

LARGE ANIMAL RESCUE

Approved by the Statewide Training and Education Advisory Committee



Adopted by the State Board of Fire Services



INSTRUCTOR GUIDE

January 2003 Edition



LARGE ANIMAL RESCUE

O P E R A T I O N A L

I N S T R U C T O R G U I D E



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State Fire Training

Mission Statement

The mission of State Fire Training is to enable the California fire service to safely protect life and property through education, training, and certification.

Fire Service Training And Education Program

The Fire Service Training and Education Program (FSTEP) was established to provide specific training needs of local fire agencies in California. State Fire Training coordinates the delivery of this training through the use of approved curricula and registered instructors.

The FSTEP series is designed to provide both the volunteer and career fire fighter with hands-on training in specialized areas such as fire fighting, extrication, rescue, and pump operations. All courses are delivered through registered instructors and can be tailored by the instructor to meet your department's specific need.

Upon successful completion of an approved FSTEP course, participants will receive an Office of State Fire Marshal course completion certificate.

Acknowledgments

The State Fire Training Curriculum Development Division coordinated the development of the material contained in this guide. Before its publication, the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS) approved this guide. This guide is appropriate for fire service personnel and for personnel in related occupations that are pursuing State Fire Training certification.

| | |
|--|--|
| Andrea Tuttle Director of CDF | John J. Tennant State Fire Marshal |
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Special Acknowledgments

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 Fire Service Training Specialist

Lisa Powell
 Office Technician

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| | |
|---|--|
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| Linda Richmond Felton FPD California State Parks Horse Patrol Santa Cruz County Horsemen's Assoc. | Steve Richmond Felton FPD CDF Deputy Chief Retired California State Parks Horse Patrol |

This 2003 edition of Large Animal Rescue (LAR) represents a collaborative effort that started in 1996. We gratefully acknowledge the following individuals for their support and development of the LAR technique. We gratefully acknowledge the Board of Directors, Chief **Ron Rickabaugh**, Assistant Chief **Dave Newell**, and the fire fighters of Felton Fire Protection District for their support and assistance with the development of the LAR technique.

- | | | | |
|-----------------|-----------------|-------------------------|--------------------------|
| ▪ Sami Abend | ▪ Daniel Davis | ▪ Don Luis | ▪ Dave Sherrick |
| ▪ Isaac Blum | ▪ Arnie Dolgins | ▪ Rob Martin | ▪ Ray Solar, Captain |
| ▪ Cate Bryson | ▪ Bob Gray | ▪ Cyndi McDonnell | ▪ Steve Stilwell |
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Course Structure

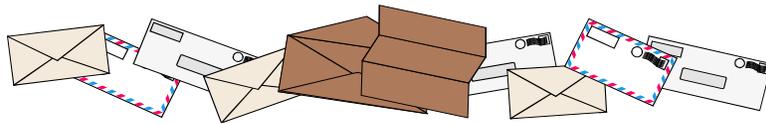
The success of your students depends greatly on your conformance to the student behavioral objective prescribed at the start of each lesson. The remaining portion of the lesson plan is only a guide; and as such, should not preclude you from adapting the lesson plans to best meet the needs of your students. Group activities and direct applications of the skills addressed in this curriculum are essential to the overall success of the course.

Evaluations are included with the course materials sent by State Fire Training and are required at the end of the class.

Disclaimer

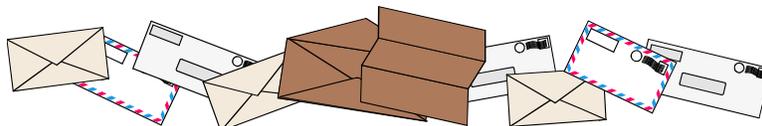
The rescue of large animals and the training for such rescues is a hazardous activity, which poses a risk of serious injury or death. The safety of the rescuers must be the first priority. Every rescue situation has its own unique conditions and situations that must be evaluated by the personnel on scene. Effective risk management and safety of the rescuers comes from the proper application of training, experience, equipment, and good judgment.

These rescue operations involve the use of special equipment and techniques. Personnel lacking adequate training and equipment increase the risk of injury and should not attempt these rescues.



State Fire Training gladly accepts your comments and suggestions for future enhancements or revisions to this document. Please forward to:

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Instructor Requirements

An individual who has met the instructor requirements for this course and is registered with State Fire Training must be the Primary Instructor and present at least 50% of the course.

Qualifications

To qualify as a Large Animal Rescue Instructor, applicant shall satisfy the following criteria:

1. Instructor Training (any one of the following five options)
 - a) Completed Fire Instructor 1A and 1B
 - b) Have a valid Community College teaching credential
 - c) Completed the UC/CSU 60-hour Techniques of Teaching course
 - d) Completed the NFA's Fire Service Instructional Methodology course
 - e) Completed four semester units of upper division credit in educational materials, methods and curriculum development
2. Coursework
 - a) Fire Fighter I
 - b) Vehicle Extrication
 - c) Swiftwater Rescue
 - d) Rescue Systems 1
 - e) ICS 300
3. Occupational Experience
 - a) Working knowledge of and experience with large animal behavior, physical characteristics, and handling
 - b) Knowledge of and experience with trailer types and construction
 - c) Experience with large animal rescue

Because of the specific nature of this technical rescue, it may be necessary for instructors to team-teach to meet instructor qualifications.

Registration Process

1. Resume Evaluation

Submit a complete application package for review that includes all of the following:

- a) Application for registration form
- b) Up-to-date resume of education, position/rank, and experience

- c) Verification of instructor training
 - d) Verification of coursework
 - e) Verification of occupational experience
2. Instructor applications will be reviewed and approved by the Peer Assessment for Credential Evaluation (PACE II) committee on a quarterly basis.
- a) Any misrepresentation or falsification of information submitted may be grounds for denial of instructor registration.
 - b) If, in the judgment of the PACE II committee, the instructor candidate has displayed conduct that does not uphold the values of honesty, integrity, and responsibility expected of an OSFM instructor, approval may be denied.

Responsibilities

Primary instructor responsibilities include:

1. Course
- a) Ensuring all objectives of the course curriculum are met.
 - b) Teaching at least 50% of the course. If training is delivered on a "shift" or back-to-back schedule, it is considered more than one (1) course.
 - 1) For courses delivered on a "shift" or back-to-back schedule, a Primary Instructor must be assigned to each shift and that Primary Instructor must teach at least 50% of that shift's course schedule.
 - 2) A Primary Instructor may be assigned to more than one (1) shift.
 - c) Ensuring all administrative requirements are completed in accordance with printed guidelines. Including but not limited to:
 - 1) Request for course scheduling.
 - 2) Assistant instructor identification and qualifications.
 - 3) Return, within two weeks of course completion, all student materials.
 - d) Record keeping where applicable
 - 1) Daily attendance records.
 - 2) Student progress chart.
 - 3) Student assignment records.
 - 4) Calendar of events identifying use of all assistant instructors and guest lecturers.

- e) Maintaining all class records, including items (d)1 - (d)4 above, for a minimum of five (5) years.
 - 1) State Fire Training may request, at any time, the Primary Instructor to submit these records for review.
 - 2) Failure to comply shall result in disciplinary action.
 - f) Proctoring the performance exam when used.
2. Assistant Instructors
- a) Supervising Assistant Instructor's presentation of the course.
3. Guest Lecturers
- a) Attending and monitoring Guest Lecturer's presentation.

Student Profile

Target Group

Fire fighters, fire service personnel, animal control officers, and law enforcement officers

Prerequisites

1. Knowledge of basic fire fighting practices and operations
2. Knowledge of basic fire fighting equipment
3. Knowledge of basic rescue systems practices and operations
4. Knowledge of vehicle extrication

Training Materials

The characteristics of the classroom and supportive facilities have a great impact on the learning environment and the instructor's success or failure. For this course, it is advisable for the instructor to adhere as closely as possible to the following guidelines.

Technical Training

1. Writing board with markers/erasers
2. Computer and audiovisual equipment to present PowerPoint® presentations
3. Appropriate video equipment and screen or monitor
4. Overhead projector and screen
5. All other equipment required for the course

Manipulative Training

1. Appropriate personal protective equipment
2. Appropriate anchor and anchor equipment
3. 20-foot length of appropriately sized anchor rope
4. 20-foot length of ½-inch anchor rope
5. 5 carabiners
6. 2 anchor plates
7. 1 6-foot length of 2-inch webbing or a mariner's knot
8. Conventional halter
9. Conventional lead line
10. Fiberglass horse
11. 15-foot length of 2½ or 3-inch hoseline
12. 8-foot or longer pike pole, boat hook, or snake tongs
13. 60-foot length of ¾ or 1-inch soft cotton rope or 1-inch single jacket hoseline
14. Set of tandem prusik loops
15. Set of parallel prusik loops
16. 16-18 foot rescue strap
17. 25-30 foot length of ½-inch rope
18. 4:1 and 2:1 rope systems, constructed or premade
19. 200-foot length of anchor rope
20. Sufficient hardware for a z-rig
21. Optional: 60-foot length of 2-inch webbing
22. Recommended: Horse skull, articulated horse mannequin

Introduction To The Manual

This publication is intended to serve as an instructor guide and includes lesson plans, a slide index, student activities, and tests. For each topic identified in the course outline, a lesson plan has been developed that contains: a time frame, level of instruction, behavioral objective, materials needed, references, preparation statement, lesson content, and endnotes. Suggested application methods have been identified throughout the lessons for you to use during your presentation.

- **Time Frame:** The estimated duration required for in-class presentation.
- **Level Of Instruction:** Identifies the instructional level that the material was designed to fulfill. Obviously, you have the latitude to increase the level based on available time, local conditions, and the students' apperceptive base.
- **Behavioral Objective:** The behavioral objective is a statement of the student's performance desired at the end of instruction. You must ensure that enough information is given in the presentation and/or activities to enable the student to perform according to the goal.
- **Materials Needed:** This should be a complete list of everything you will need to present the lesson, including visual aids, tests, and so on.
- **References:** These are the specific references the curriculum development team used when developing the lesson plan. In addition, references may be listed as additional study aids for instructors to enhance the lesson -- books, manuals, bulletins, scripts, visual aid utilization plans and the like. The corresponding pages in the student supplement are also listed here.
- **Preparation:** The motivational statements in this section connect the student with the lesson plan topic through examples or illustrations relating to their occupation, injury, and even mortality. You may modify this section to better fit your students' environment.
- **Lesson Content:** Includes information used in the four-step method of instruction.

Technical Lesson Plans

| PRESENTATION | APPLICATION |
|------------------------------------|--|
| What you want the students to know | Everything the student participates in |
| Lesson content | Questions |
| Notes to yourself | Classroom Exercises |
| | Audiovisual Cues |

Manipulative Lesson Plans

| OPERATIONS | KEY POINTS |
|--|--|
| Specific actions to be performed by the students | The who, what, when, where, why, and how (the "tricks of the trade") |
| Begin with a verb, followed by a noun | Safety practices |

Appendix A – Glossary

- Definitions for course-specific terms.

Appendix B – Manipulative Performance Tests

Appendix C – Instructor Test

- Course test with answer keys.

Appendix D – Student test

- Test master to copy for your students. Keep in good condition to use for future classes. Collect the test after it has been graded and discussed in class. **Do not let the students keep it since you will be using the same test for your next class.**

Course Outline

Course Objectives: To provide the student with...

- a) Information about large animal rescue as a technical rescue
- b) Information about prey animal behavior and characteristics
- c) Information and training on emergency containment of large animals
- d) Information and training on scene management and large animal operations
- e) Information and training on large animal rescue equipment and application
- f) Information and training on horse trailers and on-road accidents
- g) Information and training on rope operations and large animals
- h) Information and training on hauling, lifting and lowering large animals
- i) Information and training on vertical lifting operations with large animals
- j) Information and training on water rescue with large animals

| | |
|--|------|
| Course Content | 8:00 |
| Unit 1: Introduction To Large Animal Rescue | |
| 1-1 Introduction And History | 0:30 |
| 1-2 Horse Characteristics And Behavior | 0:30 |
| 1-3 The Emergency Rope Halter And Lead Line | 0:30 |
| 1-4 How To Approach A Loose Horse | 0:15 |
| 1-5 How To Apply An Emergency Rope Halter | 0:15 |
| Unit 2: Operations And Equipment | |
| 2-1 Scene Management And Operations | 0:30 |
| 2-2 Large Animal Rescue Equipment | 0:30 |
| 2-3 How To Apply A Rescue Strap, Forward Application..... | 0:15 |
| 2-4 How To Apply The Vertical Lift Tie..... | 0:15 |
| 2-5 Trailers And Trailer Operations..... | 1:00 |
| 2-6 Raising And Lowering Systems And Operations | 0:45 |
| 2-7 How To Apply A Rescue Strap, Rear Drag Application | 0:15 |
| 2-8 How To Assemble A Set Of Tandem Prusik Loops To An Anchor Rope | 0:15 |
| 2-9 How To Assemble A Set Of Parallel Prusik Loops To A Double Anchor Rope | 0:15 |
| 2-10 How To Set Up A Piggyback Haul System | 0:15 |
| 2-11 How To Operate A Piggyback Haul System | 0:15 |
| 2-12 Water Operations..... | 0:30 |
| Review And Exam | 1:00 |

Texts And References

- "All Calls Great And Small", 9-1-1 Magazine, Nancy J. Rigg, January/February 2000 Edition
- "Behavior of the Horse", Journal of Equine Science, R. M. Miller, DVM, 1995, 15: No. 1
- "Catching Difficult Horses", Equestrian Safety Series, Willis Lamm
- Considering the Horse: Tales of Problems Solved and Lessons Learned, Mark Rashid, Johnson Books, 1993
- East Sussix Fire Brigade Manual, East Sussix Fire Brigade, FF Wright, September 1997
- "The Evolution of Technical Rescue", NFPA Journal, NFPA, March/April 2000 Edition
- "Helicopter Rescue of Horses", Journal of Equine Veterinary Science, 1995, Vol. 15: #4
- "The Helsingborg Veterinary Ambulance" Journal of Equine Veterinary Science, Flemming Winberg and MVSC, Roger Sandberg, 1995 Edition, Volume 15
- High Angle Rescue Techniques, National Association for Search and Rescue on Rope, Second Edition
- Horse Anatomy, A Pictorial Approach to Equine Structure, Peter C. Goody, J. A. Allen & Co. LTD, 1997
- "How Horses See," Equus, Emily Kilby, Primedia Inc., February 2000
- Incident Command System, IFSTA, First Edition
- Large Animal Rescue Student Manual, SFT, 2003 Edition
- Logan Trailers product literature
- The Merck Veterinary Manual, Merck & Co. Inc, New Jersey, Eighth Edition, 1998
- Principles of Vehicle Extrication, IFSTA, Second Edition
- Public Information Officer, IFSTA, 1999
- Rescue 3, International Swift Water Rescue Technician, Unit 1 Manual
- River Rescue: A Manual for White Water Safety, Les Bechdel, Slim Ray, CFS Press, May 1998
- Rescue Systems I Instructor Guide, SFT, 2000 Edition
- Swiftwater Rescue, A Manual for the Rescue Professional, Slim Ray, Appalachian Mountain Club, April 1997
- Swiftwater Rescue Field Guide, Slim Ray, Jan Atlee (illustrator), CFS Press, January 1997



LARGE ANIMAL RESCUE

Operational

TOPIC: 1-1: Introduction And History

TIME FRAME: 0:30

LEVEL OF INSTRUCTION: Level I

BEHAVIORAL OBJECTIVE:

Condition: Given a written test

Behavior: The student will confirm a knowledge of the history of large animal rescue as it relates to the fire service by completing the written test

Standard: With a minimum 80% accuracy according to the information contained in Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 8-15

MATERIALS NEEDED:

- Writing board/pad with markers/erasers
- Appropriate audiovisual equipment
- Appropriate audiovisual materials

REFERENCES:

- "All Calls Great And Small", 9-1-1 Magazine, Nancy J. Rigg, January/February 2000 Edition, Pages 22-30
- East Sussix Fire Brigade Manual, East Sussix Fire Brigade, FF Wright, September 1997 Edition, Part 1, Section 7
- Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 8-15
- "The Evolution of Technical Rescue", NFPA Journal, NFPA, March/April 2000 Edition, Pages 75-77
- "The Helsingborg Veterinary Ambulance," Journal of Equine Veterinary Science, Flemming Winberg and MVSC, Roger Sandberg, 1995 Edition, Volume 15, Pages 145-147

PREPARATION:

Animal rescue is not new to the fire service. In other countries this technical rescue skill is included as part of basic fire training. Because of a higher level of professionalism and expectation in our society, fire fighters are increasingly more likely to be called to the scene of a large animal rescue.



LARGE ANIMAL RESCUE

Operational

| PRESENTATION | APPLICATION |
|--|--|
| <p>I. LARGE ANIMAL RESCUE (LAR) AS A TECHNICAL RESCUE</p> <p>A. Large animals can be working partners or companions</p> <ol style="list-style-type: none">1. A means of livelihood2. A financial investment3. A priceless family member<ol style="list-style-type: none">a) Some people grow up with their horses<ol style="list-style-type: none">1) Can live as much as 30 years <p>B. Demographics have changed</p> <ol style="list-style-type: none">1. More horse owners are urban/suburban based2. Most are recreational riders<ol style="list-style-type: none">a) May be limited in resources and experience3. More owners are transporting animals greater distances <p>C. Some countries recognize LAR as a routine response</p> <ol style="list-style-type: none">1. Sweden<ol style="list-style-type: none">a) Swedish fire fighters have dedicated equipment for animal rescuesb) Have "animeds" trained to give first-aid to animals | <p>SLIDE: 1-1-1</p> <p>SLIDE: 1-1-2 Why should we respond to LAR incidents?</p> <p>SLIDE: 1-1-3</p> <p>SLIDE: 1-1-4</p> <p>SLIDE: 1-1-5</p> |

| PRESENTATION | APPLICATION |
|---|--|
| <ul style="list-style-type: none"> 7. John Fox, Captain Felton Fire Protection District <ul style="list-style-type: none"> a) Developed training for Felton LAR unit b) Wrote protocols for county and OES response that led to the development of FSTEP curriculum 8. Craig Jones, Rescue Critters <ul style="list-style-type: none"> a) Developed articulated and weighted horse mannequin 9. Previous U.S. LAR response efforts were isolated, individual, and not standardized United States <ul style="list-style-type: none"> 1. Efforts fragmented, isolated 2. Not formerly organized or standardized in a particular agency 3. LAR training <ul style="list-style-type: none"> a) A need to develop, organize, standardize 4. LAR as a technical rescue <ul style="list-style-type: none"> a) A blending of other technical skills <ul style="list-style-type: none"> 1) Applied with an understanding of large animal behavior b) Based on standard fire service equipment and operations c) A unified command using the Incident Command System d) Dispatched through 9-1-1 system e) Standardized training | <p>SLIDE: 1-1-9</p> <p>SLIDE: 1-1-10</p> |

| PRESENTATION | APPLICATION |
|--|---|
| <ul style="list-style-type: none"> d) The fire service has a command system for all incidents 4. A large animal response calls for action to help a partner (the horse) in distress <ul style="list-style-type: none"> a) Horses have the ability to form a team relationship with a human b) Horses have played an integral part in the history of mankind and the history of the fire service <ul style="list-style-type: none"> 1) 1850s - 1906 | <p>SLIDE: 1-1-13</p> <p>SLIDE: 1-1-14</p> |
| <p>H. Course objectives</p> <ul style="list-style-type: none"> 1. Explain LAR and its relevance to the fire service 2. Discuss the importance of knowing horse behavior 3. Introduce basic knowledge of horse characteristics 4. Teach students how to make and use the emergency rope halter 5. Discuss scene management and on-scene operations 6. Review the basics of horse trailers 7. Show the basic techniques of trailer rescues 8. Teach students the use and application of the rescue strap 9. Discuss rope operations and large animals 10. Provide knowledge on hauling, lifting and lowering animals 11. Teach students how to tie and use the vertical lift rope harness | <p>SLIDE: 1-1-15</p> |



LARGE ANIMAL RESCUE

Operational

| PRESENTATION | APPLICATION |
|---|-----------------------------|
| <ul style="list-style-type: none">12. Review sustained vertical lifting operations13. Discuss water operations and techniques <p>I. LAR training</p> <ul style="list-style-type: none">1. Emergency responders can train for LAR<ul style="list-style-type: none">a) Scenarios can be staged<ul style="list-style-type: none">1) Fiberglass horses2) Articulated horse mannequins | <p>SLIDE: 1-1-16</p> |

SUMMARY:

With the rising expectation of the public, fire service responses to animal rescues are increasingly more common. There is an established tradition in other countries of fire service response to LAR incidents. Technical rescue skills can be adapted to make these responses more successful. Large animal rescue as a technical rescue requires a blending of these skills with adaptability and flexibility. All responders must work in "concert" with each other and apply an understanding of horse characteristics and behavior. The emphasis of this course is on safety.

EVALUATION:

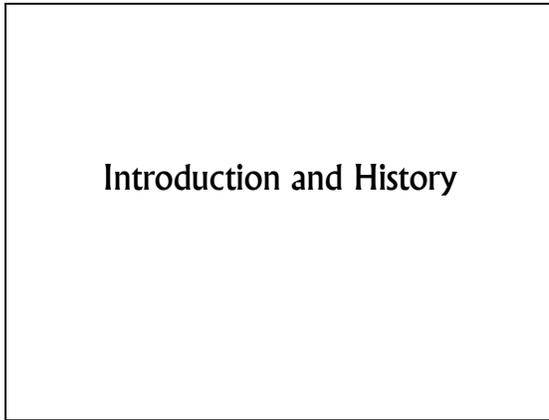
The student will complete the written test at a time determined by the instructor.

ASSIGNMENT:

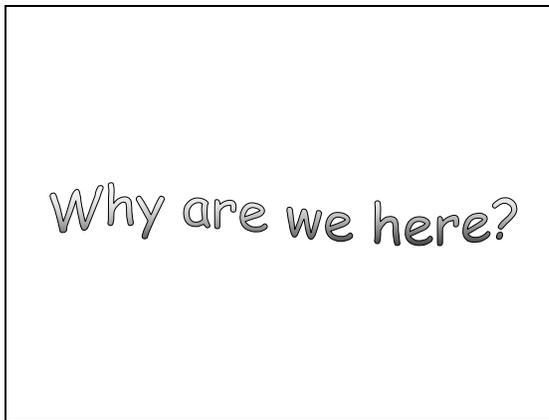
Review your notes and read Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 8-15 in order to prepare yourself for the upcoming test. Study for our next session.

SLIDE INDEX

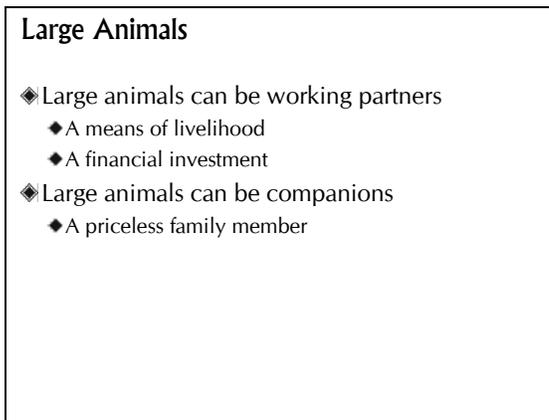
Slide 1



Slide 2



Slide 3



Slide 4

Owner Demographics

- ◆ Demographics have changed
- ◆ More horse owners are urban/suburban based
- ◆ Most are recreational riders
 - ◆ May be limited in resources and experience
- ◆ More owners are transporting animals greater distances

Slide 5

International Efforts

- ◆ Sweden
 - ◆ Department maintains animal rescue ambulances
 - ◆ Has staffing trained in the emergency medical treatment of animals (ANIMEDS)
- ◆ Australia
 - ◆ Developed a vertical lift harness
- ◆ England
 - ◆ Part of basic fire fighter training
 - ◆ Many brigades have units specifically designed for LAR

Slide 6

LAR in England



Courtesy of Hampton Fire Brigade

Slide 7

Early U.S. LAR

- ◆ Charles Anderson & John Madigan, DVM, MS
 - ◆ Invented Anderson sling for vertical lifting
- ◆ Stephen Dey, DVM
 - ◆ Devised vertical lift tie
 - ◆ Produced trailer accident training video
- ◆ Robert Miller, DVM
 - ◆ Articles on horse behavior and emergency handling
- ◆ Tim Collins, Rescue Technician
 - ◆ Teaches evacuation/rescue, devised rescue strap
- ◆ Los Angeles Fire Department
 - ◆ USAR/Special Ops respond to LAR incidents

Slide 8

U.S. LAR Development Continued With

- ◆ Tomas and Rebecca Gimenez, PhDs
 - ◆ Developed training and response through Clemson Univ.
- ◆ John Fox, Captain Felton Fire Protection District
 - ◆ Developed training for Felton LAR unit
 - ◆ Wrote protocols for county and OES response that led to the development of FSTEP curriculum
- ◆ Craig Jones, Rescue Critters
 - ◆ Developed articulated and weighted horse mannequin
- ◆ Previous U.S. LAR response efforts were isolated, individual, and not standardized

Slide 9

Training Needed To Be

Developed
Organized
Standardized

Slide 10

LAR As A Technical Rescue

- ◆ Blending of other technical rescue skills
 - ◆ Applied with an understanding of large animal behavior
- ◆ Based on standard fire service equipment and their operation
- ◆ A unified command using ICS
- ◆ Dispatched through 9-1-1 system
- ◆ Standardized training

Slide 11

The Fire Service Charter

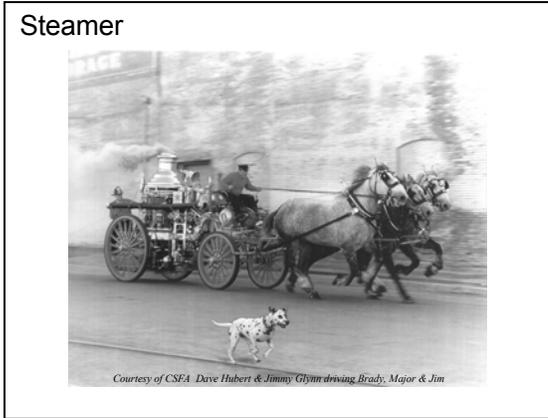
**The Protection Of
Life
Property
and the
Environment**

Slide 12

Fire Service As the Primary Resource

- ◆ Fire service is well suited to the task
 - ◆ Fire fighters routinely enter high-risk situations
 - ◆ LAR blends and adapts other technical skills
 - ◆ Vehicle extrication
 - ◆ Heavy rescue
 - ◆ Swift-water rescue
 - ◆ Confined space entry
 - ◆ Technical skills can be effectively applied to LAR with an understanding of horse behavior
 - ◆ The fire service has a command system for all incidents

Slide 13



Slide 14

- Course Objectives**
- ◆ LAR's relevance to the fire service
 - ◆ The importance of knowing horse behavior
 - ◆ Basic knowledge of horse characteristics
 - ◆ How to make and use an emergency rope halter
 - ◆ Scene management and on-scene operations
 - ◆ Basics of horse trailers
 - ◆ Basic techniques of trailer rescues

Slide 15

- Course Objectives**
- ◆ Basic use and application of a rescue strap
 - ◆ Rope operations and large animals
 - ◆ Hauling, lifting, lowering and assisting animals
 - ◆ How to tie and use the vertical lift rope harness
 - ◆ Sustained vertical lifting operations
 - ◆ Water operations and techniques

Slide 16

LAR Training



Courtesy of Felton Fire Department

TOPIC: 1-2: Horse Characteristics And Behavior

TIME FRAME: 0:30

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a written test

Behavior: The student will confirm a knowledge of the physical and behavioral characteristics of horses by completing the written test

Standard: With a minimum 80% accuracy according to the information contained in Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 16-26

MATERIALS NEEDED:

- Writing board/pad with markers/erasers
- Appropriate audiovisual equipment
- Appropriate audiovisual materials

REFERENCES:

- "Behavior of the Horse", Journal of Equine Science, R. M. Miller, DVM, 1995 Edition, 15: No. 1
- "Catching Difficult Horses", Equestrian Safety Series, Willis Lamm
- Considering the Horse: Tales of Problems Solved and Lessons Learned, Mark Rashid, Johnson Books, 1993
- Horse Anatomy, A Pictorial Approach to Equine Structure, Peter C. Goody, J. A. Allen & Co. LTD, 1997 Edition
- "How Horses See", Eguus, Emily Kilby, Primedia Inc., February 2000 Edition, Pages 38-44
- Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 16-26

PREPARATION:

To effectively resolve an incident involving a large animal or horse, it is first critical to understand the animal and what motivates it. Safety relies on an understanding of how these prey animals think, their physical characteristics and what reactions we can expect. An understanding of this will help with scene management and the safe application of technical skills. While the focus of this lesson is on horses, the information is applicable to other large prey animals.

| PRESENTATION | APPLICATION |
|--|-----------------------------|
| <p>B. Talk to the horse in a calm voice</p> <ol style="list-style-type: none"> 1. Talking keeps you breathing 2. Holding your breath conveys tension, the idea that things are not ok <p>C. Body language</p> <ol style="list-style-type: none"> 1. Be relaxed, confident, alert, and ready 2. Horse will sense if you're tense 3. Natural easy walk 4. Non-threatening posture <ol style="list-style-type: none"> a) Do not approach with hand behind back b) Do not surprise c) Do not sneak d) Be forward, act like a leader <ol style="list-style-type: none"> 1) Leader moves with a purpose 2) Be passive leader, calm, supportive, not dominant <p>D. Approach from the side to a neutral position</p> <ol style="list-style-type: none"> 1. Read the horse and what it is doing <ol style="list-style-type: none"> a) Watch the eyes, ears, mouth, and motion <p>E. Gain and maintain physical contact</p> <p>F. Direct and support the horse as softly as possible</p> <p>X. EQUIPMENT</p> <p>A. Halters</p> <ol style="list-style-type: none"> 1. A means of control 2. Types <ol style="list-style-type: none"> a) Leather <ol style="list-style-type: none"> 1) Subject to rot b) Nylon web <ol style="list-style-type: none"> 1) Metal fittings can fail | <p>SLIDE: 1-2-20</p> |

| PRESENTATION | APPLICATION |
|--|---|
| <p>c) Rope or "cowboy"</p> <p>1) Have knots to aid in control</p> <p>B. Lead lines</p> <ol style="list-style-type: none"> 1. Means of communication 2. Used to direct and support the horse 3. Conventional lead lines may be too short for a rescue situation <p>XI. CONTAINMENT</p> <p>A. Enclosures</p> <ol style="list-style-type: none"> 1. Most horses will respect enclosures 2. Cattle might not <p>B. Horse handlers</p> <p>C. In horse trailers</p> <p>D. Pastures or paddocks adjacent to scene</p> <p>E. Vehicles</p> <p>F. Attitude may convey</p> <ol style="list-style-type: none"> 1. Cooperation 2. Exhaustion <ol style="list-style-type: none"> a) May appear to have given up <ol style="list-style-type: none"> 1) Prey animals conserve energy for when they really need it 2) Could react at first opportunity to escape 3. Panic <ol style="list-style-type: none"> a) Flight or fight | <p>SLIDE: 1-2-21</p> <p>SLIDE: 1-2-22</p> <p>What could happen if you tie a horse to a "bomb-proof" object?</p> <p>SLIDE: 1-2-23</p> |



LARGE ANIMAL RESCUE

Operational

| PRESENTATION | APPLICATION |
|--|-------------|
| <p>S. Muzzle</p> <p>T. Forehead</p> <p>U. Forelock</p> | |

SUMMARY:

Horses are prey animals. Horses have an ability to form a team relationship with humans. This relationship is strongest when the human provides the support and leadership that would normally come from a herd environment. Like the alpha mare, the human can provide proper support and direction with good position and timing. Knowledge of the "Line of Fire" and neutral zones will help horse handlers to maintain proper position for directing and supporting the horse.

Because horses respond to frightening things or situations with "flight" or "fight," it is necessary for all incident responders to have an understanding of horse characteristics and behavior. The horse is acutely aware of everything in its surroundings. Normal incident tasks such as opening salvage covers, lighting flares, or setting up rope systems may cause the horse to react. Responders must be conscious of their actions and their impact on the horse and the horse handler.

Because the horse can react instantaneously, responders who are working with the horse to apply rescue equipment must learn to work in safe/neutral zones, maintaining proper position with the horse at all times.

EVALUATION:

The student will complete the written test at a time determined by the instructor.

ASSIGNMENT:

Review your notes and read Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 16-26 in order to prepare yourself for the upcoming test. Study for our next session.

SLIDE INDEX

Slide 1

**Horse Characteristics
and Behavior**

Slide 2

Behavior

- ◆ Horses are a prey animal, by comparison, a dog or cat are predators
- ◆ Horses are herd animals
- ◆ Aggression and fear are motivational factors that produce "fight" or "flight"
- ◆ A horse's main concern in life is food
- ◆ Senses are used to categorize things and situations

Slide 3

Hearing

- ◆ Can hear sounds at frequencies above those perceived by humans
- ◆ Lower limit
 - ◆ Horse = 55 Hz
 - ◆ Human = 20 Hz
- ◆ Optimal range
 - ◆ 1-16 kHz
 - ◆ 50 Hz – 8 kHz
- ◆ Upper limit
 - ◆ Horse = 33.5 kHz
 - ◆ Human = 20 kHz

Slide 4

Hearing

- ◆ Ears are fairly big and can swivel in all directions
- ◆ Act like a radar to pick up sound waves before the object is seen
- ◆ Turn its head if it can't turn its ears toward sound
- ◆ Communicate with position, movement and sound

Slide 5

Smell

- ◆ Nasal cavity is long
- ◆ Highly developed sense of smell
- ◆ Better sense of smell than humans
- ◆ Use smell to remember other horses, things, and places

Slide 6

Sight

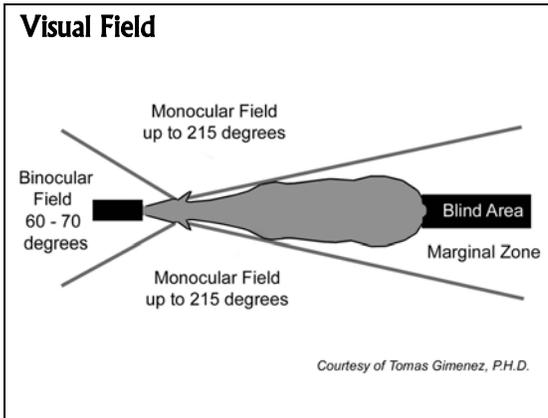
- ◆ Eyes big, set on side of head
 - ◆ By turning its head slightly, can see 360 degrees
- ◆ Wide peripheral vision
 - ◆ Can see around when head is down for feeding
 - ◆ Assume they can see everything on scene
- ◆ Field of vision is mostly monocular
 - ◆ Have poor depth perception; cannot judge distance
 - ◆ Cannot determine if movement is towards them or going away
- ◆ Narrow field of binocular vision
 - ◆ Effective for long distance

Slide 7

Sight

- ◆ Excellent night vision
- ◆ Blind spots
 - ◆ Large area at the rear of the body
 - ◆ Small area under the chin
 - ◆ Can be eliminated by slight movement of the head
- ◆ See movement easily
 - ◆ Be careful of abrupt movement
 - ◆ Shape of eyeball exaggerates movement from behind
- ◆ See in color is unknown
 - ◆ Can probably see reds/blues
 - ◆ Yellows seen as white light, bright

Slide 8



(Rev. 08/03)

Slide 9

Reading A Horse

- ◆ Read a horse to anticipate its behavior
- ◆ Pay attention to the
 - ◆ Ears: position and movement
 - ◆ Eyes: expression
 - ◆ Head: elevation and movement
 - ◆ Stance: leg posture and position
 - ◆ Tail: movement and posture

Slide 10

Signs Of A Calm Horse

- ◆ Ears
 - ◆ Moving
- ◆ Eyes
 - ◆ Normal, soft
- ◆ Head
 - ◆ Lowered
- ◆ Stance
 - ◆ Relaxed
 - ◆ Back leg may be bent
- ◆ Tail
 - ◆ Relaxed, down



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Slide 11

Signs Of An Alert Horse

- ◆ Ears
 - ◆ Upright, forward
- ◆ Eyes
 - ◆ Wide open, whites showing
- ◆ Head
 - ◆ Upright, tall
- ◆ Stance
 - ◆ Tail upright
 - ◆ Sprint positioned
- ◆ Tail
 - ◆ Swishing or flicking, flagged



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Slide 12

Signs Of An Excited Horse

- ◆ Sprint position
- ◆ Body collected
- ◆ Hindquarters loaded
- ◆ Eyes tense



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Slide 13

Safety

- ◆ Safety of humans comes first
- ◆ All large animals are different, be alert
 - ◆ Highly sensitive, emotional animals
 - ◆ Mishandled horses may not trust humans
 - ◆ Ask owner about potential behavior problems
- ◆ These are prey animals
- ◆ The main defense is flight
 - ◆ Flight is a horse's main defense, a situation can change instantly, in a blink of an eye

Slide 14

Things To Be Aware Of

- ◆ Rear Legs
- ◆ Front legs
- ◆ Hooves
- ◆ Head

Slide 15

Things To Be Aware Of

- ◆ Rear legs - kicking legs
 - ◆ Can extend and kick back up to 6 feet
 - ◆ Can kick with both legs, or one
 - ◆ Can kick forward 2-3 feet
- ◆ Front legs - striking legs
 - ◆ Can strike forward 2-3 feet, down, hard
 - ◆ Can strike back 2-3 feet
 - ◆ Can rear up on hind legs and strike down

Slide 16

Things To Be Aware Of

- ◆ Hooves
 - ◆ May have steel shoes, greater impact
 - ◆ Unshod hooves, may be sharp
 - ◆ Cloven hooves can be sharp
- ◆ Head
 - ◆ Horses can bite
 - ◆ Can swing with wide range of motion
 - ◆ Can raise and lower head quickly

Slide 17

Positioning

- ◆ Stay in safety/neutral zones or out of the line of fire
- ◆ You can be pushed by the head, hind end, front end and stepped on
- ◆ Stay alert, don't be distracted
- ◆ Support personnel must be alert, attentive to animal handler, don't cause a distraction
- ◆ Need room to move and feel comfortable, don't confine

Slide 18

Line Of Fire

The diagram shows a horse's head and neck in profile. A shaded area extends from the front of the horse's head, labeled 'Do not approach from the front'. Another shaded area extends from the right side of the horse's head, labeled 'Do not approach from this area'. A third shaded area extends from the back of the horse's head, labeled 'May not be accustomed to a right-side approach'. A white arrow points towards the horse's shoulder, labeled 'Approach toward the shoulder'. The text 'Line Of Fire' is written above the diagram.

Courtesy of Tomas Gimenez, P.H.D.

(Rev. 08/03)

Slide 19

Approach

- ◆ Keep eye contact with the horse
- ◆ Talk to the horse in a calm voice
- ◆ Body language
 - ◆ Be relaxed, confident, alert, and ready
 - ◆ Horse will sense if you're tense
 - ◆ Natural easy walk
 - ◆ Non-threatening posture
- ◆ Approach from the side to a neutral position
- ◆ Gain and maintain physical contact
- ◆ Direct and support the horse as softly as possible

Slide 20

Halters

- ◆ A means of control
- ◆ Types
 - ◆ Leather: Subject to rot
 - ◆ Nylon web: Metal fittings can fail
 - ◆ Rope or "cowboy": Have knots to aid in control

Slide 21

Lead Lines

- ◆ Means of communication
- ◆ Used to direct and support the horse
- ◆ Conventional lead lines may be too short for a rescue situation

Slide 22

Containment

- ◆ Enclosures
 - ◆ Most horses will respect enclosures
 - ◆ Cattle might not
- ◆ Horse handlers
- ◆ In horse trailers
- ◆ Pastures or paddocks adjacent to scene
- ◆ Vehicles

Slide 23

Attitude

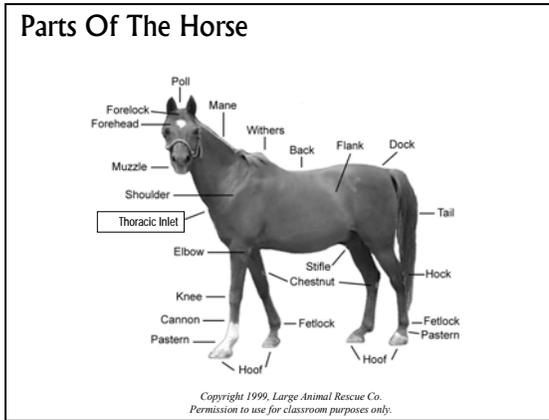
- ◆ May convey
 - ◆ Cooperation
 - ◆ Exhaustion
 - ◆ May appear to have given up
 - ◆ Panic
 - ◆ Flight or fight

Slide 24

Sedation Or Chemical Restraint

- ◆ Sedated horse may be more tolerant
 - ◆ Can still react violently if over stimulated
- ◆ Certain sedatives may cause unpredictable behavior - watch out!
- ◆ Stimulation may reverse effects of sedation
- ◆ Vet will determine if horse should be sedated, the level, and will monitor the effects

Slide 25



TOPIC: 1-3: The Emergency Rope Halter And Lead Line

TIME FRAME: 0:30

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a written test

Behavior: The student will confirm a knowledge of the application and use of the emergency rope halter and tied lead line by completing the written test

Standard: With a minimum 80% accuracy according to the information contained in Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 27-32

MATERIALS NEEDED:

- Writing board/pad with markers/erasers
- Appropriate audiovisual equipment
- Appropriate audiovisual materials
- 25-30 foot length of ½" rope
- Conventional lead line and halter
- Fiberglass horse
- Appropriate PPE

REFERENCES:

- Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 27-32

PREPARATION:

Control of the animal in a LAR is imperative. In some situations, such as a trail incident, or an incident involving a loose horse on the roadway, there may not be a halter available. It is useful for responders to know how to fashion a halter out of a length of rope. The safety of the horse handler as well as other responders on scene depends on control of the horse. A halter and longer lead line gives the handler an advantage in controlling, directing, and supporting the horse. The success of a LAR may depend upon this simple but important piece of equipment.

| PRESENTATION | APPLICATION |
|---|--|
| <p>I. THE EMERGENCY ROPE HALTER</p> <p>A. Situations where an emergency rope halter may be necessary</p> <ol style="list-style-type: none"> 1. Loose horse with no halter 2. Horse is wearing a bridle 3. Horse is wearing a weak or damaged halter <p>B. If no rope is available</p> <ol style="list-style-type: none"> 1. Shirt 2. Belt 3. Arms <p>C. Criteria for an improvised halter</p> <ol style="list-style-type: none"> 1. Material readily available on any fire engine <ol style="list-style-type: none"> a) Rope is available on any fire engine 2. Easy to assemble 3. Quick to assemble 4. Will fit any size animal 5. Will work on different types of animals <ol style="list-style-type: none"> a) Horse b) Cow c) Llama 6. Must be easily removed 7. Can be applied in standing or recumbent positions | <p>SLIDE: 1-3-1</p> <p>SLIDE: 1-3-2</p> <p>If no rope is available, what could be used to temporarily restrain a horse?</p> <p>SLIDE: 1-3-3</p> |

| PRESENTATION | APPLICATION |
|--|---|
| <p>NOTE: This application was suggested by equestrian Ray Berta, P.O. Box 1248, Carmel Valley, CA 93914. He may be contacted for questions or comment.</p> <p>D. Equipment needed</p> <ol style="list-style-type: none"> 1. Rope, ½-inch or larger 2. 20-25 foot minimum length <p>E. Application</p> <ol style="list-style-type: none"> 1. Tie a small loop on one end of the rope <ol style="list-style-type: none"> a) Use an non-slip knot <ol style="list-style-type: none"> 1) Figure 8 2) Bowline 3) Overhand knot 2. Zigzag the rope in your hand <ol style="list-style-type: none"> a) Allows the rope to be pulled from the hand cleanly b) Coils can tighten around the hand or fingers and cause injury 3. At the neutral position, place the small loop over the neck at the withers of the horse 4. Slowly lower the loop down the opposite side of the neck <ol style="list-style-type: none"> a) This is done while rubbing the wither and neck with a closed hand 5. Grab the loop from under the neck <ol style="list-style-type: none"> a) Gain control of the horse | <p>SLIDE: 1-3-4</p> <p>SLIDE: 1-3-5</p> <p>Why would you not want to hold a coiled rope in your hand?</p> |

| PRESENTATION | APPLICATION |
|--|--|
| <p>6. Pass the middle section of the rope thru the loop, forming a second loop</p> <p>a) Gain control of the horse</p> <p>7. Move the new loop up over the horses nose</p> <p>8. Snug the two loops up</p> <p>F. This is a temporary halter, do not use it in place of a regular halter</p> <p>1. Rope can tighten</p> <p>2. Can cause pain and/or injury</p> <p>G. Safety</p> <p>1. Wear appropriate PPE</p> <p>2. Zigzag the rope</p> <p>NOTE: Demonstrate with a fiberglass horse.</p> | <p>SLIDE: 1-3-6</p> <p>SLIDE: 1-3-7</p> <p>SLIDE: 1-3-8</p> |
| <p>II. THE LEAD ROPE TIE</p> <p>A. Situations where a lead rope tie may be necessary</p> <p>1. Lead line is too short</p> <p>a) A longer lead line allows more space for the handler to direct and support the animal</p> <p>1) Handler can read horse body language more easily</p> <p>2) Safer for the handler, more time to react</p> <p>3) Horse can see handler better</p> <p>4) Horse may not feel so confined</p> <p>b) Longer lead line allows more leverage for the handler and may be necessary for certain evolutions including</p> <p>1) Assistance up a steep hill</p> | |

| PRESENTATION | APPLICATION |
|--|-----------------------------|
| <ul style="list-style-type: none"> 2) Assistance out of mud 3) Extrication from a rolled trailer <ol style="list-style-type: none"> 2. Lead line may be damaged or weak 3. Halter clip could break 4. Halter clip could injure the horse or handler during operations <p>NOTE: This tie was suggested by Captain John Fox, Felton FPD, 131 Kirby Street, Felton, CA 95018. He may be contacted for questions or comment.</p> | |
| <p>B. Attachment</p> <ol style="list-style-type: none"> 1. Rope, ½-inch or larger 2. 15 foot minimum length | <p>SLIDE: 1-3-9</p> |
| <ol style="list-style-type: none"> 3. Tie off onto halter loop <ol style="list-style-type: none"> a) Feed the end of the rope through the halter ring or loop 14-18 inches | <p>SLIDE: 1-3-10</p> |
| <ol style="list-style-type: none"> a) With end of the rope, wrap two coils around the running end of the lead line near the ring or loop | <p>SLIDE: 1-3-11</p> |
| <ol style="list-style-type: none"> c) On the third wrap, feed the mid section of the wrapped line through the loop formed between the first wrap and the halter ring | <p>SLIDE: 1-3-12</p> |
| <ol style="list-style-type: none"> 1) Leave a short, approximately 6-inch tag line <ol style="list-style-type: none"> d) Push the coils towards the halter ring or loop to secure the knot | <p>SLIDE: 1-3-13</p> |
| <p>C. Removal</p> <ol style="list-style-type: none"> 1. Pull down on the small tag line | |

SUMMARY:

The safety of the horse handler as well as the other responders on scene depends on control of the horse. The rope halter provides the firefighters with a simple piece of equipment that can be used on any size and many types of animals.

If there is a halter on scene, it may have a lead line that is only 6-8 feet long. This does not allow the handler enough line to achieve distance from the animal. Distance gives the handler a broader view to read the animal and anticipate its movement. This allows the handler to maintain proper positioning outside of the line-of-fire. As well, extra lead line length gives the handler more leverage to control, support, and direct the animal. Responders should know how to safely tie off a longer lead line.

EVALUATION:

The student will complete the written test at a time determined by the instructor.

ASSIGNMENT:

Review your notes and read Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 27-32 in order to prepare yourself for the upcoming test. Study for our next session.

SLIDE INDEX

Slide 1

**The Emergency Rope Halter
and Lead Line**

Slide 2

Rope Halter Situations

- ◆ Loose horse with no halter
- ◆ Horse wearing a bridle
- ◆ Horse wearing a weak or damaged halter
- ◆ Can also use
 - ◆ Shirt
 - ◆ Belt
 - ◆ Arms

Slide 3

Rope Halter Criteria

- ◆ Readily available material
- ◆ Easy and quick to assemble
- ◆ Will fit any size animal
- ◆ Will work on different types of animals
- ◆ Easy to remove
- ◆ Applied in standing or recumbent positions

Slide 4

Equipment Needed

- ◆ Rope, ½-inch diameter or larger
- ◆ 20 to 25 feet long (minimum)



Slide 5

Application



◆ Slowly run the loop over the withers and under the neck

◆ Gain control of the horse

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Slide 6

Application



◆ Feed the middle part of the rope thru the loop, forming a second loop.

◆ Gain control of the horse.

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Slide 7

Application



- ◆ Move the new loop over the nose
- ◆ Snug the two loops up

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Slide 8

Lead Rope Tie

- ◆ When the lead rope is too short
 - ◆ Longer lead allows
 - ❖ More space for the handler to direct and support the horse
 - ❖ More leverage for the handler
- ◆ When the lead line is weak or damaged
- ◆ If the halter clip could break
- ◆ If the halter clip could injure the horse or handler

Slide 9

Attachment

- ◆ Rope, ½-inch or larger
- ◆ 15 foot minimum length

Slide 10

Application



◆ Pass one end of the rope thru the halter ring or loop 14 to 18 inches

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Slide 11

Application



◆ Wrap the loose end around the standing section of rope 2½ times

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Slide 12

Application



◆ Feed the mid section of the running section of the rope thru the loop at the halter ring

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Slide 13

Application



- ◆ Push the wraps up and tighten
- ◆ To release the knot, pull on the tag line

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TOPIC: 1-4: How To Approach A Loose Horse

TIME FRAME: 0:15

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a fiberglass horse, a 25-30 foot length of ½-inch rope, and appropriate personal protective equipment

Behavior: The student will safely approach the horse

Standard: Completing all operations within _____ according to the job breakdown

MATERIALS NEEDED:

- Job breakdown
- Fiberglass horse
- 25-30 foot length of ½-inch rope
- Appropriate personal protective equipment

REFERENCES:

- None

PREPARATION: Rescuer safety is paramount with a LAR incident. Almost every aspect of a large animal rescue requires that one or more rescuers deal directly with the animal. Proper approach of the animal is critical. An improper approach could trigger the "fight or flight" reaction thus compromising safety. Fire fighters who will be assisting the vet and/or animal handlers should know how to approach and gain contact with the animal.

| OPERATIONS | KEY POINTS |
|--------------------------------|---|
| 1. Face the horse | 1a. From the front, a little towards the side b. Talking softly c. With soft eyes, overall view, not staring like a predator d. Pausing until horse acknowledges you |
| 2. Move towards the horse | 2a. To the horse's left side b. Remaining calm and confident |
| 3. Hold rope against your body | 3a. So it appears to be a part of you b. Without hiding it c. Zigzagged neatly |
| 4. Go to the neutral position | 4a. Out of the line of fire |
| 5. Hold your hand out | 5a. Letting the horse smell your hand b. Watching the horse's body language |
| 6. Contact horse | 6a. At the withers b. With a closed hand c. Rubbing gently d. Not patting or clawing |
| 7. Stay in position | 7a. Moving with the horse's neutral zone b. Maintaining contact |

APPLICATION:

The student will practice performing the operations in the job breakdown while under supervision.

EVALUATION:

The student will complete a manipulative performance test at a time determined by the instructor.

ASSIGNMENT:

Practice this job in order to prepare yourself for the upcoming performance test. Study for our next session.

TOPIC: 1-5: How To Apply An Emergency Rope Halter

TIME FRAME: 0:15

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a fiberglass horse, a 25-30 foot length of ½-inch rope, and appropriate personal protective equipment

Behavior: The student will approach the fiberglass horse and apply an emergency rope halter

Standard: Completing all operations within _____ according to the job breakdown

MATERIALS NEEDED:

- Job breakdown
- Fiberglass horse
- 25-30 foot length of ½-inch rope
- Appropriate personal protective equipment

REFERENCES:

- None

PREPARATION: Rescuer safety is paramount with a LAR incident. To keep the emergency responders safe, there must be a means to control and direct the animal. This can be done with a halter. If a halter is not available, a simple halter can be tied out of rope. Since most rescues will require long lead rope much longer than the standard lead rope, we must also be able to provide a halter with an adequate lead rope.



LARGE ANIMAL RESCUE

Operational

| OPERATIONS | KEY POINTS |
|-------------------------------|--|
| 1. Tie a 3-4 inch loop | 1a. Using a nonslip knot b. On one end of the rope |
| 2. Gather the rope | 2a. In one hand b. Zigzag the rope |
| 3. Hold the loop | 3a. In the other hand |
| 4. Approach the horse | |
| 5. Go to the neutral position | 5a. At the withers b. Staying out of the line of fire |
| 6. Rub the horse | 6a. With the loop b. At the withers c. Slowly d. Gently |
| 7. Work the loop | 7a. Over the back and down the opposite side of the horse b. Slowly c. Watching the horse's body language |
| 8. Grab the loop | 8a. Reaching under the neck b. Slowly c. Maintaining contact with the horse d. Watching the horse's body language |
| 9. Gain control | 9a. Of the horse b. Holding the loop and rope together c. In one hand |

| OPERATIONS | KEY POINTS |
|--------------------------------|--|
| 10. Work the neck loop | 10a. Up the neck b. Slowly c. To a position behind the ears d. Watching the horse's body language |
| 11. Feed a portion of the rope | 11a. Through the small loop b. Forming a second loop c. About 2 feet long |
| 12. Gain control | 12a. Of the horse b. Holding the second loop and the rest of the rope together c. Watching the horse's body language |
| 13. Place the second loop | 13a. Over the horse's nose b. Slowly c. Halfway between the eyes and nostrils d. Watching the horse's body language |
| 14. Tighten the loops | 14a. Slowly b. In a down and forward motion c. Not jerking the rope |

APPLICATION:

The student will practice performing the operations in the job breakdown while under supervision.

EVALUATION:

The student will complete a manipulative performance test at a time determined by the instructor.

ASSIGNMENT:

Practice this job in order to prepare yourself for the upcoming performance test. Study for our next session.

TOPIC: 2-1: Scene Management And Operations

TIME FRAME: 0:30

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a written test

Behavior: The student will confirm a knowledge of scene management and operations as it applies to a LAR incident by completing the written test

Standard: With a minimum 80% accuracy according to the information contained in Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 33-42

MATERIALS NEEDED:

- Writing board/pad with markers/erasers
- Appropriate audiovisual equipment
- Appropriate audiovisual materials

REFERENCES:

- Incident Command System, IFSTA, First Edition
- Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 33-42
- Public Information Officer, IFSTA, 1999 Edition
- The Merck Veterinary Manual, Merck & Co. Inc, Eighth Edition, Pages 1222-1224

PREPARATION:

Any incident that involves a large animal requires special considerations. These incidents will be multi-agency responses, involving fire, animal control, veterinarians, possibly law enforcement, and the owner. Lights, noise, and the movement of the rescuers can have a dramatic impact on the victim. The physical setup of the scene is different. Adequate space for operations is critical. Last but not least, the legal aspects are different.



LARGE ANIMAL RESCUE

Operational

| PRESENTATION | APPLICATION |
|---|--|
| <p>I. SCENE MANAGEMENT AND OPERATIONS</p> <p>A. Pre-establish protocols for LAR with 9-1-1 dispatch for needed information</p> <ol style="list-style-type: none">1. Nature of incident<ol style="list-style-type: none">a) Vehicle accidentb) Trail accidentc) Structure collapse, etc2. Is rider injured?<ol style="list-style-type: none">a) Dispatch as medical emergency3. How many animals involved?<ol style="list-style-type: none">a) Injuries to animals4. Is owner present?<ol style="list-style-type: none">a) Capable of making decisions?b) Capable of assisting?5. Has a veterinarian been notified?6. Notify animal control and law enforcement if necessary <p>B. Pre-establish response agreements with appropriate agencies</p> <ol style="list-style-type: none">1. Unified command<ol style="list-style-type: none">a) Animal controlb) Law enforcementc) Fire departmentd) Veterinariane) Owner | <p>SLIDE: 2-1-1</p> <p>SLIDE: 2-1-2</p> <p>SLIDE: 2-1-3</p> |

| PRESENTATION | APPLICATION |
|--|--|
| <ul style="list-style-type: none"> 4) Horse/human bond can be very strong b) Biggest problem <ul style="list-style-type: none"> 1) Can be emotionally traumatized, dysfunctional c) The final authority... <ul style="list-style-type: none"> 1) The owner has final responsibility and authority for disposition of the victim 7. Consider resource list (LAR trained) <ul style="list-style-type: none"> a) Experienced horse handlers b) Experienced cattlemen C. On-scene <ul style="list-style-type: none"> 1. Quiet approach 2. Low light levels 3. Don't rush in <ul style="list-style-type: none"> a) Animals may react b) If the situation is stable and animals are quiet, leave it alone while objectives are established 4. Establish an Incident Command Post (ICP) <ul style="list-style-type: none"> a) This will probably be a unified command situation b) ICP should be outside the working area but in easy view of the scene 5. Scene size-up, get additional resources <ul style="list-style-type: none"> a) Heavy equipment <ul style="list-style-type: none"> 1) Cranes | <p>SLIDE: 2-1-9</p> <p>Why?</p> <p>What other resources might be necessary?</p> |

| PRESENTATION | APPLICATION |
|--|-----------------------------|
| <ul style="list-style-type: none"> 2) Tow trucks 3) Helicopters b) Animal transports 6. Attend to any human injuries first 7. IC establishes operation zones, safety zones, and staging areas <ul style="list-style-type: none"> a) Allow ample room for each operation b) Keep scene lighting as general as possible 8. IC designates team leaders <ul style="list-style-type: none"> a) Operations b) Safety Officer c) Animal handler d) Extrication Officer e) Information Officer f) Containment Leader | <p>SLIDE: 2-1-10</p> |
| <ul style="list-style-type: none"> D. Team leaders <ul style="list-style-type: none"> 1. Operations <ul style="list-style-type: none"> a) Directs all rescue operations b) Considers the unpredictable movements of the animal c) Establishes safety areas d) Establishes adequate workspace <ul style="list-style-type: none"> 1) To accommodate operational needs e) Determines the need for and requests additional resources | <p>SLIDE: 2-1-11</p> |

| PRESENTATION | APPLICATION |
|---|---|
| <ul style="list-style-type: none"> 5. Information Officer <ul style="list-style-type: none"> a) Contact person for all news media personnel 6. Containment Leader <ul style="list-style-type: none"> a) In situations where there are loose or multiple animals b) Organizes personnel and equipment to capture and contain loose animals c) Coordinates animal handlers d) Responsible for control of animals until they are turned over to responsible party E. Trailer accidents <ul style="list-style-type: none"> 1. Stop traffic (if possible) 2. Check for loose animals <ul style="list-style-type: none"> a) While en route b) Upon arrival on-scene 3. Keep distractions to a minimum <ul style="list-style-type: none"> a) Remember line-of-fire, field-of-vision b) No red lights or sirens on-scene c) Quiet pagers 4. Establish open working zones <ul style="list-style-type: none"> a) Frightened animals need room to move so they won't feel confined 5. Establish safety zones <ul style="list-style-type: none"> a) For horse b) For rescuers | <p>SLIDE: 2-1-15</p> <p>SLIDE: 2-1-16</p> <p>SLIDE: 2-1-17</p> |

| PRESENTATION | APPLICATION |
|--|---|
| <ul style="list-style-type: none"> 6. Keep personnel calm <ul style="list-style-type: none"> a) No running, shouting, or throwing equipment around 7. Position (stage) extra personnel and equipment out of the way, but readily available <ul style="list-style-type: none"> a) Extra personnel should watch for safety of others 8. Access the trailer <ul style="list-style-type: none"> a) Animal handler and vet <ul style="list-style-type: none"> 1) Check animal(s) for injuries 2) Check for position in trailer 9. Determine trailer's structural integrity <ul style="list-style-type: none"> a) Special considerations 10. Determine operations and prepare contingencies <p>F. Trail accidents</p> <ul style="list-style-type: none"> 1. Gain control of the animal <ul style="list-style-type: none"> a) Emergency halter if necessary 2. Determine the level of injuries to the animal 3. Determine appropriate rescue system(s) use 4. Establish working zones <ul style="list-style-type: none"> a) With ample space for operations b) Operations will not be static 5. Establish safety zones 6. Establish escape routes 7. Establish locations to reset hauling system 8. Determine operations and prepare contingencies | <p style="text-align: center;">SLIDE: 2-1-18</p> |

SUMMARY:

A LAR will normally be a unified command operation. Legal aspects may determine certain decisions and strategies may rely upon active input of the veterinarian on scene. While scene management is similar to more conventional incidents, operations and scene set-up must remain flexible to accommodate the volatile nature of a large animal rescue. Operations, at all times, should be guided by an understanding of horse characteristics and behavior.

Because large animal rescue is inherently dangerous, operations should give the highest priority to the safety of rescue personnel. All responders should wear the appropriate personal protective equipment.

EVALUATION:

The student will complete the written test at a time determined by the instructor.

ASSIGNMENT:

Review your notes and read Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 33-42 in order to prepare yourself for the upcoming test. Study for our next session.

SLIDE INDEX

Slide 1

**Scene Management and
Operations**

Slide 2

Protocols for Large Animal Rescue

- ◆ What is the nature of the incident?
- ◆ Is the rider(s) injured?
- ◆ How many horses are involved? Any injuries?
- ◆ Is the owner present and capable of making decisions concerning the welfare of the animal?
- ◆ Has a veterinarian been notified?
- ◆ Notify animal control and law enforcement if necessary

Slide 3

Who Is In Command?

- ◆ Animal control
- ◆ Law enforcement
- ◆ Fire department
- ◆ Veterinarian
- ◆ Owner

Slide 4

Animal Control

- ◆ Has legal authority in incidents involving animals
- ◆ They assume responsibility of the animal if the owner is not present
- ◆ Transportation of large animal(s)
- ◆ Housing and care of the animal(s) after the incident

Slide 5

Law Enforcement

Highway Patrol, Sheriff, Police, Park Ranger

- ◆ May share legal authority with animal control
- ◆ Often are first on-scene
- ◆ Responsible for traffic control or road closure
- ◆ May be needed for crowd control and scene access
- ◆ May be needed to dispatch animal control

Slide 6

Fire Department

- ◆ The primary resource
- ◆ Provides
 - ◆ Staffing
 - ◆ Equipment
 - ◆ Communication
 - ◆ Technical skills
- ◆ Can access additional resources

Slide 7

Large Animal Veterinarian

- ◆ The medical authority
- ◆ Mobile
- ◆ Best qualified to assess the condition of the animals
- ◆ Equipped with medication
 - ◆ Chemical restraints
 - ◆ Sedatives and pain killers
 - ◆ IV fluids
 - ◆ Euthanasia solution
- ◆ May not be used to a "team" situation
- ◆ May not be trained in heavy rescue/extrication

Slide 8

The Owner

- ◆ Best resource
- ◆ May be your biggest problem
- ◆ The final authority...
 - ◆ The owner has final responsibility and authority for disposition of the victim

Slide 9

On-scene

- ◆ Quiet approach
- ◆ Low light levels
- ◆ Don't rush in
- ◆ Establish an ICP
- ◆ Scene size-up
- ◆ Attend to human injuries first
- ◆ IC establishes operation and safety zones, staging areas
- ◆ IC designates team leaders

Slide 10

Team Leaders

- ◆ Operations
- ◆ Safety Officer
- ◆ Animal Handler
- ◆ Extrication Officer
- ◆ Information Officer
- ◆ Containment Leader
 - ◆ In situations where there are loose or multiple animals

Slide 11

Operations

- ◆ Directs all rescue operations
- ◆ Considers the unpredictable movements of the animal
- ◆ Establishes safety areas
- ◆ Establishes adequate workspace
- ◆ To accommodate operational needs
- ◆ Determines the need for and requests additional resources

Slide 12

Safety Officer

- ◆ Responsible for
 - ◆ Safety of all rescue personnel
 - ◆ Proper and safe use of rescue equipment
 - ◆ Use of appropriate PPE
 - ◆ Proper safety practices
- ◆ Oversees all operations including monitoring all safety and work areas

Slide 13

Animal Handler

- ◆ Interfaces with owner to obtain information
- ◆ Makes initial contact with animal
- ◆ Interfaces with the veterinarian
- ◆ Inspects the trailer/situation and advises IC of veterinarian's orders or actions
- ◆ Monitors animal's status during operations
 - ◆ Advises IC if event is escalating in risk

Slide 14

Extrication/Haul Team Officer

- ◆ Responsible for set-up and implementation of all animal extrications
- ◆ Sets up haul teams and haul systems

Slide 15

Information Officer

- ◆ Contact person for all news media personnel

Slide 16

Containment Officer

- ◆ In situations where there are loose or multiple animals
- ◆ Organizes personnel and equipment to capture and contain loose animals
- ◆ Coordinates animal handlers
- ◆ Responsible for control of animals until they are turned over to responsible party

Slide 17

Trailer Accidents

- ◆ Stop traffic (if possible)
- ◆ Check for loose animals
- ◆ Keep distractions to a minimum
- ◆ Establish open working and safety zones
- ◆ Keep personnel calm
- ◆ Stage extra personnel and equipment
- ◆ Access the trailer
- ◆ Determine trailer's structural integrity
- ◆ Determine operations; prepare contingencies

Slide 18

Trail Accidents

- ◆ Gain control of the animal
- ◆ Determine level of animal's injuries
- ◆ Determine appropriate rescue system
- ◆ Establish working and safety zones
- ◆ Establish escape routes
- ◆ Establish locations to reset hauling system
- ◆ Determine operations; prepare contingencies

Slide 19

Operations (On- and Off-road)

- ◆ Consult with on-scene vet and owner to determine plan of action
- ◆ Coordinate operations and timing
- ◆ Establish communications
- ◆ Review established areas of operation
- ◆ Carry-out operation
- ◆ Consider legal aspects

Slide 20

Legal Considerations

- ◆ Owner has authority to resolve animal's fate
- ◆ Animal control assumes authority if owner is not present
 - ◆ May be shared with law enforcement
- ◆ Some animals are insured - FIND OUT!
- ◆ Notify insurance company of imminent euthanasia

Slide 21

Euthanasia

- ◆ A "good" death
- ◆ A gentle death
 - ◆ Free of pain and suffering
- ◆ Preferably by injection
- ◆ Possible by firearm

Slide 22

Safety

- ◆ Safety of the rescuers is a priority
- ◆ May not be possible to manage risk at a reasonable level
 - ◆ If the rescue is too dangerous, decline the assignment
- ◆ Euthanasia may be the only option

TOPIC: 2-2: Large Animal Rescue Equipment

TIME FRAME: 0:30

LEVEL OF INSTRUCTION: Level I

BEHAVIORAL OBJECTIVE:

Condition: Given a written test

Behavior: The student will confirm a knowledge of the different rescue equipment specific to LAR by completing the written test

Standard: With a minimum 80% accuracy according to the information contained in Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 43-58

MATERIALS NEEDED:

- Writing board/pad with markers/erasers
- Appropriate audiovisual equipment
- Appropriate audiovisual materials
- 25-30 foot length of ½-inch rope, conventional lead line
- Fiberglass horse
- Rescue straps
- 18 foot length of 3" or 4" fire hose
- 60 foot length of ¾-inch or 1-inch soft cotton rope or 1-inch single jacket fire hose
- 60 foot length of 2-inch webbing (optional)
- Appropriate PPE

REFERENCES:

- "Helicopter Rescue of Horses," Journal of Equine Veterinary Science, 1995, Volume 15: #4, Pages 155-157
- Large Animal Rescue Student Manual, SFT, 2002 Edition, Pages 43-58

PREPARATION:

The size, weight, and injuries of a large animal must be considered when choosing rescue equipment. With training and improvisation, standard equipment, carried on almost any fire engine, can be adapted for LAR. Depending on the terrain, injuries, and other considerations, specially designed equipment specific for LAR may be required.

| PRESENTATION | APPLICATION |
|---|---|
| <p>E. Rescue strap, rear application</p> <ol style="list-style-type: none"> 1. The rescue strap is placed over the back just forward of the hip 2. The loop ends are placed through the back legs and exit as a pair towards the tail 3. Pull is to the hips <ol style="list-style-type: none"> a) No pressure on the belly b) Intestines are not protected by the ribs 4. Rescue function <ol style="list-style-type: none"> a) Extrication of large animal from confined space <ol style="list-style-type: none"> 1) Trailer 2) Barn collapse 3) Stuck between two trees | <p>SLIDE: 2-2-10</p> <p>SLIDE: 2-2-11</p> <p>SLIDE: 2-2-12</p> |
| <p>II. AIDES</p> <p>A. Lubricants</p> <ol style="list-style-type: none"> 1. Can be used in conjunction with rescue strap to extricate the animal out of a confined space 2. Can be applied to the rescue strap to ease application on recumbent animals <p>B. Thin diameter rope</p> <ol style="list-style-type: none"> 1. Can be tied to the end of the rescue strap to apply at a safe distance <ol style="list-style-type: none"> a) Stay out of the line of fire 2. Can be tied to the end of the rescue strap to feed under the animal | <p>SLIDE: 2-2-13</p> <p>SLIDE: 2-2-14</p> |

| PRESENTATION | APPLICATION |
|--|-----------------------------|
| <p>VIII. MISCELLANEOUS EQUIPMENT</p> <ul style="list-style-type: none">A. Ear plugs<ul style="list-style-type: none">1. Nylon stockings stuffed with cottonB. Blindfolds<ul style="list-style-type: none">1. Towel, shirt, jacket, etc.C. Short lengths of soft cotton ropeD. Throw lineE. Pike pole, boat hook, or snake tongs | <p>SLIDE: 2-2-39</p> |

SUMMARY:

A successful rescue depends on many things. Equipment is one. There are several pieces of equipment specific to LAR that can be useful in a variety of situations. If this equipment is not available, standard fire equipment can be adapted. Some fire districts have special equipment available through animal control agencies. Any resources should be identified and listed ahead of time.

EVALUATION:

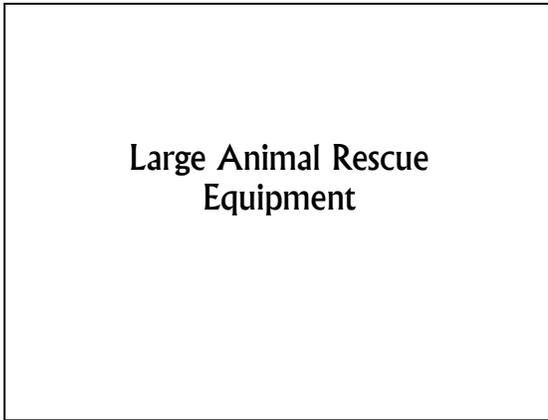
The student will complete the written test at a time determined by the instructor.

ASSIGNMENT:

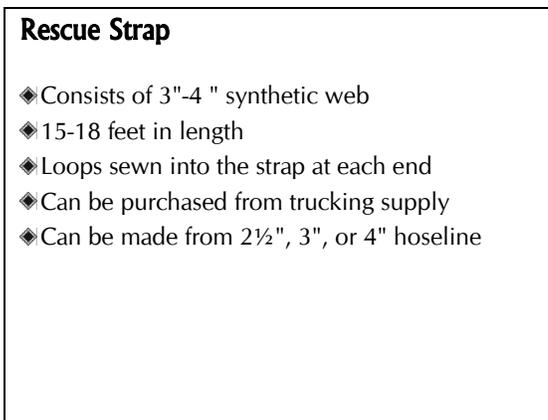
Review your notes and read Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 43-58 in order to prepare yourself for the upcoming test. Study for our next session.

SLIDE INDEX

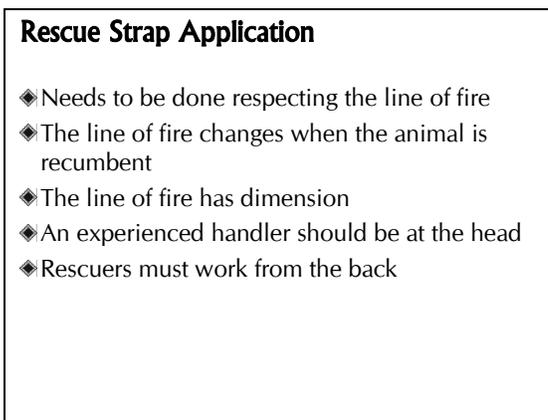
Slide 1



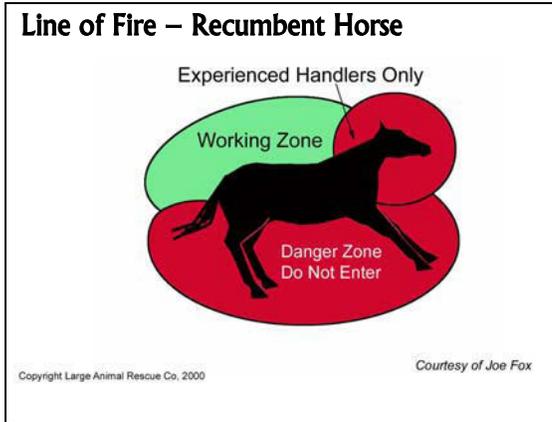
Slide 2



Slide 3

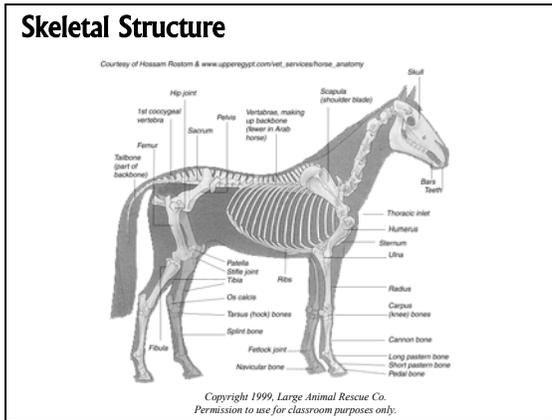


Slide 4



(Rev. 8/03)

Slide 5



Slide 6

Rescue Strap, Forward Application

- ◆ Maintain proper position out of the line of fire
- ◆ Circle strap around girth area until first loop arrives behind near leg below the shoulder
 - ◆ Pressure is applied to the skeletal structure
 - ◆ Structure is substantial
- ◆ Second loop is fed through first loop to create a larksfoot
- ◆ Free end is brought through the front legs for attachment to rope system

Slide 7

Rescue Strap, Forward Application



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Slide 8

Rescue Function

- ◆ Assisting a large animal
 - ◆ Up a steep hill
 - ◆ Out of the mud
 - ◆ Out of water, ice
 - ◆ Out of a swimming pool

Slide 9

Rescue Strap, Front Lift Application

- ◆ The rescue strap is placed in the forward location with the larksfoot at the withers
- ◆ Rescue function
 - ◆ Only used to assist to upright position
 - ◆ Not used to vertically lift
 - ◆ This is used to assist the animal to a standing position

Slide 10

Rescue Strap, Rear Application

- ◆ The rescue strap is placed over the back just forward of the hip
- ◆ The loop ends are placed through the back legs and exit as a pair towards the tail
- ◆ Pull is to the hips
 - ◆ No pressure on the belly
 - ◆ Intestines are not protected by the ribs

Slide 11

Rescue Strap, Rear Application



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Slide 12

Rescue Function

- ◆ Extrication of large animal from confined space
 - ◆ Trailer
 - ◆ Barn collapse
 - ◆ Stuck between two trees

Slide 13

Lubricants

- ◆ Can be used in conjunction with rescue strap to extricate the animal out of a confined space
- ◆ Can be applied to the rescue strap to ease application on recumbent animals

Slide 14

Thin Diameter Rope

- ◆ Can be tied to the end of the rescue strap to apply at a safe distance
 - ◆ Stay out of the line of fire
- ◆ Can be tied to the end of the rescue strap to feed under the animal

Slide 15

Pike Poles and Snake Tongs

- ◆ Can be used as an extension of the arm to facilitate application

Slide 16

Vertical Lift Tie Materials

- ◆ 1-inch soft cotton rope
 - ◆ Seats well in application
 - ◆ Produces big knots; Less comfortable for victim
 - ◆ Some are not rated; Requires inspection and maintenance
- ◆ 2-inch polyester web tie
 - ◆ Can slip off
 - ◆ Knots lie flat against the victim; More comfortable
 - ◆ Most are rated; Low maintenance

Slide 17

Vertical Lift Tie Materials

- ◆ 1" wildland hoseline tie
 - ◆ Readily available
 - ◆ Good substitute for conventional materials
 - ◆ Bulky knots
 - ◆ May not be rated

Slide 18

Vertical Lift Tie Application

- ◆ Find center of rope and fold in half
- ◆ Holding center at horse's withers, measure down to the sternum and tie an overhand knot
- ◆ Place the loop over the horse's neck
- ◆ Situate knot at the sternum below the thoracic inlet

Slide 19

Vertical Lift Tie Application



Photos Courtesy Of Felton FD

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Slide 20

Vertical Lift Tie Application

- ◆ With one person working on each side of the horse and holding a rope end, feed running ends of the rope through the front legs and up to the withers
- ◆ Exchange ends forming an "X" behind the withers
- ◆ Ends are brought down to the inside of each hind leg and exit in between the hind legs
- ◆ The ends are brought up and joined with an overhand knot above the tail

Slide 21

Vertical Lift Tie Application



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Slide 22

Vertical Lift Tie Application

- ◆ Ends are both fed under the "X," brought forward, and fed under the neck loop
- ◆ The ends are brought back over the "X," tucked between the two straps on the back, and brought forward to the neck loop again
- ◆ The ends are wound around the straps, each in the opposite direction, between the neck and the withers repeatedly until a handle is formed for lifting
- ◆ The carabiner is attached to the handle

Slide 23

Vertical Lift Tie Application



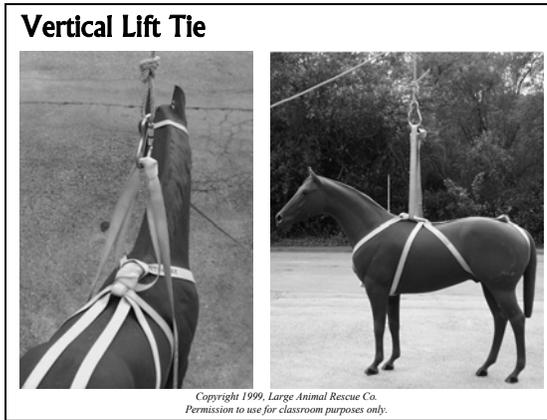
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Slide 24

Rescue Function

- ◆ Assist a large animal to its feet
- ◆ A low lift for a short duration (10 minutes)
 - ◆ Out of a hole, ravine, etc.
 - ◆ Out of a swimming pool

Slide 25



Slide 26

Vertical Lift Tie Considerations

- ◆ Advantages
 - ◆ Lifts the animal from the center of gravity
 - ◆ Captures each quarter of the animal
 - ◆ Does not require any mechanical devices or hardware
- ◆ Cautions
 - ◆ May cause pain or discomfort
 - ◆ May incite thrashing
 - ◆ May damage nerves and delicate tissues on the inside of the upper rear legs

Slide 27

2 Strap Vertical Lift Materials

- ◆ 2 lifting straps
 - ◆ 4"-5" wide
 - ◆ 12-14 feet long
- ◆ Chest strap
 - ◆ 4"-5" wide
 - ◆ 2-3 feet long
- ◆ Lifting bar

Slide 28

2 Strap Vertical Lift Application

- ◆ Chest strap is fed under the chest and joined at the back
- ◆ Second strap is fed under the animal
 - ◆ At rear of animal and in front of rear legs
- ◆ Chest strap is attached across front of chest
 - ◆ Attached to front lifting strap on both sides
- ◆ Both lifting straps are attached to lifting bar
 - ◆ The lifting bar is attached to the haul system

Slide 29

2 Strap Vertical Lift Application



*Photo Courtesy Of
Tomas Gimenez, PhD*

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Slide 30

Rescue Function

- ◆ Assist a large animal to its feet
- ◆ A low lift for a short duration (10 minutes)
 - ◆ Out of a hole, ravine, etc.
 - ◆ Out of a swimming pool

Slide 31

2 Strap Vertical Lift Considerations

- ◆ Advantages
 - ◆ Easy and relatively quick to apply
- ◆ Cautions
 - ◆ Requires the bar to keep the straps separated
 - ◆ Requires a chest strap to keep the front strap from slipping back
 - ◆ For short, low lifts less than 10 minutes
 - ◆ Applies pressure to the internal organs
 - ◆ Rear strap may act as a bucking strap

Slide 32

The Glide

- ◆ A backboard for large animals
- ◆ Materials
 - ◆ High density polymer material
 - ◆ Metal fittings
 - ◆ Web straps with ratchets
 - ◆ Shaped like a sled
 - ◆ Slip-sheet
 - ❖ To go over minor ground obstructions
 - ❖ To go into a stock trailer or horse ambulance
 - ◆ Hobbles

Slide 33

The Glide



Photo Courtesy Of
Tomas Gimenez, PhD

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Slide 34

Rescue Function

- ◆ A means of moving a recumbent horse
 - ◆ A distance
 - ◆ Up a hill
 - ◆ Into a trailer
- ◆ Generally requires sedation
- ◆ Hobbles are optional

Slide 35

The Anderson Sling

- ◆ Materials
 - ◆ Polyester web
 - ◆ Adjustable buckles
 - ◆ Metal frame
 - ◆ Helicopter package

Slide 36

The Anderson Sling



Photo Courtesy Of
Tomas Gimenez, PhD

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Slide 37

Rescue Function

- ◆ High vertical lift
- ◆ Sustained lift (lift longer than 10 minutes)
- ◆ Helicopter lift
 - ◆ The only harness tested and military approved for helicopter rescue
 - ◆ Special training required for helicopter use

Slide 38

Head Protection

- ◆ Rescue Function
 - ◆ Head protection for sedated animals
 - ◆ Confined spaces
 - ◆ Hauling recumbent animals
 - ◆ Offers more protection for the animal and the rescuers
- ◆ Alternate Head Protection
 - ◆ Blankets
 - ◆ Coats
 - ◆ Shirts

Slide 39

Miscellaneous Equipment

- ◆ Ear plugs
 - ◆ Nylon stockings stuffed with cotton
- ◆ Blindfolds
 - ◆ Towel, shirt, jacket, etc.
- ◆ Short lengths of soft cotton rope
- ◆ Throw line
- ◆ Pike pole, boat hook, or snake tongs

TOPIC: 2-3: How To Apply A Rescue Strap, Forward Application

TIME FRAME: 0:15

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a haltered fiberglass horse, rescue strap, and appropriate personal protective equipment

Behavior: The student will apply a rescue strap in the forward application

Standard: Completing all operations within _____ according to the job breakdown

MATERIALS NEEDED:

- Job breakdown
- Haltered fiberglass horse
- Rescue strap
- Appropriate personal protective equipment

REFERENCES:

- None

PREPARATION:

The rescue of a large animal usually requires movement of the animal to a safe location. The easiest way to move a large animal in a forward direction is with a forward application of the rescue strap. The forward application can be applied on a standing or recumbent animal. Knowing proper application techniques will help fire fighters to be efficient and stay safe.

| OPERATIONS | KEY POINTS |
|------------------------------|--|
| 1. Approach the horse | 1a. With approval of the handler b. Holding rescue strap close to body c. With strap zigzagged in the hand d. Allowing horse to see and smell strap e. Staying in the neutral zone |
| 2. Place the strap | 2a. On the horse b. Slowly c. While rubbing d. Gently |
| 3. Work the rescue strap | 3a. Over the horse's back and down to the other side b. Slowly c. With back of arm against the horse's chest d. Allowing horse to settle if agitated |
| 4. Grasp end of rescue strap | 4a. Slowly b. While reaching under horse's girth c. With back of arm in gentle contact with horse's girth area d. Allowing horse to settle if agitated |
| 5. Pull end of strap | 5a. Up to horse's side b. Gently c. Slowly d. Allowing horse to settle if agitated |



LARGE ANIMAL RESCUE

Operational

| OPERATIONS | KEY POINTS |
|--------------------------------|--|
| 6. Insert running end of strap | 6a. Through loop at horse's side b. Slowly c. Keeping length organized and contained d. Allowing horse to settle if agitated |
| 7. Feed running end of strap | 7a. Down and forward through the horse's front legs b. Slowly c. At the handler's direction d. Allowing horse to settle if agitated |
| 8. Work the strap loop | 8a. From the side down to the sternum b. Slowly c. Keeping loose d. Allowing horse to settle if agitated |
| 9. Extend running end of strap | 9a. Forward to the haul system b. At the direction of the handler c. Slowly d. Allowing horse to settle if agitated |

APPLICATION:

The student will practice performing the operations in the job breakdown while under supervision.

EVALUATION:

The student will complete a manipulative performance test at a time determined by the instructor.

ASSIGNMENT:

Practice this job in order to prepare yourself for the upcoming performance test. Study for our next session.

TOPIC: 2-4: How To Apply A Vertical Lift Tie

TIME FRAME: 0:15

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a fiberglass horse, a 60-foot length of $\frac{3}{4}$ -inch soft cotton rope or 1-inch single jacket wildland hoseline, and appropriate personal protective equipment

Behavior: The student will

Standard: Completing all operations within _____ according to the job breakdown

MATERIALS NEEDED:

- Job breakdown
- Fiberglass horse
- 60-foot length of $\frac{3}{4}$ -inch soft cotton rope or 1-inch single jacket wildland hoseline
- Appropriate personal protective equipment

REFERENCES:

- None

PREPARATION:

Prey animals have poor depth perception. This makes them more vulnerable to falling into pits, swimming pools, and ravines, a situation that may require low vertical lifting of the animal. Application of the vertical lift tie is critical to success of the operation. An incorrect tie may put pressure on the soft tissue of the animal, resulting in injury. If the tie is not snug enough, the animal may slip or struggle out of it, posing a risk to itself and nearby rescuers. A simple vertical lift tie devised by Dr. Stephen Dey can be used to capture each quarter of the animal, making use of the bony structure for support.

| OPERATIONS | KEY POINTS |
|--|--|
| 1. Rescuer 1 places the center of the rope | 1a. At the top of the withers b. With the center of the rope in one hand c. With the running ends folded in the other hand d. Slowly e. Gentle but firm contact f. Soft, general eye contact g. Standing in neutral zone |
| 2. Extend the folded running ends | 2a. To the mid sternum b. Marking location on running ends |
| 3. Tie an overhand knot | 3a. At the marked location b. Forming a loop in the middle of the rope c. So that the knot falls in the mid sternum |
| 4. Handler feeds halter lead | 4a. Through the loop b. With Rescuer 1 on the side of the horse c. Allowing horse to settle if it becomes agitated |
| 5. Rescuer 2 approaches horse | 5a. On side opposite from Rescuer 1 b. In neutral zone c. With handler holding halter lead |
| 6. Rescuer 1 hands one running end of tie | 6a. To Rescuer 2 b. With running end folded neatly c. Keeping the other running end organized and folded |
| 7. Rescuer 1 passes the running end | 7a. Between the horse's front legs b. Towards the tail |

| OPERATIONS | KEY POINTS |
|--|--|
| 8. Rescuer 1 brings the running end | 8a. Up to the girth area b. Allowing horse to settle if agitated c. Maintaining proper position |
| 9. Rescuer 2 repeats steps 7-8 | 9a. On the side opposite Rescuer 1 b. Repeating 8a-c |
| 10. Both rescuers move the folded running ends | 10a. Up to the withers b. Slowly c. Flaking out the folds as necessary d. Allowing horse to settle if agitated e. Either at the same time or separately, depending on the horse's behavior |
| 11. Rescuers exchange folded running ends | 11a. Just behind the withers b. Forming an X over the back c. Moving towards the rear quarters |
| 12. Rescuer 1 works the folded running end | 12a. Down and under the horse b. Around the rear leg c. Gently rubbing with placement of rope d. Moving slowly e. Maintaining contact f. Ending with rope up near base of tail |
| 13. Rescuer 2 repeats step 12 | 13a. On side opposite Rescuer 1 b. Repeating 12a-f |
| 14. Rescuers bring running ends | 14a. Together b. At top of tail |

| OPERATIONS | KEY POINTS |
|---------------------------------------|--|
| 15. Rescuer 1 ties an overhand knot | 15a. In running ends b. Above tail c. With running ends equal and parallel d. With Rescuer 2 assisting if necessary |
| 16. Rescuers pass folded running ends | 16a. Forward b. Under X on back c. Flaking out folds as necessary |
| 17. Rescuers pass running ends | 17a. Forward b. Under neck loop c. At top of withers |
| 18. Rescuers pass running ends | 18a. Over and under the X b. Passing through the double lines on the back c. Turning under the X |
| 19. Rescuers repeat Step 17 | |
| 20. Rescuers tighten tie | 20a. Gently b. Pulling slack out of rope or hose as possible c. Until snug on horse |
| 21. Rescuers divide running ends | 21a. While in neutral zone |
| 22. Rescuers wrap running ends | 22a. Around lines between neck loop and X b. Alternating direction c. Passing ends back and forth between each other d. Continuing until a "handle" is formed |

| OPERATIONS | KEY POINTS |
|----------------------------------|--|
| 23. Rescuer 1 ties the rope ends | 23a. Together b. With a nonslip knot c. To form a lifting loop |

APPLICATION:

The student will practice performing the operations in the job breakdown while under supervision.

EVALUATION:

The student will complete a manipulative performance test at a time determined by the instructor.

ASSIGNMENT:

Practice this job in order to prepare yourself for the upcoming performance test. Study for our next session.

TOPIC: 2-5: Trailers And Trailer Operations

TIME FRAME: 1:00

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a written test

Behavior: The student will confirm a knowledge of animal transport trailer types and construction, scene set up where a trailer is involved, and an overall knowledge of animal removal from a trailer by completing the written test

Standard: With a minimum 80% accuracy according to the information contained in Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 59-70

MATERIALS NEEDED:

- Writing board/pad with markers/erasers
- Appropriate audiovisual equipment
- Appropriate audiovisual materials

REFERENCES:

- Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 59-70
- Logan Trailers product literature
- Principles of Vehicle Extrication, IFSTA, Second Edition
- Rescue Systems 1 Instructor Guide, SFT, 2000 Edition
- Sooner Trailers product literature

PREPARATION:

The transportation of large animals on the roadways is an everyday event as animals are transported for sport, competition, and pleasure. If an accident happens, the fire department will be called. Knowledge of LAR will help resolve the incident more quickly, mitigating the impact on traffic flow. Proper technique will lessen the risk that a loose horse would pose to other motorists. Successful extrication of the animal(s) depends on knowledge of trailers and their construction.

| PRESENTATION | APPLICATION |
|---|---|
| <p>I. TRAILERS</p> <p>A. Trailers types</p> <ol style="list-style-type: none"> 1. Bumper pull trailer 2. Gooseneck trailer 3. Tractor trailer 4. Stand-alone, single vehicle <ol style="list-style-type: none"> a) The animal-hauling portion is permanently affixed to the vehicle <p>B. Trailer configurations</p> <ol style="list-style-type: none"> 1. Straight or side-by-side load: 2- and 4-horse <ol style="list-style-type: none"> a) Without tack room b) With tack room 2. Slant load: 2-, 3-, or 4-horse <ol style="list-style-type: none"> a) Without tack room b) With front tack room c) With rear tack room 3. Trailer floor plans vary <ol style="list-style-type: none"> a) Rear load, side load, rear load/side unload b) Design of trailer will dictate extrication 4. Stock <ol style="list-style-type: none"> a) Rear or side load | <p>SLIDE: 2-5-1</p> <p>SLIDE: 2-5-2</p> <p>SLIDE: 2-5-3</p> <p>SLIDE: 2-5-4</p> <p>SLIDE: 2-5-5</p> <p>SLIDE: 2-5-6</p> <p>SLIDE: 2-5-7</p> <p>SLIDE: 2-5-8</p> |



LARGE ANIMAL RESCUE

Operational

| PRESENTATION | APPLICATION |
|--|----------------------------|
| <ul style="list-style-type: none">5. Trailers with living quarters may contain<ul style="list-style-type: none">a) Propane tanksb) Appliancesc) People6. Special trailers, truck/trailer combinations<ul style="list-style-type: none">a) Represent high value animalsb) Expect an attendant to be in trailer with animals <p>C. Trailer construction</p> <ul style="list-style-type: none">1. Frame<ul style="list-style-type: none">a) Steelb) Aluminumc) Square steel tubing2. Roofing<ul style="list-style-type: none">a) Steelb) Aluminumc) Fiberglass3. Siding<ul style="list-style-type: none">a) Steelb) Aluminumc) Fiberglassd) Woode) Rubber matting4. Floor<ul style="list-style-type: none">a) Woodb) Aluminumc) Rubber matting on floors | <p>SLIDE: 2-5-9</p> |

| PRESENTATION | APPLICATION |
|--|--|
| <p>D. Considerations</p> <ol style="list-style-type: none"> 1. People in living quarters <ol style="list-style-type: none"> a) Attendants in the animal compartment <ol style="list-style-type: none"> 1) Large semi-trailers <ul style="list-style-type: none"> • Carriers of high value animals 2) Trailers with injured or sick animals going to the vet 2. Propane tanks, cooking appliances 3. Number of animals in the trailer 4. Physical condition of the animals 5. Structural integrity of the trailer 6. Physical location of the accident and extenuating circumstances 7. Legal aspects <p>III. TRAILER UPRIGHTING EXTRICATION OPERATIONS</p> <p>A. The on-scene veterinarian may sedate the animal to assist with operations</p> <ol style="list-style-type: none"> 1. Operations must be preplanned and executed within the "window of opportunity" that various levels of sedation allow <p>B. Upright the trailer with the animals still inside</p> <p>NOTE: Trailer uprighting techniques were developed by Captains John Fox and Greg Malloy with the assistance of the Felton FPD.</p> <p>C. Considerations</p> <ol style="list-style-type: none"> 1. Greater safety for the rescue workers 2. Less chance of injury to the animals | <p>SLIDE: 2-5-19</p> <p>What kinds of trailers would have attendants?</p> <p>SLIDE: 2-5-20</p> |

| PRESENTATION | APPLICATION |
|--|-----------------------------|
| <p>a) Rear tack rooms may prevent or complicate walking the animal out the rear door</p> <p>1) A narrow door at the rear may indicate a tack room</p> <p>2) Some rear tack rooms are collapsible, some are not</p> <p>4. Determine extrication operations</p> <p>a) How will the doors be opened?</p> <p>b) Do doors need to be removed?</p> <p>c) Is there a center post?</p> <p>d) If present, how will center divider be removed?</p> <p>e) Can animal(s) stand up and walk out?</p> <p>5. Two or more animals complicate operations</p> <p>a) They will want to get out at the first opportunity</p> <p>1) If one animal is down, the other may further injure it in an attempt to escape</p> <p>b) Provide one handler per animal</p> <p>c) Position or orientation of the animals may complicate the operation</p> <p>1) Animals may be "pancaked"</p> <ul style="list-style-type: none"> • The pressure of the upper animal may soon compromise the physical condition of the lower animal • Rescuers will need to work quickly | <p>SLIDE: 2-5-25</p> |

| PRESENTATION | APPLICATION |
|---|---|
| <ul style="list-style-type: none"> 2) The animal(s) are positioned with head downhill <ul style="list-style-type: none"> • They can only stay in this position for a limited time before suffering damage or death • Rescuers will need to work quickly d) Animal may need to be sedated <ul style="list-style-type: none"> 1) Length of sedation needs to be coordinated with operations and closely monitored 6. Establish a clear working zone for the rescuers and the extricated animal(s) 7. If the animal(s) are not able to back out, rescue straps will be needed <ul style="list-style-type: none"> a) Determine operations <ul style="list-style-type: none"> 1) Application of straps 2) Appropriate rope system 3) Necessary maneuvering of animal to fit through opening <ul style="list-style-type: none"> • Pull feet into the body in tight situations 8. Operations and safety officers must be positioned to see the vet, handlers, animal and team leaders at all times <ul style="list-style-type: none"> a) Monitor body language of animal b) Operations halt if anyone sees a problem 9. Extrication personnel must have escape routes <ul style="list-style-type: none"> a) Operation could be unpredictable b) Stay flexible | <p style="text-align: center;">SLIDE: 2-5-26</p> |

| PRESENTATION | APPLICATION |
|---|-----------------------------|
| <p>10. "One-in, One-out" option</p> <ul style="list-style-type: none"> a) Backup personnel for rescuers working closely with animal <p>11. Consider usage of backboards and salvage covers to slide animal over metal edges</p> <p>12. Open doors slowly</p> <ul style="list-style-type: none"> a) Remember butt-chain b) Remember animal's wide field of vision c) Remember prey behavior <ul style="list-style-type: none"> 1) Animal may appear to be quiet, but is really conserving energy for the first opportunity at escape d) Remember to stay out of the "swing" of doors <ul style="list-style-type: none"> 1) A properly placed hoof can open a door quickly <p>F. Extrication by roof removal</p> <ul style="list-style-type: none"> 1. Consider the construction and structural integrity <ul style="list-style-type: none"> a) Doors may have to be left in place to prevent collapse 2. Determine what will be cut and in what order <ul style="list-style-type: none"> a) Minimize the number of cuts 3. Determine the tool to be used and a back-up tool 4. Consider noise created by removing roof <ul style="list-style-type: none"> a) Use of ear plugs, blindfold, and head protection b) Blanket animal to protect from sparks | <p>SLIDE: 2-5-27</p> |

| PRESENTATION | APPLICATION |
|---|-----------------------------|
| <ul style="list-style-type: none"> 5. Extrication team works with vet <ul style="list-style-type: none"> a) Estimate duration of operation b) Determine level of sedation 6. Determine hand signals 7. Cutter has backup person to monitor operations and assist with escape <ul style="list-style-type: none"> a) Start any power tools away from trailer <ul style="list-style-type: none"> 1) Allows animal to adjust to noise b) Cutting starts on command of operations <ul style="list-style-type: none"> 1) Operations confirms everyone is ready, everything ok c) Cutter is accompanied by "removal" person who remove cutoffs to safe zone d) Cutter is in vulnerable position e) Watch for "loaded" frame members <ul style="list-style-type: none"> 1) May spring up when cut 2) Especially on older trailers f) Avoid jerking or tugging on cut-offs <ul style="list-style-type: none"> 1) Cut-offs may come loose and hurt someone 2) Noise and movement of the cut-offs will excite the animal g) Let the tools do the work 8. Place the duct tape over sharp edges or points 9. Consider a backboard or salvage cover to smooth extrication | <p>SLIDE: 2-5-28</p> |

SUMMARY:

Fire fighter safety in an incident involving an animal transport or horse trailer depends on basic knowledge of vehicle extrication and heavy rescue skills applied with an understanding of horse behavior. Familiarity with trailer types and construction, condition of the animal(s), and condition of the trailer are considered when determining extrication or upright operations. Less intrusive rescues are safer for both the rescuers and the animals. If extrication is necessary, it should involve as little cutting up of the trailer as possible. The successful resolution of an on-road incident relies upon good incident command, inter-agency cooperation, and good communication. Strategies should remain flexible to accommodate the volatile nature of the incident.

EVALUATION:

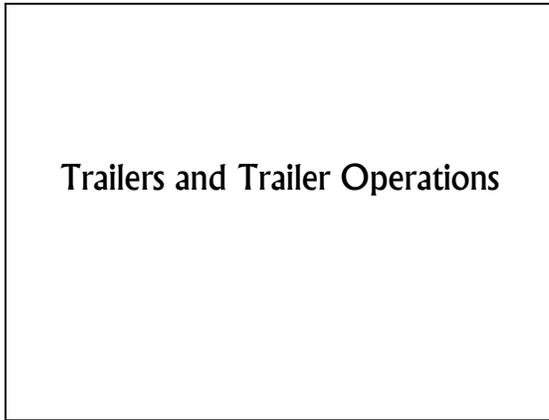
The student will complete the written test at a time determined by the instructor.

ASSIGNMENT:

Review your notes and read Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 59-70 in order to prepare yourself for the upcoming test. Study for our next session.

SLIDE INDEX

Slide 1



Slide 2

Trailer Types

- ◆ Bumper pull trailer
- ◆ Gooseneck trailer
- ◆ Tractor trailer
- ◆ Stand-alone, single vehicle
 - ◆ The animal-hauling portion is permanently affixed to the vehicle

Slide 3

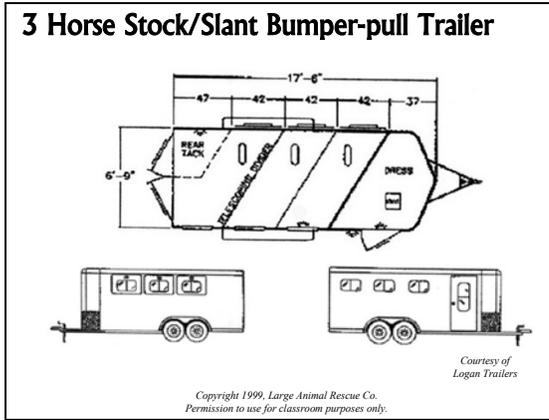
3 Horse Stock/Slant Bumper-pull Trailer



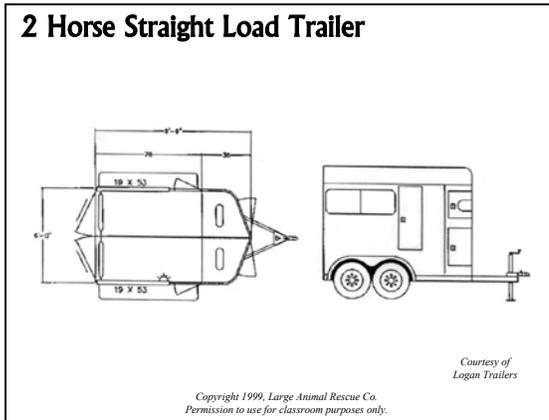
Copyright 1999, Large Animal Rescue Co.
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Courtesy of
Logan Trailers

Slide 4



Slide 5



Slide 6



Slide 7

Trailer Configurations

- ◆ Straight or side-by-side load: 2- and 4-horse
 - ◆ With or without tack room
- ◆ Slant load: 2-, 3-, or 4-horse
 - ◆ Without tack room
 - ◆ With front or rear tack room
- ◆ Trailer floor plans vary
 - ◆ Rear load, side load, rear load/side unload
 - ◆ Design of trailer will dictate extrication

Slide 8

Trailer Configurations

- ◆ Stock
 - ◆ Rear or side load
- ◆ Trailers with living quarters
 - ◆ May contain propane tanks, appliances, people
- ◆ Special trailers, truck/trailer combinations
 - ◆ Represent high value animals
 - ◆ Expect an attendant to be in trailer with animals

Slide 9

Trailer Construction

- ◆ Frame
 - ◆ Steel, aluminum, square steel tubing
- ◆ Roofing
 - ◆ Steel, aluminum, fiberglass
- ◆ Siding
 - ◆ Steel, aluminum, fiberglass, wood, rubber matting
- ◆ Floor
 - ◆ Wood, aluminum, rubber matting on floors

Slide 10

Trailer Weights

- ◆ Standard trailers
 - ◆ 2-horse trailers: 3,550 pounds
 - ◆ 3-horse trailers: 4,400 pounds
 - ◆ 4-horse trailers: 5,000 pounds
- ◆ Stock trailers
 - ◆ 12 foot: 3,200 pounds
 - ◆ 14 foot: 3,400 pounds
 - ◆ 16 foot: 4,050 pounds
 - ◆ 18 foot: 4,800 pounds

Slide 11

Door Configurations

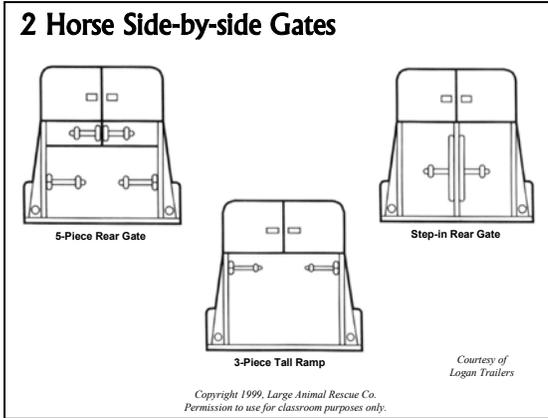
- ◆ Door style may indicate floor plan
- ◆ Doors can help or hinder extrication
- ◆ 2- and 4-horse, side-by-side
- ◆ Step up 2-door, open top
- ◆ Step up 4-door, 2 on bottom, 2 on top
- ◆ Ramp, 2-door on top
- ◆ Ramp, 4-door, 2 on top, 2 in the middle

Slide 12

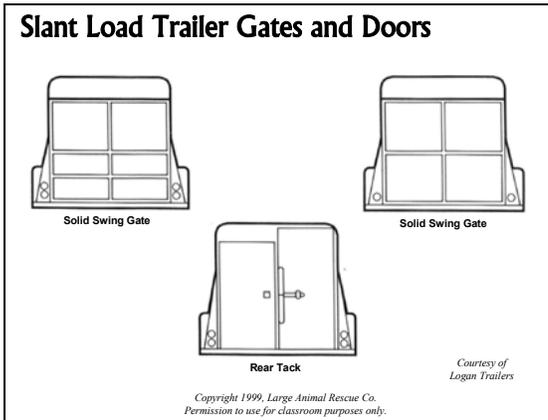
Door Configurations

- ◆ Stock trailers
 - ◆ Single one-piece swing gate
 - ◆ Single one-piece swing gate with a sliding single width door
 - ◆ Sliding door
 - ◆ Ramp side door with top door

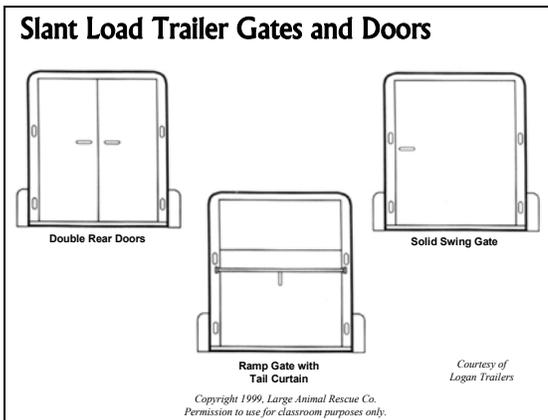
Slide 13



Slide 14



Slide 15



Slide 16

Dividers

- ◆ Can complicate extrication
- ◆ Some are fixed in place, others are movable
- ◆ Single bar
- ◆ Single bar with triangle gusset on the top
- ◆ Quarter-height
- ◆ Half-height, full-height, or stud gate
- ◆ Movable dividers can be unpinned or unlatched
- ◆ Fixed dividers

Slide 17

Stock Trailers

- ◆ Have no dividers
 - ◆ Animals are generally loose
 - ◆ May be tied
- ◆ May have a mixed load of different animals
 - ◆ Generally in a mixed load, a wall will separate the animals

Slide 18

Trailer Operations

- ◆ All operations involving large animals have the potential to change in an instant
- ◆ Position, timing and communication are essential
 - ◆ Operations must be orchestrated
- ◆ A trailer operation that involves large animals requires careful scene management

Slide 19

Considerations

- ◆ People in living quarters
- ◆ Propane tanks, cooking appliances
- ◆ Number of animals in the trailer
- ◆ Physical condition of the animals
- ◆ Structural integrity of the trailer
- ◆ Physical location of the accident and extenuating circumstances
- ◆ Legal aspects

Slide 20

Trailer Uprighting Extrication Operations

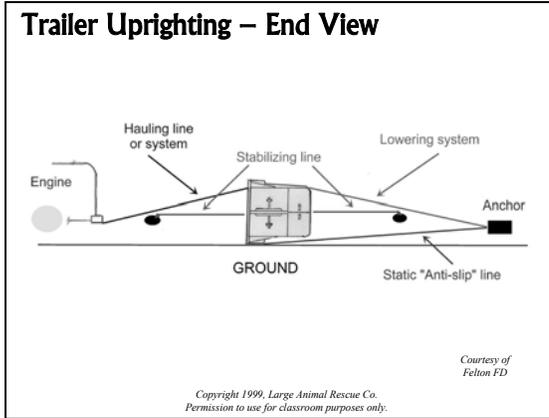
- ◆ On-scene veterinarian may sedate the animal to assist with operations
- ◆ Operations must be preplanned and executed within the “window of opportunity” that various levels of sedation allow
- ◆ Upright of the trailer with the animals inside
 - ◆ Greater safety for the rescue workers
 - ◆ Less chance of injury to the animals
 - ◆ Greater safety for motorists near the scene because the animals are contained

Slide 21

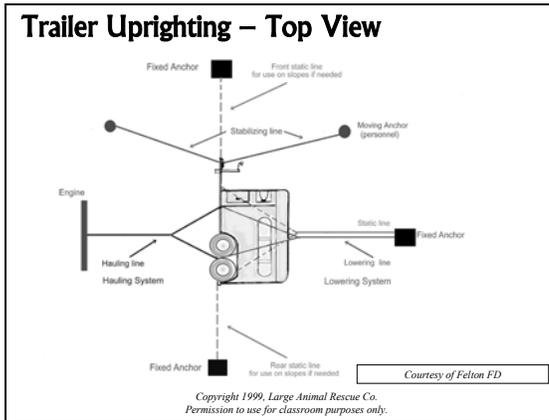
Uprighting Criteria

- ◆ Adequate space to safely complete operation
- ◆ Animals positioned so upright evolution will allow return to standing position
- ◆ Minor injuries, vet verifies that upright will not cause further injury
- ◆ Lifting equipment appropriate for size and weight of trailer and allows safety margin
- ◆ Trailer in sound condition without structural damage that could jeopardize the operation or create safety problem

Slide 22



Slide 23



Slide 24

- ### Extrication Using the Doors
- ◆ Safer for the rescuers and easier on the animals
 - ◆ Horses could be hanging by tether to trailer
 - ◆ Identify style of doors
 - ◆ Determine extrication operations
 - ◆ How will the doors be opened?
 - ◆ Do doors need to be removed?
 - ◆ Is there a center post? How will it be removed?
 - ◆ Can animal(s) stand up and walk out?

Slide 25

Extrication Using the Doors

- ◆ Two or more animals complicate operations
 - ◆ They will want to get out at the first opportunity
 - ◆ Provide one handler per animal
 - ◆ Position or orientation of the animals may complicate the operation
 - ◆ Animal may need to be sedated
- ◆ Establish a clear working zone for the rescuers and the extricated animal(s)
- ◆ If the animal(s) are not able to back out, rescue straps will be needed

Slide 26

Extrication Using the Doors

- ◆ Operations and safety officers must be positioned to see the vet, handlers, animal and team leaders at all times
- ◆ Extrication personnel must have escape routes
- ◆ “One-in, one-out” option
- ◆ Consider usage of backboards and salvage covers to slide animal over metal edges
- ◆ Open doors slowly

Slide 27

Extrication By Roof Removal

- ◆ Consider the construction and structural integrity
- ◆ Determine what will be cut and in what order
- ◆ Determine the tool to be used and a back-up tool
- ◆ Consider noise created by removing roof
- ◆ Extrication team works with vet

Slide 28

Extrication By Roof Removal

- ◆ Determine hand signals
- ◆ Cutter has backup person to monitor operations and assist with escape
- ◆ Place the duct tape over sharp edges or points
- ◆ Consider a backboard or salvage cover to smooth extrication

TOPIC: 2-6: Raising And Lowering Systems And Operations

TIME FRAME: 0:45

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a written test

Behavior: The student will confirm a knowledge of the different rope systems and rope operations used in LAR by completing the written test

Standard: With a minimum 80% accuracy according to the information contained in Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 71-87

MATERIALS NEEDED:

- Writing board/pad with markers/erasers
- Appropriate audiovisual equipment
- Appropriate audiovisual materials
- 4:1 and 2:1 rope systems, constructed or premade
- 200 foot length of anchor rope
- Sufficient hardware for a z-rig
- Articulated horse mannequin (optional but recommended)
- Fiberglass horse

REFERENCES:

- CMC Rope Rescue Manual, James A. Frank, Third Edition
- High Angle Rescue Techniques, Tom Vine and Steve Hudson, Second Edition
- Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 71-87
- Swiftwater Rescue, Slim Ray, 1996, Chapter 11

PREPARATION:

Large animal rescues generally involve moving or assisting the animal. Because of the animal's weight, rope systems with a mechanical advantage may be required. Appropriate systems can be set up to accommodate different situations. Because of the unpredictability of the animals, the systems need to be operated with more flexibility than usual.

| PRESENTATION | APPLICATION |
|---|--|
| <p>I. RAISING AND LOWERING SYSTEMS</p> <p>A. Most large animal rescues require the use of rope systems or heavy equipment</p> <p>B. Lowering systems</p> <ol style="list-style-type: none"> 1. Standard friction device <ol style="list-style-type: none"> a) 8-plate b) Brake rack 2. Reverse the haul system <ol style="list-style-type: none"> a) 2:1 b) 4:1 c) "Z-rig" (3:1) d) Piggyback system <p>C. Raising or hauling systems</p> <ol style="list-style-type: none"> 1. Either rope systems or heavy equipment 2. Rope systems <ol style="list-style-type: none"> a) Manufactured rope systems <ol style="list-style-type: none"> 1) Commercial premade system b) Premade <ol style="list-style-type: none"> 1) Assembled prior to incident c) 2:1 <ol style="list-style-type: none"> 1) For every 2 feet of pull, load moves 1 foot d) 4:1 <ol style="list-style-type: none"> 1) For every 4 feet of pull, load moves 1 foot e) Z-rig (3:1) | <p>SLIDE: 2-6-1</p> <p>SLIDE: 2-6-2</p> <p>SLIDE: 2-6-3</p> |

| PRESENTATION | APPLICATION |
|--|---|
| <p>D. Equipment</p> <ol style="list-style-type: none"> 1. A piggyback haul system requires several pieces of equipment 2. 200 - 300 feet of rope 3. Two anchor plates 4. Carabiners (as needed) 5. Long load transfer <ol style="list-style-type: none"> a) With load capacity to hold animal in place while haul system is moved b) Mariner's hitch <ol style="list-style-type: none"> 1) Acts as a shock absorber 2) Preferred c) Cargo strap d) Rope 6. A haul system, 2:1, 4:1, or other <ol style="list-style-type: none"> a) With a brake on a short mariner's hitch b) Manufactured <ol style="list-style-type: none"> 1) Purchased as an assembled system c) Assembled <ol style="list-style-type: none"> 1) Assembled with separate parts d) Gibbs or prusik <ol style="list-style-type: none"> 1) A full load situation 2) Gibbs may damage the rope given the load 3) Gibbs are subject to failure | <p>SLIDE: 2-6-7</p> <p>Why would a Gibbs work in this situation?</p> <p>What are the advantages of using prusik loops?</p> |

| PRESENTATION | APPLICATION |
|--|---|
| <ul style="list-style-type: none"> 7. Two sets of double prusik loops <ul style="list-style-type: none"> a) Tandem b) Parallel c) Provide more weight capacity d) Greater safety margin 8. Cut-away section <ul style="list-style-type: none"> a) Placed between the animal and the haul system b) Made of material that can be easily cut c) Of sufficient strength for the load <p>E. Assembly of the piggyback haul system</p> <ul style="list-style-type: none"> 1. A solid anchor that is in-line with the load 2. The extended anchor rope is attached to the anchor, rope is extended toward load 3. Haul system is extended to its longest working length <ul style="list-style-type: none"> a) From position near the animal b) Toward the anchor c) Not attached to animal yet 4. An anchor plate is attached to top of haul system 5. Tandem or parallel 3 wrap prusik loops are attached to the anchor rope at the top of the haul system 6. The anchor plate is attached to both loops 7. A haul system is attached to the anchor plate 8. A minimal load brake system is attached to the anchor plate and haul system <ul style="list-style-type: none"> a) Using a short 2 – 3 foot long RPM | <p>SLIDE: 2-6-8</p> <p>SLIDE: 2-6-9</p> |

| PRESENTATION | APPLICATION |
|---|---|
| <p>9. A second pair of tandem or parallel prusik loops are attached just below the first pair</p> <p>10. A long 4 – 5 foot, full load transfer, with a carabiner at the end, is attached to the second set of prusiks</p> <p>IV. SYSTEM OPERATIONS</p> <p>A. Short haul examples</p> <ol style="list-style-type: none"> 1. Need to move the animal a short distance <ol style="list-style-type: none"> a) The in-line anchor is within the working distance of the system b) The in-line anchor is outside the working distance of the system <p>B. Short haul operations</p> <ol style="list-style-type: none"> 1. Short haul is within the working length of the haul system <ol style="list-style-type: none"> a) The animal only needs to be moved a short distance b) The haul system is attached to the anchor c) The haul system is attached to the animal d) No anchor rope is needed e) No extended haul line is needed f) There is ample room for personnel to operate in safely 2. Short haul with no in-line anchor within the working length of the haul system <ol style="list-style-type: none"> a) The animal only needs to be moved a short distance b) There is no close in-line anchor c) This situation requires the use of anchor rope | <p>SLIDE: 2-6-10</p> <p>SLIDE: 2-6-11</p> <p>SLIDE: 2-6-12</p> |

| PRESENTATION | APPLICATION |
|---|-----------------------------|
| <ul style="list-style-type: none"> g) The anchor line is extended to the top of the haul system h) The haul system is attached or piggybacked to the anchor rope i) When all personnel are in place and at handler's command attach the haul system to the animal j) Haul begins at the handler's command | <p>SLIDE: 2-6-17</p> |
| <p>5. Fixed anchor rope, repositioning piggyback haul system</p> <ul style="list-style-type: none"> a) Put a halter and long lead line on the animal, gain control b) Establish separate safety zones for personnel and animal c) Establish path to be taken by the animal <ul style="list-style-type: none"> 1) With rest points d) Find an in-line anchor e) Attach the anchor rope to the anchor and extend it towards the animal f) Extend the system to full working length from the animal towards the anchor g) Cut-away section is put in place h) Attach the haul system to the anchor rope i) When the handler is ready, the haul system is attached to the animal j) At handler's command, haul begins k) Haul team signals handler to stop before working distance of system is exhausted l) After animal settles handler signals for transfer to proceed | |

| PRESENTATION | APPLICATION |
|---|---|
| <ul style="list-style-type: none"> m) Animal is transferred to load release n) At handler's command, haul system is tightened, and load release is detached o) Operation resumes p) Repeat steps described in j – m as necessary | <p>SLIDE: 2-6-20</p> <p>SLIDE: 2-6-21</p> <p>SLIDE: 2-6-22</p> |
| <p>C. Long haul examples</p> <ul style="list-style-type: none"> 1. Haul distance is several times the working length of the haul system <ul style="list-style-type: none"> a) The animal needs to be moved a long distance b) The haul system is attached to the anchor c) An extended haul line is piggybacked to the haul system d) There is plenty of room for the haul team and animal recovery 2. Where haul team and haul system need to be kept a long distance from animal <ul style="list-style-type: none"> a) The animal needs to be moved a long distance b) The haul system is attached to the anchor c) An extended haul line is piggybacked to the haul system d) There is not enough room for the haul team and the animal in the recovery area e) For safety reasons, the haul team is separated from the recovery area | <p>SLIDE: 2-6-23</p> <p>SLIDE: 2-6-24</p> |

| PRESENTATION | APPLICATION |
|---|---|
| <p>g) Both may be precarious applications</p> <ol style="list-style-type: none"> 1) May fall off with kicking or thrashing 2) Balance is critical <p>VIII. VERTICAL/HIGH ANGLE LIFTING OPERATIONS</p> <ol style="list-style-type: none"> A. Assign positions B. Establish safety zones C. Animal handler consults with vet to establish level of sedation/tranquilization D. Determine system and strategy of operation E. Establish communication signals F. The animal handler gives commands on lifting, rest, etc. | <p>SLIDE: 2-6-43</p> <p>SLIDE: 2-6-44</p> |

SUMMARY:

The terrain, weight of the large animal, length of haul, and available anchors will determine the choice of a particular rope system. Standard rope systems may need to be modified to meet the situation. While the basic raising and lifting system remain the same, the behavioral characteristics of the animal, and the safety of the rescuers dictate that certain operational aspects must change. Operations must be conducted with ample space around the victim and the rope system to accommodate the unpredictability of the animal. The haul team must work in concert with the animal handler. Clear communication between the animal handler and the haul team is essential. Where visibility and distance are a problem, operations, may require a safety/communications officer to assist with communications.

EVALUATION:

The student will complete the written test at a time determined by the instructor.

ASSIGNMENT:

Review your notes and read Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 71-87 in order to prepare yourself for the upcoming test. Study for our next session.

SLIDE INDEX

Slide 1

**Raising and Lowering
Systems and Operations**

Slide 2

Lowering Systems

- ◆ Standard friction device
 - ◆ 8-plate
 - ◆ Brake rack
- ◆ Reverse the haul system
 - ◆ 2:1
 - ◆ 4:1
 - ◆ "Z-rig" (3:1)
 - ◆ Piggyback system

Slide 3

Raising or Hauling Systems

- ◆ Rope systems
 - ◆ Manufactured rope systems
 - ❖ Commercial premade system
 - ◆ Premade
 - ❖ Assembled prior to incident
 - ◆ 2:1
 - ❖ For every 2 feet of pull, load moves 1 foot
 - ◆ 4:1
 - ❖ For every 4 feet of pull, load moves 1 foot
 - ◆ Z-rig (3:1)

Slide 4

Raising or Hauling Systems

- ◆ Heavy equipment
 - ◆ Winch
 - ◆ Tow truck
 - ◆ Crane
 - ◆ Tractors, backhoes, bucket loaders
 - ◆ Helicopters

Slide 5

Anchors

- ◆ Fixed anchors, appropriate to victim's weight
 - ◆ Natural anchors
 - ◆ Trees
 - ◆ Rocks
 - ◆ Artificial anchors
 - ◆ Vehicles
 - ◆ Buildings
 - ◆ Picket systems
- ◆ Extended anchor line with a piggyback haul system

Slide 6

Piggyback Haul System

- ◆ Either a haul system is attached to an extended anchor rope, "piggybacked" or an extended haul rope is attached to a fixed hauling system, piggybacked
- ◆ Allows repositioning or re-extending of the haul system without disconnecting the load
 - ◆ Useful in long haul situations

Slide 7

Equipment

- ◆ 200 - 300 feet of rope
- ◆ Two anchor plates
- ◆ Carabiners (as needed)
- ◆ Long load transfer
- ◆ Haul system, 2:1, 4:1, or other
- ◆ Two sets of double prusik loops
- ◆ Cut-away section

Slide 8

Equipment

Tandem Prusiks
Parallel Prusiks

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Slide 9

Assembly

**A 4:1 Haul System
 "Piggy backed" on an
 extended anchor rope**

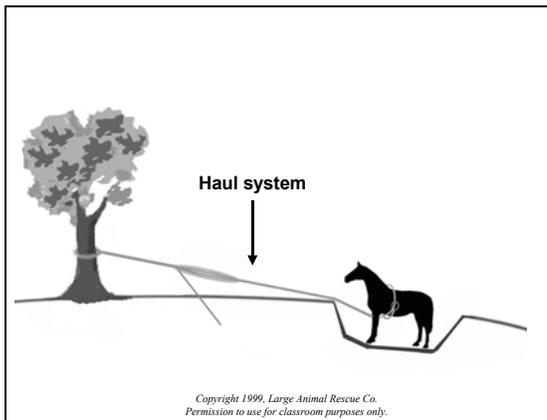
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Slide 10

Short Haul Operations

- ◆ Short haul is within the working length of the system
 - ◆ Animal moved only a short distance
 - ◆ Haul system is attached to the anchor and the animal
 - ◆ No anchor rope or extended haul line is needed
 - ◆ Ample room for personnel to operate in safely

Slide 11

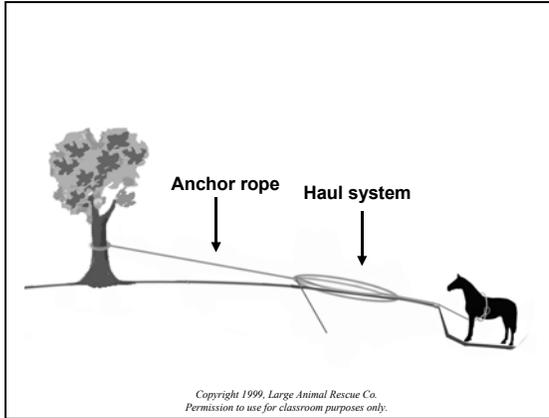


Slide 12

Short Haul Operations

- ◆ Short haul with no in-line anchor within the working length of the haul system
 - ◆ Animal moved only a short distance
 - ◆ No close in-line anchor
 - ◆ Requires an anchor rope
 - ◆ Lots of room for personnel to operate in safely

Slide 13



Slide 14

Short Haul Operations

- ◆ In-line anchor within working length of system
 - ◆ Put halter and long lead on animal, gain control
 - ◆ Separate safety zones for animal and personnel
 - ◆ Establish anchor with adequate room at the top
 - ◆ System is assembled and extended to the animal
 - ◆ Cut-away section is put in place
 - ◆ When handler is ready, system is attached
 - ◆ At handler's command, haul begins

Slide 15

Short Haul Operations

- ◆ In-line anchor *not* within working length of system
 - ◆ Put halter and long lead on animal, gain control
 - ◆ Separate safety zones for animal and personnel
 - ◆ Establish path to be taken by the animal
 - ◆ Establish in-line anchor
 - ◆ System is assembled and extended to full working length near the animal

Slide 16

Short Haul Operations

◆ In-line anchor is not within working length of the system (continued)

- ◆ Cut-away section is put in place
- ◆ Extend anchor line to the top of the haul system
- ◆ System is attached/piggybacked to anchor rope
- ◆ When handler is ready, system is attached
- ◆ At handler's command, haul begins

Slide 17

Short Haul Operations

◆ Fixed anchor rope, repositioning piggyback haul system

- ◆ Put halter and long lead on animal, gain control
- ◆ Establish separate safety zones for personnel and animal
- ◆ Establish path to be taken by the animal with rest points
- ◆ Find an in-line anchor
- ◆ Attach anchor rope to anchor and extend it towards the animal

Slide 18

Short Haul Operations

◆ Fixed anchor rope, repositioning piggyback haul system (continued)

- ◆ Extend the system to full working length from the animal towards the anchor
- ◆ Cut-away section is put in place
- ◆ Attach the haul system to the anchor rope
- ◆ When the handler is ready, the haul system is attached to the animal
- ◆ At handler's command, haul begins

Slide 19

Short Haul Operations

- ◆ Fixed anchor rope, repositioning piggyback haul system (continued)
 - ◆ Haul team signals handler to stop before working distance of system is exhausted
 - ◆ After animal settles, handler signals for transfer to proceed
 - ◆ Animal is transferred to load release
 - ◆ At handler's command, haul system is tightened, and load release is detached
 - ◆ Operation resumes
 - ◆ Repeat steps as necessary

Slide 20

Extended Anchor Rope – Piggyback

ANCHOR
The haul system is "piggybacked" to an anchor rope

Extended anchor rope

LOAD

A mariner's hitch or load transfer is put in place

The working length of the haul system is reached

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Slide 21

Extended Anchor Line – Piggyback

Attach the load to the load transfer

The haul system is detached, the load is now on the load transfer

The haul system is then moved up the anchor rope

The haul system is then re-extended

The load is reattached to the haul system

The load transfer is detached and moved up the anchor rope, the haul is continued

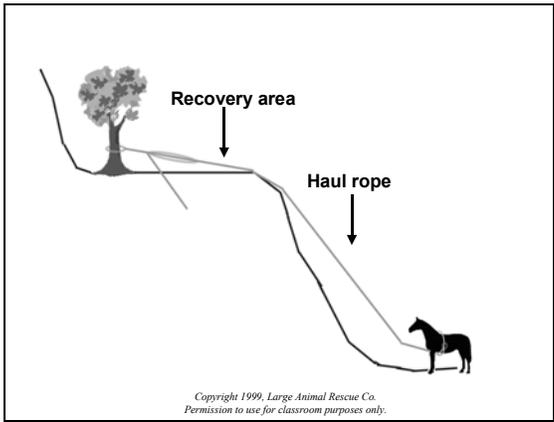
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Slide 22

Long Haul Examples

- ◆ Haul distance is several times the working length of the haul system
 - ◆ The animal needs to be moved a long distance
 - ◆ The haul system is attached to the anchor
 - ◆ An extended haul line is piggybacked to the haul system
 - ◆ There is plenty of room for the haul team and animal recovery

Slide 23

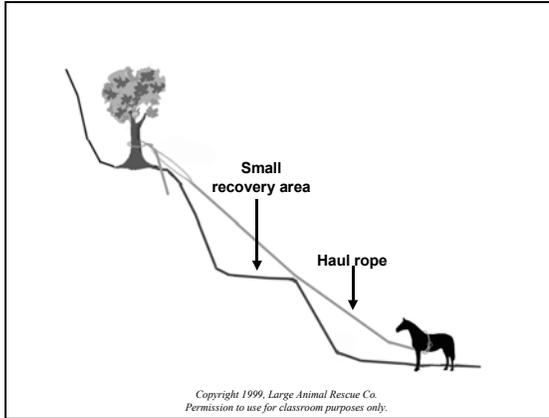


Slide 24

Long Haul Examples

- ◆ Where haul team and haul system need to be kept a long distance from animal
 - ◆ The animal needs to be moved a long distance
 - ◆ The haul system is attached to the anchor
 - ◆ Extended haul line is piggybacked to the system
 - ◆ There is not enough room for the haul team and the animal in the recovery area
 - ◆ For safety reasons, the haul team is separated from the recovery area

Slide 25



Slide 26

Long Haul Operations

- ◆ Fixed haul system, piggybacked haul rope
 - ◆ Put halter and long lead on animal, gain control
 - ◆ Establish safety zones for animal and personnel
 - ◆ Establish path for animal with rest points
 - ◆ Find an in-line anchor
 - ◆ Attach a haul system to the anchor
 - ◆ Extend system to full working length

Slide 27

Long Haul Operations

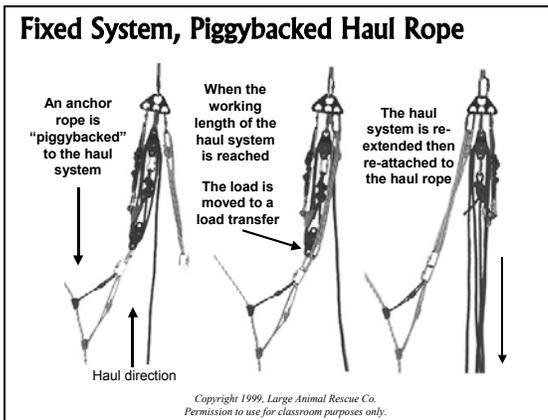
- ◆ Fixed haul system, piggybacked haul rope
(continued)
 - ◆ Run end of haul rope from system down to animal
 - ◆ Cut-away section is put in place
 - ◆ Attach haul system to haul rope
 - ◆ When handler is ready, attach system to animal
 - ◆ Haul begins at handler's command
 - ◆ Haul team signals handler to stop before working distance of system is exhausted

Slide 28

Long Haul Operations

- ◆ Fixed haul system, piggybacked haul rope
(continued)
- ◆ After animal settles handler signals for transfer to proceed
- ◆ Animal is transferred to the load transfer
- ◆ Haul system is re-extended to its full length and re-attached to the anchor rope
- ◆ Operation resumes
- ◆ Repeat steps as needed

Slide 29



Slide 30

Basic Haul Applications Review

- ◆ Short haul with an in-line anchor
- ◆ Short haul with no in-line anchor
- ◆ Long assist requiring a mechanical advantage
- ◆ Long haul that requires a 4:1 mechanical advantage

Slide 31

Haul Considerations

- ◆ Weight and size of the animal
- ◆ Position and situation of the animal - accessibility
- ◆ Physical condition of the animal
 - ◆ Injuries
 - ◆ Level of exhaustion
 - ◆ Cooperation
- ◆ Terrain
 - ◆ Availability of in-line anchors
 - ◆ Distance and angle of haul
 - ◆ Access for heavy equipment
 - ◆ Vegetation

Slide 32

Rope System Considerations

- ◆ Limited working distance
- ◆ Requires appropriate equipment
- ◆ Requires sufficient staffing
- ◆ Offers more control over operations
- ◆ More versatile for remote or difficult terrain
- ◆ Offers a higher level of operational safety

Slide 33

Hauling or Lifting Systems Considerations

- ◆ Use is limited by access
- ◆ Allow long hauls without repositioning
- ◆ Do not require an anchor
- ◆ System lag time needs to be considered
- ◆ Haul speeds are fixed
- ◆ Lowering speeds are fixed or free wheeling
- ◆ Some systems can not be reversed easily
- ◆ Systems operated by nonfire personnel may cause communication problems

Slide 34

Haul System Review

- ◆ Choose proper haul system
- ◆ Remember load is alive
- ◆ Operation must be flexible
- ◆ Choose an anchor
- ◆ Attach animal to the system LAST

Slide 35

Vertical/High Angle Lifting Systems

- ◆ Rope systems
 - ◆ Are limited by the working length
 - ◆ Require an anchor overhead
 - ◆ Have very limited horizontal movement

Slide 36

Vertical/High Angle Lifting Systems

- ◆ Cranes
 - ◆ Restricted to situations with adequate access
 - ◆ Have long working length
 - ◆ Have good lateral movement
 - ◆ Operator is generally in view of operation
 - ◆ Facilitates communication
 - ◆ Noise is limited

Slide 37

Vertical/High Angle Lifting Systems

- ◆ Helicopters
 - ◆ Are versatile in all directions
 - ◆ Only a few helicopters are licensed for live animal operations
 - ◆ Specialized equipment is required
 - ◆ Communications with pilot can be difficult
 - ◆ Noise can be a problem
 - ◆ Limited on scene time
 - ◆ High risk for all participants
 - ◆ Not suited for certain environment

Slide 38

Vertical/High Angle Lifting Slings

- ◆ The Anderson Sling
 - ◆ Currently the only Mil Spec large animal sling
 - ◆ Certified for helicopter use
 - ◆ Can support the animal adequately and comfortably for extended periods of time

Slide 39

The Anderson Sling



Courtesy of CDA Products

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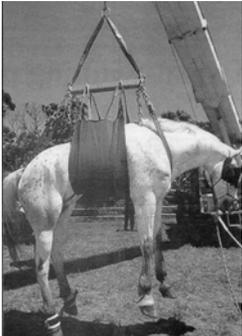
Slide 40

Vertical/High Angle Lifting Slings

- ◆ Australian FD lifting harness
 - ◆ Supports the bulk of the animal's weight at the rib cage
 - ◆ Two straps run from the chest support on both sides of the neck to the lifting bar
 - ◆ Two straps run from the chest support rearward between the rear legs, up at the tail to the lifting bar
 - ◆ Several slings are maintained at airports across the country

Slide 41

Australian FD Lifting Harness



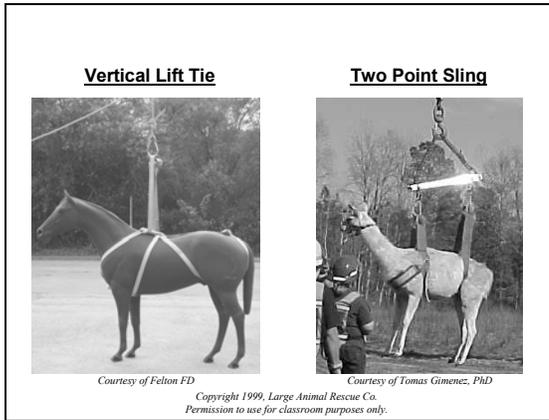
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Vertical/High Angle Lifting Slings

- ◆ Emergency vertical lifting slings
 - ◆ Use only if the Anderson sling is not available
 - ◆ Vertical lift tie
 - ◆ 2-point sling
 - ◆ Both limited to 10 minute lifts
 - ◆ Both limited to low level lifts
 - ◆ Both have a potential to injure the animal
 - ◆ Both may be precarious applications
 - ◆ May fall off with kicking or thrashing
 - ◆ Balance is critical

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Slide 44

Vertical/High Angle Lifting Operations

- ◆ Assign positions
- ◆ Establish safety zones
- ◆ Animal handler consults with vet to establish level of sedation/tranquilization
- ◆ Determine system and strategy of operation
- ◆ Establish communication signals
- ◆ The animal handler gives commands on lifting, rest, etc.

TOPIC: 2-7: How To Apply A Rescue Strap, Rear Drag Application

TIME FRAME: 0:15

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a recumbent fiberglass horse, rescue strap, 25-30 foot length of ½-inch rope, an 8-foot or longer pike pole or boat hook, and appropriate personal protective equipment

Behavior: The student, with assistance, will approach a recumbent horse and apply a rescue strap in the rear drag application

Standard: Completing all operations within _____ according to the job breakdown

MATERIALS NEEDED:

- Job breakdown
- Fiberglass horse
- Rescue strap
- 25-30 foot length of ½-inch rope
- 8-foot or longer pike pole or boat hook
- Appropriate personal protective equipment

REFERENCES:

- None

PREPARATION:

The rescue of a large animal requires the movement of the animal to a safe location. If a large animal becomes trapped in a confined space such as a trailer, it may be necessary to extricate the animal with a rear pull. Usually, the animal is in a down or recumbent position that complicates application of the rescue strap. Two or more rescuers are required to apply the strap and additional safety precautions must be taken.

| OPERATIONS | KEY POINTS |
|---|--|
| 1. Tie the ends of the rope | 1a. Onto the ends of the rescue strap b. Through the loops of the strap c. Forming a large circle d. Neatly organizing length |
| 2. Rescuer 1 approaches the animal | 2a. Observing the "recumbent field of vision" b. Talking to the animal c. Keeping strap and rope close to body |
| 3. Rescuer 1 gains contact with animal | 3a. From the back b. Gently allowing horse to settle c. Maintaining contact |
| 4. Rescuer 1 places one end of the rescue strap | 4a. Forward of hip bone |
| 5. Rescuer 1 tucks middle section of the rope | 5a. Under the upper leg b. In between the upper and lower legs |
| 6. Rescuer 2 holds the middle section of the rope | 6a. Walking out and around the kill zone towards the front of the horse |
| 7. Rescuer 2 places the rope | 7a. Under bottom back leg |
| 8. Rescuers 1 and 2 pull rope | 8a. Using a see-saw motion b. To work strap around animal c. Continuing until strap is in position d. Using a lubricant if necessary e. With middle of strap at backbone |

| OPERATIONS | KEY POINTS |
|-------------------------------|---|
| 9. Rescuer 2 pulls strap ends | 9a. Through legs b. Towards tail c. Using pole or stick to place rope d. Moving slowly |

APPLICATION:

The student will practice performing the operations in the job breakdown while under supervision.

EVALUATION:

The student will complete a manipulative performance test at a time determined by the instructor.

ASSIGNMENT:

Practice this job in order to prepare yourself for the upcoming performance test. Study for our next session.

TOPIC: 2-8: How To Assemble A Set Of Tandem Prusik Loops To An Anchor Rope

TIME FRAME: 0:15

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a set of tandem prusik loops, 20 foot length of appropriately sized anchor rope, 1 carabiner, and appropriate personal protective equipment

Behavior: The student will assemble a set of tandem prusik loops to an anchor rope

Standard: Completing all operations within _____ according to the job breakdown

MATERIALS NEEDED:

- Job breakdown
- Set of tandem prusik loops
- 20 foot length of appropriately sized anchor rope
- 1 carabiner
- Appropriate personal protective equipment

REFERENCES:

- None

PREPARATION:

Every large animal rescue involves the moving of the animal to a safe place. Because of the size, weight and strength of these animals any system used to move them needs to be stronger than a normal human rescue system. These systems also need to be more flexible. To accomplish this, heavier duty equipment is necessary. This can be done with the use of $\frac{5}{8}$ -inch or larger rope using tandem prusik loops to attach equipment.

| OPERATIONS | KEY POINTS |
|------------------------------------|--|
| 1. Tie 3 wrap prusik | 1a. On a single anchor line b. With the anchor rope tight |
| 2. Place shorter prusik loop | 2a. On the anchor rope b. On the top c. Holding on to the prusik knot |
| 3. Open the loop | 3a. Wide |
| 4. Pass the prusik knot | 4a. Through the loop b. Around the anchor rope c. Inside the larger loop d. Three times |
| 5. Tighten the loop | 5a. On to the anchor rope b. Pull on the prusik loop just below the prusik knot c. Work the knot away from the end of the new loop |
| 6. Tie second 3 wrap prusik | 6a. On the anchor line b. Using the longer prusik |
| 7. Repeat Steps 3 through 5 | 7a. Tying shorter prusik on the load side of the first prusik loop |
| 8. Release one of the prusik loops | 8a. By twisting wraps on the anchor rope b. Twisting in the opposite direction that they were wrapped on the anchor rope |
| 9. Adjust the prusiks | 9a. Until the bottom of both loops are even |

| OPERATIONS | KEY POINTS |
|-------------------------|--|
| 10. Tighten the prusiks | 10a. By twisting the wraps that are on the anchor rope b. In the same direction that they were wrapped on the anchor rope |
| 11. Place a carabiner | 11a. Through both loops |

APPLICATION:

The student will practice performing the operations in the job breakdown while under supervision.

EVALUATION:

The student will complete a manipulative performance test at a time determined by the instructor.

ASSIGNMENT:

Practice this job in order to prepare yourself for the upcoming performance test. Study for our next session.

TOPIC: 2-9: How To Assemble A Set Of Parallel Prusik Loops To A Double Anchor Rope

TIME FRAME: 0:15

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a set of parallel prusik loops, 20 foot length of appropriately sized anchor rope, and appropriate personal protective equipment

Behavior: The student will assemble a set of parallel prusik loops to a double anchor rope

Standard: Completing all operations within 1 minute according to the job breakdown

MATERIALS NEEDED:

- Job breakdown
- Set of parallel prusik loops
- 20 foot length of appropriately sized anchor rope
- Appropriate personal protective equipment

REFERENCES:

- None

PREPARATION:

Every large animal rescue involves the moving of the animal to a safe place. Because of the size, weight, and strength of these animals, any system used to move them needs to be stronger than a normal human rescue system. These animal rescue systems also need to be more flexible. To accomplish this, heavier duty equipment is needed or we need to double up the normal equipment we have. This can be done with a ½-inch anchor rope that has been doubled for additional strength. A set of parallel prusik loops is attached to anchor the equipment.

| OPERATIONS | KEY POINTS |
|---|---|
| 1. Tie the first 3 wrap prusik of a tandem prusik set | 1a. On a single anchor line b. With the anchor rope tight |
| 2. Place the prusik loop on the anchor rope | 2a. On the top b. Holding on to the prusik knot |
| 3. Open the loop | 3a. Wide |
| 4. Pass the prusik knot through the loop | 4a. Around the anchor rope b. Inside the larger loop c. Three times |
| 5. Tighten the loop on to the anchor rope | 5a. Pulling on the prusik loop just below the prusik knot b. Working the knot away from the end of the new loop |
| 6. Tie the second 3 wrap prusik on the anchor line | 6a. On the other anchor rope |
| 7. Repeat Steps 3 through 5 | 7a. Placing the second loop opposite of the first prusik loop |
| 8. Release one of the prusik loops | 8a. By twisting the wraps that are on the anchor rope b. In the opposite direction that they were wrapped on the anchor rope |
| 9. Adjust the prusiks | 9a. So the bottom of both loops are even |
| 10. Tighten the prusik | 10a. By twisting the wraps that are on the anchor rope b. In the same direction that they were wrapped on the anchor rope |
| 11. Place a carabiner through the loops | 11a. Both loops |

APPLICATION:

The student will practice performing the operations in the job breakdown while under supervision.

EVALUATION:

The student will complete a manipulative performance test at a time determined by the instructor.

ASSIGNMENT:

Practice this job in order to prepare yourself for the upcoming performance test. Study for our next session.

TOPIC: 2-10: How To Set Up A Piggyback Haul System

TIME FRAME: 0:15

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a haul system (4:1 system preferred), appropriate anchor and anchor equipment, an anchor rope, 4 carabiners appropriate prusiks sets, and appropriate personal protective equipment

Behavior: The student will set up of a piggyback haul system

Standard: Completing all operations within 10 minutes according to the job breakdown

MATERIALS NEEDED:

- Job breakdown
- Haul system (4:1 system preferred)
- Appropriate anchor and anchor equipment
- Appropriate length of anchor rope
- 4 carabiners
- Appropriate prusiks sets
- Appropriate personal protective equipment

REFERENCES:

- None

PREPARATION:

Every large animal rescue involves the moving of the animal to a safe place. Because of the size, weight, and strength of these animals any system used to move them needs to be stronger than a normal human rescue system. These systems also need to be more flexible. Due to the limited haul distance of a mechanical advantage haul system or the need to place the hauling team at a safe distance from the animal, a piggyback haul system is normally used.

| OPERATIONS | KEY POINTS |
|--|--|
| 1. Choose an appropriate haul system | 1a. Consider the weight of the animal b. Consider the angle of the pull c. Consider the distance of the pull d. Consider the available staffing |
| 2. Establish an anchor | 2a. Consider the direction of the pull |
| 3. Determine the location of the haul team | 3a. Consider the haul team's safety b. Consider the area needed for the operation of the haul system |
| 4. Set out the haul system | 4a. Be sure that everything is correct |
| 5. Set out the haul system brake | 5a. Appropriate for the haul system |
| 6. Set out the load transfer | 6a. Appropriate to the weight of the animal b. Of sufficient length for the haul system |
| 7. Attach an anchor plate | 7a. To the anchor b. Of appropriate size for the system |
| 8. Attach the haul system | 8a. To the anchor plate b. Use the appropriate size carabiner |
| 9. Attach the haul system brake | 9a. To the anchor plate b. Use the appropriate size carabiner |
| 10. Attach the load transfer | 10a. To the anchor plate b. Use the appropriate size carabiner |
| 11. Extend the haul system | 11a. Out towards the animal b. To its full working length c. Keep the haul line long enough to accommodate the haul team |

| OPERATIONS | KEY POINTS |
|----------------------------|---|
| 12. Extend the haul rope | 12a. From the haul system to the animal |
| 13. Place the haul rope | 13a. Do not attach it to the animal b. Close to the animal |
| 14. Tie a loop | 14a. A figure 8 on a bite or a bowline b. On the end of the haul rope |
| 15. Place a carabiner | 15a. Use the appropriate size carabiner b. On the loop |
| 16. Attach the haul system | 16a. To the haul rope b. Use a set of tandem or parallel prusik loops c. Of appropriate size for the haul rope d. Within the working length of the haul system |

APPLICATION:

The student will practice performing the operations in the job breakdown while under supervision.

EVALUATION:

The student will complete a manipulative performance test at a time determined by the instructor.

ASSIGNMENT:

Practice this job in order to prepare yourself for the upcoming performance test. Study for our next session.

TOPIC: 2-11: How To Operate A Piggyback Haul System

TIME FRAME: 0:15

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: Given a haul system (4:1 system preferred), appropriate anchor and anchor equipment, an anchor rope, 4 carabiners, appropriate prusiks sets, and appropriate personal protective equipment

Behavior: The student will operate a piggyback haul system

Standard: Completing all operations within 10 minutes according to the job breakdown

MATERIALS NEEDED:

- Job breakdown
- Haul system (4:1 system preferred)
- Appropriate anchor and anchor equipment
- Appropriate length of anchor rope
- 4 carabiners
- Appropriate prusiks sets
- Appropriate personal protective equipment

REFERENCES:

- None

PREPARATION:

Every large animal rescue involves the moving of the animal to a safe place. Because of the size, weight, and strength of these animals any system used to move them needs to be stronger than a normal human rescue system. These systems also need to be more flexible. The use of a piggyback haul system allows the system to be reset several times over a long haul, it also allows the haul team to be located a safe distance from the animal. Operation of these systems needs to be a coordinated effort.

| OPERATIONS | KEY POINTS |
|--|--|
| 1. Attach the haul rope | 1a. To the animal b. When the haul team is ready c. At the handler's command d. To the rescue strap |
| 2. Bring up tension | 2a. At the handler's command b. Slowly |
| 3. Begin the haul | 3a. At the handler's command b. Slowly c. Smoothly |
| 4. Stop the haul | 4a. At the handler's command b. If there is a problem with the animal |
| 5. Notify the handler of a stop | 5a. Near the end of the haul systems working distance |
| 6. Stop the haul | 6a. At the handler's command |
| 7. Set the haul brake | |
| 8. Attach the load transfer to the haul rope | 8a. Appropriate size carabiner b. At the prusik loops |
| 9. Back the haul system down | 9a. Placing the load on the load transfer |
| 10. Disconnect the haul system | 10a. When the load is fully on the load transfer |
| 11. Re-extend the haul system | 11a. Along the haul rope |

| OPERATIONS | KEY POINTS |
|---|---|
| 12. Attach a set of prusiks on the haul rope | 12a. Within the working distance of the haul system |
| | b. Tandem or parallel prusiks |
| | c. Of appropriate size for the system |
| 13. Attach the haul system to the prusiks | 13a. At the handler's command |
| 14. Bring up tension on the haul system | 14a. At the handler's command |
| 15. Disconnect the load transfer from the haul rope | 15a. At the handler's command |
| 16. Disconnect the first set of prusiks | |
| 17. Release the haul system brake | |
| 18. Continue the haul | 18a. At the handler's command |

APPLICATION:

The student will practice performing the operations in the job breakdown while under supervision.

EVALUATION:

The student will complete a manipulative performance test at a time determined by the instructor.

ASSIGNMENT:

Practice this job in order to prepare yourself for the upcoming performance test. Study for our next session.

TOPIC: 2-12: Water Operations

TIME FRAME: 0:30

LEVEL OF INSTRUCTION: Level I

BEHAVIORAL OBJECTIVE:

Condition: Given a written test

Behavior: The student will confirm a knowledge of the history of water operations by completing the written test

Standard: With a minimum 80% accuracy according to the information contained in Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 88-95

MATERIALS NEEDED:

- Writing board/pad with markers/erasers
- Appropriate audiovisual equipment
- Appropriate audiovisual materials

REFERENCES:

- Large Animal Rescue Student Manual, SFT, 2002 Edition, Pages 88-95
- River Rescue: A Manual for White Water Safety, Les Bechdel, Slim Ray, CFS Press, May 1998
- Swiftwater Rescue, A Manual for the Rescue Professional, Slim Ray, Appalachian Mountain Club, April 1997
- Swiftwater Rescue Field Guide, Slim Ray, Jan Atlee (illustrator), CFS Press, January 1997

PREPARATION: The challenges of a LAR are compounded when it occurs in water. Water puts the rescuers at a disadvantage with unknown footing, variable water conditions, and less predictable reactions from the victim. Each situation will dictate the amount of involvement from the rescuers. The mechanism of accident may include rider error, injury, bridge collapse, frozen water, flood, and swift water. Expectations of success may be lowered, especially in the case of a swift water rescue. Safety of the rescuers is paramount.



LARGE ANIMAL RESCUE

Operational

| PRESENTATION | APPLICATION |
|--|---|
| <p>I. WATER OPERATIONS</p> <p>A. Two types of water situations</p> <ol style="list-style-type: none">1. Standing water<ol style="list-style-type: none">a) Lakesb) Pondsc) Swimming poolsd) Ice2. Moving water<ol style="list-style-type: none">a) Riversb) Floodsc) Aqueducts <p>B. Mechanism of accident</p> <ol style="list-style-type: none">1. Over the side into the water2. Trail collapse into the water3. Bridge collapse into the water4. Injury while riding through the water5. Fall into a swimming pool6. Fall through the ice7. Fall into swift water8. Flooding water <p>C. Animal behavior in water</p> <ol style="list-style-type: none">1. In general, horses and other large animals can swim2. Will keep their heads above water as much as possible | <p>SLIDE: 2-12-1</p> <p>SLIDE: 2-12-2</p> <p>SLIDE: 2-12-3</p> <p>SLIDE: 2-12-4</p> |

| PRESENTATION | APPLICATION |
|---|---|
| <ul style="list-style-type: none"> B. Direct animal to shore C. Throw a loop around the animal's head <ul style="list-style-type: none"> 1. This is a last resort <ul style="list-style-type: none"> a) Moving water could choke animal b) Doesn't allow the animal free use of head <ul style="list-style-type: none"> 1) Head is important for movement, balance, and momentum | <p>SLIDE: 2-12-10</p> |
| <p>IV. APPLY A RESCUE STRAP</p> <ul style="list-style-type: none"> A. Attach an empty plastic bottle to a light line or heavy cord B. Using a pole, from the side, push the bottle under the animal's center C. Release the bottle and let it float up on the opposite side of the animal D. Attach the rescue strap to the end of the line E. Feed the rescue strap under the animal and up the opposite side F. Bring the end of the rescue strap over the animal and form a larksfoot to the side of the animal G. Again, feed the bottle under mid section of the animal, forward between the front legs and let it float up H. Feed the rescue strap down and forward, between the front legs positioning the larksfoot between the front legs I. Cinch the strap in place J. Attach a haul system to the strap K. Assist the animal out of the water <ul style="list-style-type: none"> 1. Avoid tangling in front legs | <p>SLIDE: 2-12-11</p> <p>SLIDE: 2-12-12</p> |

| PRESENTATION | APPLICATION |
|---|--|
| <ul style="list-style-type: none"> 2. Direct animal from a distance 3. Allow free movement of the head and neck <ul style="list-style-type: none"> a) Keep head above water 4. The pull will help lift the body up | <p>SLIDE: 2-12-13 SLIDE: 2-12-14 SLIDE: 2-12-15</p> |
| <p>V. SWIMMING POOLS</p> <p>A. Strategies</p> <ul style="list-style-type: none"> 1. Drain pool if possible <ul style="list-style-type: none"> a) Facilitates operations b) Helps prevent hypothermia 2. Direct the animal to shallow end <ul style="list-style-type: none"> a) Assist up steps <ul style="list-style-type: none"> 1) Wrap hooves with duct tape for more traction 3. Create a ramp <ul style="list-style-type: none"> a) Plywood <ul style="list-style-type: none"> 1) Improves footing 2) Support with cribbing 4. Create steps <ul style="list-style-type: none"> a) Tight bales of hay 5. Vertical lift <ul style="list-style-type: none"> a) Apply vertical lift tie b) Use tractor, crane, or tow truck to lift out of pool | |



LARGE ANIMAL RESCUE

Operational

| PRESENTATION | APPLICATION |
|--|------------------------------|
| <p>VI. ICE</p> <ul style="list-style-type: none">A. Time is criticalB. Establish a hauling systemC. If conditions allow, application of the forward assist rescue strap (or Santa Barbara Surcingle) will facilitate operationD. Keep a large area on shore clear for the animalE. Establish safety zones for personnelF. Attach a long lead to the animalG. Direct and assist the animal to shore<ul style="list-style-type: none">1. Cut a path in the ice for the animal to follow | <p>SLIDE: 2-12-16</p> |
| <p>VII. MOVING WATER</p> <ul style="list-style-type: none">A. Establish a tension diagonal system or zip line<ul style="list-style-type: none">1. Set-up at a greater angle to lessen the impact on the victim2. Construct a zip line out of inflated fire hose to lessen impact on victim | <p>SLIDE: 2-12-17</p> |
| <ul style="list-style-type: none">B. Considerations when setting up the system<ul style="list-style-type: none">1. System needs to have solid anchors due to weight and size of animal<ul style="list-style-type: none">a) If animal comes into contact with rope system, the animal's weight is multiplied by the force of the currentb) Impact could be substantialc) Rope systems must be adequate2. Establish the angle on the rope as steep as possible | <p>SLIDE: 2-12-18</p> |

| PRESENTATION | APPLICATION |
|---|------------------------------|
| <ul style="list-style-type: none">3. Use a bend in the water flow if possible<ul style="list-style-type: none">a) Use the natural flow of the water to help push the animal to shore4. Because the rope will need to be at the water's surface, provisions need to be made in case other floating objects are caught on the rope<ul style="list-style-type: none">a) A Z-rig is used to adjust the height of the system off the water5. The system's recovery zone needs to be in an area with lots of room for animal capture and recovery<ul style="list-style-type: none">a) Place halter or emergency rope halter on animal as soon as it reaches shoreb) Prevent secondary disaster6. The recovery area must have easy access to an exit trail or path <p>C. Establish a second rescue point and recovery area in case the first attempt fails</p> | <p>SLIDE: 2-12-19</p> |

SUMMARY:

Large animals are capable in water under normal conditions. If the animal is not injured, its strength and survival instinct will take it to high ground. Rescuers may be able to facilitate this by directing the horse to a safe landing. An injured animal may require assistance. The level of assistance may depend on cooperation of the animal, and complications such as swift water or ice. While time is of the essence, safety of the rescuer is paramount. All the complexities of a water or swift water rescue are compounded when the victim is a large animal. Only rescuers trained in swift water rescue should attempt a water rescue that involves a large animal victim. They should apply these technical skills with an understanding of large animal behavior.

EVALUATION:

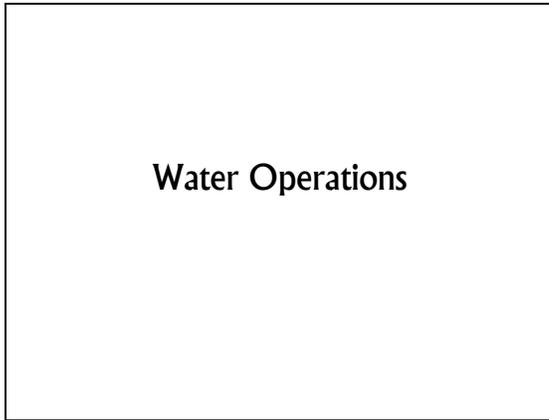
The student will complete the written test at a time determined by the instructor.

ASSIGNMENT:

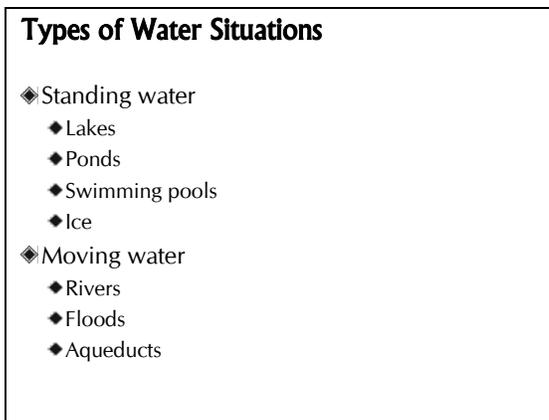
Review your notes and read Large Animal Rescue Student Manual, SFT, 2003 Edition, Pages 88-95 in order to prepare yourself for the upcoming test. Study for our next session.

SLIDE INDEX

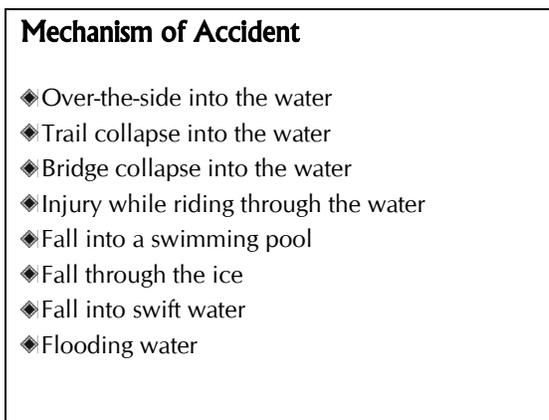
Slide 1



Slide 2



Slide 3



Slide 4

Animal Behavior in Water

- ◆ In general, horses and other large animals can swim
- ◆ Will keep their heads above water as much as possible
- ◆ Legs and hooves will be especially dangerous
 - ◆ Paddling in deep water
 - ◆ Scrambling for sure footing
- ◆ Horses are susceptible to hypothermia

Slide 5

Animal Behavior in Water

- ◆ Attitude may reflect
 - ◆ Determination
 - ◆ Confusion
 - ◆ Panic
 - ◆ Unsure footing causes panic
 - ◆ Movement may be unpredictable
 - ◆ Pain
 - ◆ Exhaustion, resignation
 - ◆ Remember prey animals conserve their energy for when they really need it

Slide 6

Safety

- ◆ Read the attitude of the animal
- ◆ Only approach if attitude suggests cooperation
- ◆ Only approach at neutral zones
- ◆ Only enter neutral zones to apply necessary rescue equipment
- ◆ Carefully plan approach and working positions
- ◆ Assist and direct the horse or animal from a distance
- ◆ The rescuer will have slower reactions in water

Slide 7

Scene Management and Operations

- ◆ Time is a major factor
 - ◆ Not efficient swimmers nor comfortable in water
 - ◆ Expend more energy and lose more body heat
 - ◆ Can become hypothermic and go into shock
- ◆ Safety officer needs to be aware of the problems associated with water operations
- ◆ Water conditions may impede or prevent application of rescue equipment

Slide 8

Scene Management and Operations

- ◆ In slow moving and swift water situations, the operations may need to move down stream, systems may need to be mobile
- ◆ Establish both animal and personnel safety zones
- ◆ Establish contingency plans, allow time to move personnel and equipment

Slide 9

Standing Water

- ◆ Get to the head and attach a long lead line
 - ◆ Keep the animal's head above water
- ◆ Direct animal to shore
- ◆ Throw a loop around the animal's head
 - ◆ This is a last resort
 - ◆ Moving water could choke animal
 - ◆ Doesn't allow the animal free use of head
 - Head is important for movement, balance, and momentum

Slide 10

Apply a Rescue Strap

- ◆ Attach an empty plastic bottle to a light line or heavy cord
- ◆ Using a pole, from the side, push the bottle under the animal's center
- ◆ Release the bottle and let it float up on the opposite side of the animal
- ◆ Attach the rescue strap to the end of the line
- ◆ Feed the rescue strap under the animal and up the opposite side

Slide 11

Apply a Rescue Strap

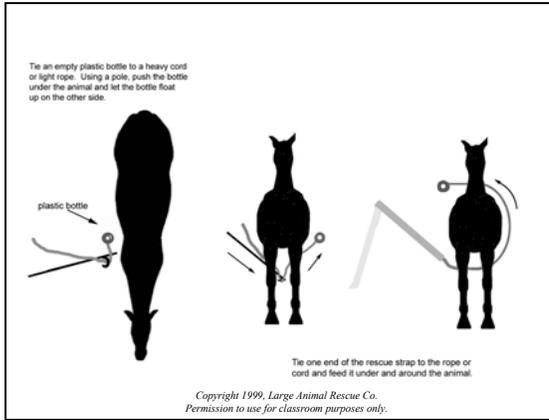
- ◆ Bring the end of the rescue strap over the animal and form a larksfoot to the side of the animal
- ◆ Again, feed the bottle under mid section of the animal, forward between the front legs and let it float up
- ◆ Feed the rescue strap down and forward, between the front legs positioning the larksfoot between the front legs
- ◆ Cinch the strap in place

Slide 12

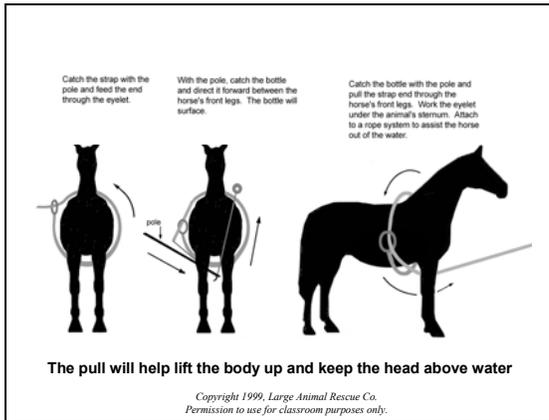
Apply a Rescue Strap

- ◆ Attach a haul system to the strap
- ◆ Assist the animal out of the water
 - ◆ Avoid tangling in front legs
 - ◆ Direct animal from a distance
 - ◆ Allow free movement of the head and neck
 - ◆ Keep head above water
 - ◆ The pull will help lift the body up

Slide 13



Slide 14



Slide 15

Swimming Pool Strategies

- ◆ Drain pool if possible
 - ◆ Facilitates operations; Helps prevent hypothermia
- ◆ Direct the animal to shallow end
 - ◆ Assist up steps; Wrap hooves with duct tape for more traction
- ◆ Create a ramp
 - ◆ Plywood improves footing; Support with cribbing
- ◆ Create steps with tight bales of hay
- ◆ Apply vertical lift tie
 - ◆ Use tractor, crane, or tow truck to lift out of pool

Slide 16

Ice

- ◆ Time is critical
- ◆ Establish a hauling system
- ◆ Keep a large area on shore clear for the animal
- ◆ Establish safety zones for personnel
- ◆ Attach a long lead to the animal
- ◆ Direct and assist the animal to shore

Slide 17

Moving Water

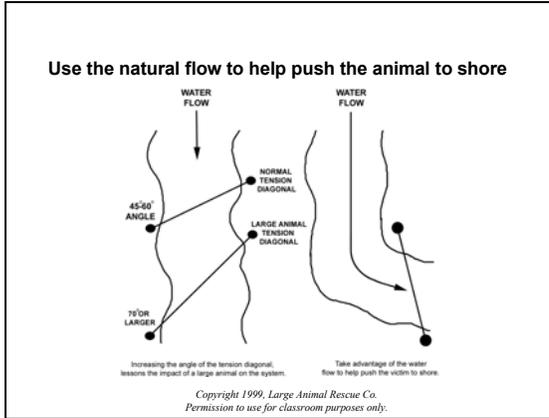
- ◆ Establish a tension diagonal system or zip line
 - ◆ Set-up at a greater angle to lessen the impact on the victim
 - ◆ Construct a zip line out of inflated fire hose to lessen impact on victim

Slide 18

Moving Water

- ◆ Considerations when setting up the system
 - ◆ Need solid anchors due to animal's weight/size
 - ◆ Establish angle on the rope as steep as possible
 - ◆ Use a bend in the water flow if possible
 - ◆ No floating objects caught on the rope
 - ◆ Recovery area
 - ◆ Lots of room for capture/recovery
 - ◆ Easy access to an exit trail or path
- ◆ Establish second rescue point and recovery area

Slide 19



Appendix A: Glossary

- Alpha Mare** The most socially dominant mare in the herd. When alerted by the stallion, she mobilizes the herd and controls herd movement through timing and athletic ability.
- Anchor Plate** A large metal plate with holes to hold various components of a rope system.
- Anderson Sling** A manufactured vertical lift harness designed to safely lift a large animal for a sustained period of time at a high angle.
- Animal Handler** The person responsible for supporting and directing the animal victim; the handler takes the place of the alpha mare or passive leader.
- Artificial Anchor**..... An artificial anchor such as a vehicle, building, telephone pole, or picket system.
- Backward Drag** Rear application of the rescue strap to a large animal for extrication, i.e., out of a trailer, confined space, etc.
- Brigade** A group of people organized for a special activity, in this case, a squad of British fire fighters.
- Blindfold** A length of cloth used to cover the horse's eyes for protection or to help calm it.
- "Bomb Proof"** A single anchor point that is capable of sustaining the potential forces exerted on a haul system without possible failure.
- Bowline**..... A knot used to form a loop that neither slips nor jams.
- Bumper Pull Trailer** A trailer that attaches to the pull vehicle with a hitch located at the bumper.
- Butt Chain** A chain that fastens behind the horse in a straight load trailer, serves as a means of containment until the doors are latched.
- Carabiner**..... An oblong metal ring that snaps in place to hold a freely running rope or other rope system devices.

| | |
|------------------------------------|--|
| Cowboy Halter | A halter constructed out of a single length of rope, usually includes knots that are calculated to position at pressure points on the horse's nose. |
| Dividers | Panels or rails that are fixed or swing into place to separate horses in a trailer. |
| Ear plugs | Small soft objects sized to fit in a horse's ear i.e. nylon stockings stuffed with cotton. |
| Eight-plate | Hardware specifically designed as a friction device for rappelling and lowering evolutions; can also be used to gather equipment. |
| Euthanasia | A gentle death free of pain and suffering. |
| Extended Anchor Rope | A rope that allows the haul system to be placed at a greater distance from the anchor. |
| Extended Haul Rope | A rope used when the distance to the load exceeds the working length of the haul system. |
| Extrication Officer | The officer in charge of a large animal extrication operation. |
| Field of Vision | Indicates the extent of a horse's monocular and binocular vision. |
| Figure 8 on a Bight | A knot in the shape of a figure eight that forms a loop at the end of the rope. |
| Fire Services Charter | Provides for the protection of life, property, and the environment. |
| Fixed Anchor | An anchor that is not movable. |
| Flight or Fight | Survival mechanisms for large animals of prey; a horse will normally choose flight before fight. |
| Forward Assist | Forward application of the rescue strap to a large animal in order to assist with walking, dragging, or lifting. |
| Gelding | A castrated male horse. |
| Glide | A sled-like device constructed of high-density polymer that is used to transport a recumbent horse, equipped with a slip-sheet to go over ground obstructions. |

- Gooseneck Trailer** A type of 5th wheel trailer that hitches to a mechanism in the bed of the truck; this type of hitch offers more stability for the trailer than a bumper hitch.
- Halter** A headstall with noseband and throat lash, constructed of leather, nylon web, or rope that is used to lead a horse.
- Haunches** The hindquarters of the animal.
- Herd Animals** Prey animals that live together in groups for protection against predators.
- ICS** Incident Command System - a basic organizational structure that can be used on all types of emergencies.
- Ladder Rig**..... A simple 2:1 or 4:1 pulley system.
- Large Animal Rescue (LAR)** ... The technical rescue of large animals that involves use of other technical rescue skills applied with an understanding of prey behavior and characteristics.
- Large Animal Veterinarian** A veterinarian qualified to treat large animals such as horses, cows, llamas, etc.
- Lead Line or Rope** A length of synthetic or cotton rope that attaches to a halter in order to lead a horse.
- Line of Fire** The non-static zone around a horse where a rescuer could be bit or kicked.
- Load Release Device** When used with a brake in a system acts as a shock absorber and allows a set brake to be released under a load.
- Mare** A mature female horse.
- Mariner's Hitch**..... A load release device constructed of small diameter rope or web.
- Movable Haul System**..... A method of load transfer that allows a rope system to be reset.
- Natural Anchor**..... A naturally occurring anchor such as a tree, large rock, brush, or root systems.
- Neutral Zone**..... The zone near the shoulder of a horse.

- One-In/One-Out**..... A system where a rescuer in a compromised situation is backed up by another rescuer who can assist with escape.
- Passive Leaders** Calm, confident horses in the herd that lead other horses by example, not dominance; horses congregate around the passive leader and willingly follow.
- Peripheral**..... The outer part of the field of vision.
- Picket Anchor System**..... A series of pickets or stakes driven into the ground at an angle, lashed together.
- Piggyback**..... A compound pulley system created by pulling on one simple pulley system with another simple pulley system.
- Piggyback Haul System** A haul system employing a load transfer that utilizes either an extended anchor rope or an extended haul rope.
- Posture** The physical stance or bearing that reflects a mental state.
- Predators**..... Animals that hunt prey animals.
- Prey**..... Animals that are hunted by predators.
- Prusik Loop**..... A short length of small diameter rope that uses double overhand knots at each end to form a loop with another length of rope; can be attached to a running line to be used as a brake.
- RPM** Rack Pulley Mariner's Hitch - a device used to manage the main line of a rope system.
- Ramp** A panel that drops down from a trailer mainframe to allow an animal to walk into the trailer; usually spring loaded.
- Recumbent**..... Lying down.
- Rescue**..... Prompt or vigorous action to free a victim from eminent danger or distress.
- Rescue Strap**..... A 3-4 inch nylon web strap, 14-18 feet long, with loops at each end.
- Rope or "Cowboy" Halter** A halter constructed of a continuous length of rope with knots that correspond with pressure points on the horse's nose.

- Santa Barbara Surcingle** Modification of a standard surcingle, which is a training device that consists of a belt 3-5 inches wide that is buckled around the girth area at the withers. Normally the device is put on and lines attached to drive the horse.
- The "Santa Barbara Surcingle" is a belt 4-5 inches wide, but built much heavier. It has several loops or attachment points on it for hauling ropes or lifting ropes. Because it is fastened at a fixed location along the girth, lifting and hauling operations do not cause it to tighten around the animal like a rescue strap in the larks foot or forward application.
- Scruff Reflex** A reflex that causes a lifted animal to go limp, such as when a mother cat carries her kitten by the scruff of the neck.
- Sedative**..... A chemical restraint that alters the animal's perception of pain or anxiety; in high doses, may cause loss of consciousness.
- Side-by-Side Load** A trailer with a center divider that is parallel to the sides, the horses are loaded from the back and positioned side-by-side.
- Slant Load** A trailer with dividers diagonal to the sides.
- Stallion** An uncastrated male horse.
- Stand-Alone** A trailer that is one unit with the vehicle, similar to a RV.
- Static**..... Stationary.
- Step-Up**..... A trailer without a ramp.
- Stock Trailer**..... A trailer without dividers for hauling multiple animals.
- Tension Diagonal System (or Zip Line)** A rope system, usually a 3:1 (z-rig), used in swift water rescue operations, set up at an angle across the river, the rope is used to assist the victim to a recovery point down stream.
- Tractor Trailer** A truck with a short chassis and no body used in conjunction with a trailer.

- Tranquilizer** A chemical restraint that alters the animal's reaction to pain and anxiety.
- Unified Command** Where representatives from two or more agencies share in the decision making process, or the command of an incident.
- Validation** Official sanction.
- Vertical Lifting Harness** A harness designed to safely lift a large animal at a high angle.
- Veterinarian** One qualified to treat diseases and injuries of animals, an essential member of a large animal rescue team.
- Withers** The high point where the horse's shoulders come together at the backbone.
- Zip Line** See "Tension Diagonal System."
- Z-rig** A 3:1 system where a single rope is configured through a carabiner, pulley, and prusik to gain a mechanical advantage.

Manipulative Performance Test #1

| | |
|-------------------------------|---|
| TITLE: | MPT #1: Applying An Emergency Rope Halter |
| OBJECTIVE: | The objective is to have the student apply an emergency rope halter on a horse. |
| TIME FRAME: | 0:01 per student |
| MATERIALS NEEDED: | <ul style="list-style-type: none"> • Fiberglass horse • 25-30 foot length of ½-inch rope • Appropriate personal protective equipment • Clipboard and marking pen • Stopwatch • Performance exam for each rater and student |
| INSTRUCTOR DIRECTIONS: | <ol style="list-style-type: none"> 1. Explain the testing process to the students. 2. Be sure they understand the process and have asked any questions they may have before the test begins. 3. No questions will be allowed after the test begins. |
| STUDENT DIRECTIONS: | <ol style="list-style-type: none"> 1. Indicate verbally when ready to begin the test. 2. The time will begin on the command "GO." 3. The time will end when the operation is complete. 4. Call out to verify visual inspection of items used in the testing process when required. 5. The rater(s) will time the evolution and keep score. 6. You have one (1) minute to complete the evolution. |
| SCORING: | <p>100 points possible 80% passing</p> <ol style="list-style-type: none"> 1. Each Operation has a point value. 2. Basic Operations have a point value of five (5). 3. Essential Operations have a point value of ten (10). |

| | |
|---------------|--|
| TITLE: | MPT #1: Applying An Emergency Rope Halter |
| | <ol style="list-style-type: none">4. Critical Operations or Safety Violations are pass/fail and are marked with an asterisk (*).5. The student will receive all the assigned points for each Operation completed correctly.6. The student will receive zero (0) points for each Operation omitted or completed incorrectly.7. The student will fail if he or she omits a Critical Operation or a Safety Violation occurs.8. The student will fail if he or she fails to complete the evolution in the time allotted. |



LARGE ANIMAL RESCUE
Operational

MANIPULATIVE PERFORMANCE TEST #1

Applying An Emergency Rope Halter

STUDENT: _____

DATE: _____

| | OPERATION | Points Possible | Points Received |
|---------------|--|------------------------|---|
| 1. | Check over all scene activity and safety, put on gloves. | 5* | |
| 2. | Zigzag the rope in one hand | 5 | |
| 3. | Do not allow rope to drop to the ground. | 10* | |
| 4. | Do not hide the equipment. | 5 | |
| 5. | Approach from the front to the horse's shoulder. | 5 | |
| 6. | Gain contact with the horse. | 5 | |
| 7. | Stay in the neutral zone. | 10* | |
| 8. | Slowly work the small loop end of the rope over the withers and down the opposite side of the horse. | 5 | |
| 9. | Take the loop end of the rope and gain control. | 5 | |
| 10. | Work the loop up the horse's neck, maintaining control. | 5 | |
| 11. | Feed the midsection of the rope through the small loop, forming a new loop. | 10 | |
| 12. | Hold the running portion of the rope and the new loop and gain control. | 5 | |
| 13. | Slowly move the new loop up and over the horse's nose. | 10 | |
| 14. | Tighten the loop in a slow downward and forward motion. | 10 | |
| 15. | Gain control of the horse. | 5 | |
| | TOTAL POINTS POSSIBLE: | 100 | |
| | PASSING SCORE: | 80 | |
| | STUDENT'S SCORE: | | |
| | MAXIMUM ALLOTTED TIME: | 1:00 | |
| | STUDENT'S TIME: | | |
| Rater's Name: | | Pass/Fail: | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Retest |
| Signature: | | | |

Manipulative Performance Test #2

| | |
|-------------------------------|--|
| TITLE: | MPT #2: Applying A Forward Rescue Strap |
| OBJECTIVE: | The objective is to have the student apply a forward rescue strap on a horse. |
| TIME FRAME: | 0:02 per student |
| MATERIALS NEEDED: | <ul style="list-style-type: none"> • Animal handler • Haltered fiberglass horse • Rescue strap • Appropriate personal protective equipment • Clipboard and marking pen • Stopwatch • Performance exam for each rater and student |
| INSTRUCTOR DIRECTIONS: | <ol style="list-style-type: none"> 1. Explain the testing process to the students. 2. Be sure they understand the process and have asked any questions they may have before the test begins. 3. No questions will be allowed after the test begins. |
| STUDENT DIRECTIONS: | <ol style="list-style-type: none"> 1. Indicate verbally when ready to begin the test. 2. The time will begin on the command "GO." 3. The time will end when the operation is complete. 4. Call out to verify visual inspection of items used in the testing process when required. 5. The rater(s) will time the evolution and keep score. 6. You have two (2) minutes to complete the evolution. |
| SCORING: | <p>100 points possible 80% passing</p> <ol style="list-style-type: none"> 1. Each Operation has a point value. 2. Basic Operations have a point value of five (5). |

| | |
|---------------|--|
| TITLE: | MPT #2: Applying A Forward Rescue Strap |
| | <ol style="list-style-type: none">3. Essential Operations have a point value of ten (10).4. Critical Operations or Safety Violations are pass/fail and are marked with an asterisk (*).5. The student will receive all the assigned points for each Operation completed correctly.6. The student will receive zero (0) points for each Operation omitted or completed incorrectly.7. The student will fail if he or she omits a Critical Operation or a Safety Violation occurs.8. The student will fail if he or she fails to complete the evolution in the time allotted. |

MANIPULATIVE PERFORMANCE TEST #2

Applying A Forward Rescue Strap

STUDENT: _____

DATE: _____

| | OPERATION | Points Possible | Points Received |
|---------------|---|-----------------|---|
| | Given that a halter and long lead line are in place and the animal handler has control of the animal. | | |
| 1. | Check over all scene activity and safety, put on gloves. | 10* | |
| 2. | At the animal handler's command, approach from the front to the shoulder. | 10 | |
| 3. | Do not hide the equipment. | 5 | |
| 4. | Do not allow equipment to drop to the ground | 10* | |
| 5. | Gain contact with the horse. | 5 | |
| 6. | Stay in the neutral zone. | 10* | |
| 7. | Work one end of the strap over the withers. | 5 | |
| 8. | Reach under the horse, maintaining contact, and grasp the end of the rescue strap. | 10 | |
| 9. | Work the end of the strap under the horse and feed the opposite end of the strap through the loop, forming a "larksfoot." | 10 | |
| 10. | Slowly position the larksfoot under the horse and feed the running end of the strap forward between the horse's front legs. | 10 | |
| 11. | Bring the end of the strap forward to the animal handler. | 10 | |
| 12. | At the animal handler's command, move away from the animal. | 5 | |
| | TOTAL POINTS POSSIBLE: | 100 | |
| | PASSING SCORE: | 80 | |
| | STUDENT'S SCORE: | | |
| | MAXIMUM ALLOTTED TIME: | 0:02 | |
| | STUDENT'S TIME: | | |
| Rater's Name: | | Pass/Fail: | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Retest |
| Signature: | | | |

Manipulative Performance Test #3

| | |
|-------------------------------|---|
| TITLE: | MPT #3: Applying A Vertical Lift Tie |
| OBJECTIVE: | The objective is to have the student apply a vertical lift tie on a horse. |
| TIME FRAME: | 0:05 per student |
| MATERIALS NEEDED: | <ul style="list-style-type: none"> • Animal handler • Assistant rescuer • Haltered fiberglass horse • 60-foot length of ¾-inch soft cotton rope or 1-inch single jacket wildland hoseline • Appropriate personal protective equipment • Clipboard and marking pen • Stopwatch • Performance exam for each rater and student |
| INSTRUCTOR DIRECTIONS: | <ol style="list-style-type: none"> 1. Explain the testing process to the students. 2. Be sure they understand the process and have asked any questions they may have before the test begins. 3. No questions will be allowed after the test begins. |
| STUDENT DIRECTIONS: | <ol style="list-style-type: none"> 1. Indicate verbally when ready to begin the test. 2. The time will begin on the command "GO." 3. The time will end when the operation is complete. 4. Call out to verify visual inspection of items used in the testing process when required. 5. The rater(s) will time the evolution and keep score. 6. You have five (5) minutes to complete the evolution. |

| | |
|-----------------|--|
| TITLE: | MPT #3: Applying A Vertical Lift Tie |
| SCORING: | <p>100 points possible 80% passing</p> <ol style="list-style-type: none"> 1. Each Operation has a point value. 2. Basic Operations have a point value of five (5). 3. Essential Operations have a point value of ten (10). 4. Critical Operations or Safety Violations are pass/fail and are marked with an asterisk (*). 5. The student will receive all the assigned points for each Operation completed correctly. 6. The student will receive zero (0) points for each Operation omitted or completed incorrectly. 7. The student will fail if he or she omits a Critical Operation or a Safety Violation occurs. 8. The student will fail if he or she fails to complete the evolution in the time allotted. |

MANIPULATIVE PERFORMANCE TEST #3

Applying A Vertical Lift Tie

STUDENT: _____

DATE: _____

| | OPERATION | Points Possible | Points Received |
|-----|---|-----------------|-----------------|
| | Given that there is a halter and long lead line on the horse and the animal handler has control of the animal. | | |
| 1. | Check over all scene activity and safety, put on gloves. | 5* | |
| 3. | At the handler's command, both rescuers approach from the front to the shoulder. | 5 | |
| 4. | Do not hide the equipment; do not allow equipment to drop to ground. | 5 | |
| 5. | Gain contact with the horse. | 5 | |
| 6. | Stay in the neutral zone. | 10* | |
| 7. | With the center of the rope, measure from the withers to the sternum and tie an overhand knot, forming a loop. | 5 | |
| 8. | Go to the handler, feed the end of the lead line through the loop, place the loop over the horse's neck. Adjust the knot so that it falls below the thoracic inlet. | 10 | |
| 9. | Run the ends of the rope, one at a time, down and back through the front legs. | 5 | |
| 10. | Bring the ends of the rope up and over the back, exchange ropes, forming an "X." | 5 | |
| 11. | Slowly, one at a time, run the ends of the rope, down and back through the horse's rear legs, and then up along the dock of the tail. | 10* | |
| 12. | Holding both sections of the rope together, tie an overhand knot just above the tail. | 10 | |
| 13. | Run both ends of the rope forward under the "X" and through the neck loop, keeping the ropes as tight as possible. | 5 | |
| 14. | Run the rope ends back over rear part of the "X" between the forward running lines, turn and continue under the rear part of the "X" towards the neck. | 5 | |
| 15. | Run the rope ends forward under the neck loop a second time. | 5 | |
| 16. | Wrap the rope ends in opposite directions around the parallel set of ropes between the withers and the middle of the back, forming a "handle." | 5 | |
| 17. | Tie the ends of the rope together, keeping the knot off-center. | 5 | |



LARGE ANIMAL RESCUE
Operational

MANIPULATIVE PERFORMANCE TEST #3

Applying A Vertical Lift Tie

STUDENT: _____

DATE: _____

| | | | |
|---------------|-------------------------------|-------------|---|
| | TOTAL POINTS POSSIBLE: | 100 | |
| | PASSING SCORE: | 80 | |
| | STUDENT'S SCORE: | | |
| | MAXIMUM ALLOTTED TIME: | 0:10 | |
| | STUDENT'S TIME: | | |
| Rater's Name: | | Pass/Fail: | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Retest |
| Signature: | | | |

Manipulative Performance Test #4

MPT #5, Applying A Rescue Strap On A Horse In A Trailer, may be substituted for this test.

| | |
|-------------------------------|---|
| TITLE: | MPT #4: Applying A Rescue Strap On A Recumbent Horse |
| OBJECTIVE: | The objective is to have the student apply a rescue strap on a recumbent horse. |
| TIME FRAME: | 0:05 per student |
| MATERIALS NEEDED: | <ul style="list-style-type: none"> • Animal handler • Assistant rescuer • Fiberglass horse • Rescue strap • 25-30 foot length of ½-inch rope or 1-inch webbing • 8-foot or longer pike pole or boat hook • Appropriate personal protective equipment • Clipboard and marking pen • Stopwatch • Performance exam for each rater and student |
| INSTRUCTOR DIRECTIONS: | <ol style="list-style-type: none"> 1. Explain the testing process to the students. 2. Be sure they understand the process and have asked any questions they may have before the test begins. 3. No questions will be allowed after the test begins. |
| STUDENT DIRECTIONS: | <ol style="list-style-type: none"> 1. Indicate verbally when ready to begin the test. 2. The time will begin on the command "GO." 3. The time will end when the operation is complete. 4. Call out to verify visual inspection of items used in the testing process when required. 5. The rater(s) will time the evolution and keep score. 6. You have five (5) minutes to complete the evolution. |



LARGE ANIMAL RESCUE

Operational

| | |
|-----------------|--|
| TITLE: | MPT #4: Applying A Rescue Strap On A Recumbent Horse |
| SCORING: | <p>100 points possible 80% passing</p> <ol style="list-style-type: none">1. Each Operation has a point value.2. Basic Operations have a point value of five (5).3. Essential Operations have a point value of ten (10).4. Critical Operations or Safety Violations are pass/fail and are marked with an asterisk (*).5. The student will receive all the assigned points for each Operation completed correctly.6. The student will receive zero (0) points for each Operation omitted or completed incorrectly.7. The student will fail if he or she omits a Critical Operation or a Safety Violation occurs.8. The student will fail if he or she fails to complete the evolution in the time allotted. |

MANIPULATIVE PERFORMANCE TEST #4
Applying A Rescue Strap On A Recumbent Horse

STUDENT: _____

DATE: _____

| | OPERATION | Points Possible | Points Received |
|-----|--|-----------------|-----------------|
| | Given that a halter and long lead rope are in place and the animal handler has control of the animal. | | |
| 1. | Check over all scene activity and safety, put on gloves. | 10* | |
| 2. | Rescuer #1 approaches the trailer while in the horse's line of sight. | 10 | |
| 3. | Rescuer #1 positions at the trailer's opening, near the horse's back. | 10 | |
| 4. | Rescuer #2 finds an opening as far forward and as low as possible in the trailer's floor and feeds the end of the webbing through it into the trailer. | 5 | |
| 5. | Rescuer #1, using a pike pole, retrieves the webbing and runs it under the legs, past the hip, then attaches it to one end of the rescue strap. | 5 | |
| 6. | Rescuer #1 hooks the loop of the rescue strap on the end of the pike pole and keeping it low, pushes it forward between the horse's back and side of the trailer, | 10 | |
| 7. | At the command of Rescuer #1, Rescuer #2 uses the webbing to pull the rescue strap under the horse just forward of the hip. The pull continues until the center of the strap is as close to the horse's spine as possible. | 10 | |
| 8. | Rescuer #2, using a pike pole, retrieves the webbing and rescue strap, feeding it over the lower leg and under the upper leg. | 10 | |
| 9. | Rescuer #1 feeds the loose end of the rescue strap over the hip and back between the rear legs, with assistance from rescuer #2 using a pike pole. | 10 | |
| 10. | Rescuer #1 attaches the loose end of the webbing to the loose end of the rescue strap. | 10 | |
| 11. | Rescuer #2 brings the rope's midsection of the webbing back and attaches it to the hauling system when everyone is ready. | 10 | |



LARGE ANIMAL RESCUE
Operational

MANIPULATIVE PERFORMANCE TEST #4
Applying A Rescue Strap On A Recumbent Horse

STUDENT: _____ **DATE:** _____

| | | | |
|---------------|-------------------------------|-------------|---|
| | TOTAL POINTS POSSIBLE: | 100 | |
| | PASSING SCORE: | 80 | |
| | STUDENT'S SCORE: | | |
| | MAXIMUM ALLOTTED TIME: | 0:10 | |
| | STUDENT'S TIME: | | |
| Rater's Name: | | Pass/Fail: | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Retest |
| Signature: | | | |

Manipulative Performance Test #5

MPT #4, Applying A Rescue Strap On A Recumbent Horse, may be substituted for this test.

| | |
|-------------------------------|---|
| TITLE: | MPT #5: Applying A Rescue Strap On A Recumbent Horse In A Trailer |
| OBJECTIVE: | The objective is to have the student apply a rescue strap on a recumbent horse in a trailer. |
| TIME FRAME: | 0:05 per student |
| MATERIALS NEEDED: | <ul style="list-style-type: none"> • Animal handler • Assistant rescuer • Stock horse trailer • Fiberglass horse • Rescue strap • 25-30 foot length of ½-inch rope • 8-foot or longer pike pole or boat hook • Appropriate personal protective equipment • Clipboard and marking pen • Stopwatch • Performance exam for each rater and student |
| INSTRUCTOR DIRECTIONS: | <ol style="list-style-type: none"> 1. Explain the testing process to the students. 2. Be sure they understand the process and have asked any questions they may have before the test begins. 3. No questions will be allowed after the test begins. |
| STUDENT DIRECTIONS: | <ol style="list-style-type: none"> 1. Indicate verbally when ready to begin the test. 2. The time will begin on the command "GO." 3. The time will end when the operation is complete. 4. Call out to verify visual inspection of items used in the testing process when required. 5. The rater(s) will time the evolution and keep score. 6. You have five (5) minutes to complete the evolution. |

| | |
|-----------------|---|
| TITLE: | MPT #5: Applying A Rescue Strap On A Recumbent Horse In A Trailer |
| SCORING: | <p>100 points possible 80% passing</p> <ol style="list-style-type: none"> 1. Each Operation has a point value. 2. Basic Operations have a point value of five (5). 3. Essential Operations have a point value of ten (10). 4. Critical Operations or Safety Violations are pass/fail and are marked with an asterisk (*). 5. The student will receive all the assigned points for each Operation completed correctly. 6. The student will receive zero (0) points for each Operation omitted or completed incorrectly. 7. The student will fail if he or she omits a Critical Operation or a Safety Violation occurs. 8. The student will fail if he or she fails to complete the evolution in the time allotted. |

MANIPULATIVE PERFORMANCE TEST #5

Applying A Rescue Strap On A Recumbent Horse In A Trailer

STUDENT: _____

DATE: _____

| | OPERATION | Points Possible | Points Received |
|-----|--|-----------------|-----------------|
| | Given that the doors of the trailer are open, a halter and long lead rope are in place, and the animal handler has control of the animal. | | |
| 1. | Check over all scene activity and safety, put on gloves. | 10 | |
| 2. | Attach the rope to one end of the rescue strap. | 5 | |
| 3. | Rescuer #1 approaches in the horse's line of sight, with the equipment. | 10 | |
| 4. | Rescuer #1 positions at the horse's back, forward of the hips. | 10* | |
| 5. | Rescuer #1 places one end of the strap under the horse just forward of the hip and holds it in place. | 5 | |
| 6. | Rescuer #2 takes the running end of the rope out and around the horse's rear, working out of the line of fire, while Rescuer #1 works the rope under the horse's rear legs using a pike pole or boat hook. | 10* | |
| 7. | Rescuers #1 and #2 work the rope under the horse's hips until the rope is just forward of the hips. Rescuer #2 pulls the strap under the horse, | 10 | |
| 8. | Rescuer #2 brings the rope and end of the rescue strap out and around the horse to Rescuer #1, pulling it under the top leg and over the lower leg. | 10 | |
| 9. | Rescuer #1 feeds the loose end of the rescue strap over the hip and back between the rear legs, with assistance from rescuer #2 using a pike pole. | 10 | |
| 10. | Rescuer #1 attaches the loose end of the rope to the loose end of the rescue strap. | 10 | |
| 11. | Rescuer #2 brings the rope's mid-section back and attaches it to the hauling system when everyone is ready. | 10* | |



MANIPULATIVE PERFORMANCE TEST #5

Applying A Rescue Strap On A Recumbent Horse In A Trailer

STUDENT: _____ **DATE:** _____

| | | | |
|---------------|-------------------------------|-------------|---|
| | TOTAL POINTS POSSIBLE: | 100 | |
| | PASSING SCORE: | 80 | |
| | STUDENT'S SCORE: | | |
| | MAXIMUM ALLOTTED TIME: | 0:10 | |
| | STUDENT'S TIME: | | |
| Rater's Name: | | | Pass/Fail: <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Retest |
| Signature: | | | |

Manipulative Performance Test #6

| | |
|-------------------------------|---|
| TITLE: | MPT #6: Applying Parallel or Tandem Prusiks and Assembling A Piggyback Haul System |
| OBJECTIVE: | The objective is to have the student apply parallel or tandem prusiks and assemble a piggyback haul system. |
| TIME FRAME: | 0:10 per student |
| MATERIALS NEEDED: | <ul style="list-style-type: none"> • Animal handler • Fiberglass horse • Sufficient length of haul rope (will need to be doubled for use of parallel prusiks) • Haul system with load transfer (4:1 system preferred) • Appropriate anchor and anchor equipment • 4 carabiners • Appropriate prusiks sets (parallel or tandem) • Appropriate personal protective equipment • Clipboard and marking pen • Stopwatch • Performance exam for each rater and student |
| INSTRUCTOR DIRECTIONS: | <ol style="list-style-type: none"> 1. Explain the testing process to the students. 2. Be sure they understand the process and have asked any questions they may have before the test begins. 3. No questions will be allowed after the test begins. |

| | |
|----------------------------|---|
| TITLE: | MPT #6: Applying Parallel or Tandem Prusiks and Assembling A Piggyback Haul System |
| STUDENT DIRECTIONS: | <ol style="list-style-type: none"> 1. Indicate verbally when ready to begin the test. 2. The time will begin on the command "GO." 3. The time will end when the operation is complete. 4. Call out to verify visual inspection of items used in the testing process when required. 5. The rater(s) will time the evolution and keep score. 6. You have ten (10) minutes to complete the evolution. |
| SCORING: | <p>100 points possible 80% passing</p> <ol style="list-style-type: none"> 1. Each Operation has a point value. 2. Basic Operations have a point value of five (5). 3. Essential Operations have a point value of ten (10). 4. Critical Operations or Safety Violations are pass/fail and are marked with an asterisk (*). 5. The student will receive all the assigned points for each Operation completed correctly. 6. The student will receive zero (0) points for each Operation omitted or completed incorrectly. 7. The student will fail if he or she omits a Critical Operation or a Safety Violation occurs. 8. The student will fail if he or she fails to complete the evolution in the time allotted. |



LARGE ANIMAL RESCUE
Operational

MANIPULATIVE PERFORMANCE TEST #6

Applying Parallel or Tandem Prusiks, Assembling A Piggyback Haul System

STUDENT: _____

DATE: _____

| | OPERATION | Points Possible | Points Received |
|---------------|---|-----------------|---|
| 1. | Check over all scene activity and safety, put on gloves. | 5* | |
| 2. | Determine a direction of pull and choose an appropriate haul system. | 5 | |
| 3. | Establish an anchor. | 5 | |
| 4. | Lay out the equipment. | 5 | |
| 5. | Attach the hauling system and a load transfer device to the anchor. | 5 | |
| 6. | Extend the haul system to a workable length. | 5 | |
| 7. | Extend the moveable haul rope to the load. | 5 | |
| 8. | Attach parallel or tandem prusiks to the haul rope at the end of the haul system and attach the haul system to the prusiks. | 10 | |
| 9. | Attach a carabiner to the end of the haul rope. | 5 | |
| 10. | When the animal handler and haul team are ready, attach the haul rope to the animal. | 10 | |
| 11. | Start the haul at the animal handler's command. | 10* | |
| 12. | The haul stops and the load transfer are attached at the animal handler's command or as the haul system approaches the end of its working length. | 10 | |
| 13. | Release tension on the haul system and transfer the load to the load release device. | 5 | |
| 14. | The haul system is extended back to its working length. | 5 | |
| 15. | A second set of prusiks is attached to the haul rope. | 5 | |
| 16. | The haul system is reattached to the haul rope. | 5 | |
| | TOTAL POINTS POSSIBLE: | 100 | |
| | PASSING SCORE: | 80 | |
| | STUDENT'S SCORE: | | |
| | MAXIMUM ALLOTTED TIME: | 0:10 | |
| | STUDENT'S TIME: | | |
| Rater's Name: | | Pass/Fail: | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Retest |
| Signature: | | | |

Answer Key

INSTRUCTIONS: This is a multiple-choice test. For each of the following questions or statements, draw a circle around the letter preceding the one best answer.

EXAMPLE: Methods and operating procedures which reduce fire, water and smoke damage during and after a fire is

- a. overhaul
 - b. ventilation
 - c. extinguishment
 - d. salvage
-

1. When working with a standing horse, the best position for the horse handler in a rescue is
 - a. in front or behind
 - b. at the shoulder or out of the line of fire
 - c. near the belly
 - d. **behind or to the side**
2. The fire service has much to offer and is a natural for large animal rescue because
 - a. knowledge of ropes and lifting devices
 - b. extrication
 - c. heavy rescue
 - d. ***all of the above***
3. In large animal rescue, an incident command system is ***not*** important. This statement is
 - a. true
 - b. **false**

9. If the animal has to be euthanized, who has the final legal authorization?
- Fire department
 - Law enforcement
 - The owner**
 - The veterinarian
10. Which of the following are herd animals?
- Horses
 - Cattle
 - Sheep
 - All of the above**
11. In setting up your game plan for the animal rescue, who should be involved?
- The owner
 - The fire department
 - Animal control
 - All of the above**
12. Other countries have recognized the need for large animal rescue training. This statement is
- true**
 - false
13. When choosing rescue equipment, what physical characteristic(s) of the animal should be considered?
- Weight
 - Size
 - Injuries
 - All of the above**
14. Which person assesses the trailer or van with the veterinarian?
- Operations
 - Information
 - Animal handler**
 - Extrication

15. On entry into the trailer, which of the various dividers may present the most difficulty in removal of the animals?
- a. **Fixed**
 - b. ½ height
 - c. Full height or stud
 - d. Single pipe
16. An understanding of animal behavior is
- a. not important
 - b. somewhat important
 - c. **extremely important**
 - d. important but not necessary to the well trained fire fighter
17. Trailer construction poses a challenge to the rescuer when entry is made other than through the door. This statement is
- a. **true**
 - b. false
18. When dealing with a recumbent horse, the safest position is
- a. by the head
 - b. **at the back**
 - c. by the belly
 - d. all of the above
19. What piece of fire equipment may be used in place of the rescue strap?
- a. Pike pole
 - b. Rope
 - c. 1-inch webbing
 - d. **3" or 4" hoseline**
20. A vertical lift tie may only be used to lift an animal for up to
- a. 5 minutes
 - b. **10 minutes**
 - c. 15 minutes
 - d. 20 minutes

21. When an animal is placed on a rescue glide, the animal may need to
- be sedated
 - be hobbled
 - have ear plugs inserted
 - both a and b are correct**
22. It is important to know trailer configurations. This statement is
- true**
 - false
23. Horses are known as prey animals because they are
- predators
 - meek and docile
 - a food source for predators**
 - none of the above
24. Tandem or parallel prusiks are used to provide more weight capacity for a piggyback system. This statement is
- true**
 - false
25. Rescuers should be extra careful when dealing with larger trailers that have living quarters because there could be
- people victims in the trailer
 - propane tanks
 - cooking appliances
 - none of the above
 - a, b, and c are correct**
26. The first line of defense for a horse is flight. This statement is
- true**
 - false

27. Which of the following is **not** an example of heavy equipment discussed in this lesson?
- a. Tow truck
 - b. Crane
 - c. **4:1 system**
 - d. Helicopter
 - e. None of the above
28. Which of the following are examples of siding material used in trailer construction?
- a. Wood
 - b. Aluminum
 - c. Steel
 - d. **All of the above**
 - e. None of the above
29. Why would you consider uprighting a trailer with the animal inside?
- a. Containment of the animals
 - b. Less risk to the rescuers
 - c. Less risk to the general public
 - d. **All of the above**
 - e. None of the above
30. What can the rescuer do to calm an animal during the cutting operation of a trailer extrication?
- a. Cover the eyes
 - b. Ear plugs
 - c. Starting noisy equipment at a distance
 - d. **All of the above**
31. Which of the following can be used to temporarily restrain an animal if no halter is available?
- a. Arms
 - b. Rope
 - c. Belt
 - d. Shirt
 - e. **All of the above**

32. Standard fire equipment cannot be used for large animal rescues. This statement is
- true
 - false**
33. The best tool to assist in the removal of an animal from a trailer is the
- rescue strap**
 - rope system
 - tow truck
 - jaws of life
34. Door configurations are not important to the rescuer. This statement is
- true
 - false**
35. What is the advantage of the piggyback haul system?
- Allows the haul team to position away from the animal
 - Allows the use of an anchor that is distant to the animal
 - Allows a limited length haul system to be extended
 - All of the above**
36. Which of the following is an advantage of using helicopters in lifting operations?
- Low cost
 - Readily available
 - Can move in any direction**
 - Low noise level
37. Sedation of the animal is not necessary for vertical lifting. This statement is
- true
 - false**
38. The assigned animal handler gives the commands on lifting, rests, etc. This statement is
- true**
 - false

39. When doing a moving water rescue, the weight and size of the animal, and speed of the water have the greatest impact on what?
- The rope system**
 - The recovery area
 - Time to complete the rescue
 - The animal's halter
40. Where are the two blind spots in the visual field of a horse?
- Rear of body
 - Under the chin
 - To the side and behind the shoulder
 - Both b and c are correct
 - Both a and b are correct**
41. Which of the following is **not** a rope system that is used for hauling or lifting?
- B-Rig**
 - 4:1
 - 2:1
 - Piggyback
42. If an animal must be pulled out through the doors of a trailer, what are the concerns for a safe extrication?
- Clear working space
 - Door type
 - Obstructions such as dividers and rear tack rooms
 - All of the above**
43. Scene management is important, and there should be no excessive noise, red lights, etc. Why?
- The lights may blind the rescuers
 - They may excite the animal
 - The noise may cause commands to be missed
 - All of the above**

44. Properly applied rescue straps apply pressure to what part of the animal's structure?
- Skin
 - Back
 - Skeleton**
 - Tail
45. Why is time important in a water rescue?
- It difficult to work a water rescue at night
 - Horses can not swim
 - Horses are subject to hypothermia**
 - Water puts the rescuers at a disadvantage
46. Which of the following can be used to temporarily restrain an animal if no halter is available?
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47. In rescue efforts your safety comes first, so watch for
- head toss
 - front leg strikes
 - kicks to the side
 - all of the above**
48. In a water rescue, the rescuer is at a ***disadvantage*** because of
- unknown footing
 - variable water conditions
 - unpredictable reactions of the animal
 - all of the above**



LARGE ANIMAL RESCUE

Operational

NAME: _____

DATE: _____

INSTRUCTIONS: This is a multiple-choice test. For each of the following questions or statements, draw a circle around the letter preceding the one best answer.

EXAMPLE: Methods and operating procedures which reduce fire, water and smoke damage during and after a fire is

- a. overhaul
 - b. ventilation
 - c. extinguishment
 - d. salvage
-

1. When working with a standing horse, the best position for the horse handler in a rescue is
 - a. in front or behind
 - b. at the shoulder or out of the line of fire
 - c. near the belly
 - d. behind or to the side

2. The fire service has much to offer and is a natural for large animal rescue because
 - a. knowledge of ropes and lifting devices
 - b. extrication
 - c. heavy rescue
 - d. all of the above

3. In large animal rescue, an incident command system is **not** important. This statement is
 - a. true
 - b. false

4. Which of the following statements is **not** true concerning a horse's hearing?
- a. Horse's ears swivel
 - b. Horses can hear danger before seeing it
 - c. Horses hear with only one ear at a time
 - d. Horses turn their heads for better hearing
5. It is important to look for signs to determine a horse's attitude and to anticipate its behavior. Circle the appropriate attitude for each of the following signs.
- | | | | |
|------------------------------------|---------|----|-------|
| a. Ears: moving | Relaxed | or | Alert |
| b. Eyes: soft | Relaxed | or | Alert |
| c. Head: raised | Relaxed | or | Alert |
| d. Stance: legs straight, together | Relaxed | or | Alert |
| e. Tail: still, down | Relaxed | or | Alert |
6. Euthanasia is best described as
- a. a natural death
 - b. a good death
 - c. heavy sedation
 - d. dispatched by a firearm
7. Which agencies may be a party to an incident using Unified Command?
- a. Fire
 - b. Law enforcement
 - c. Animal control
 - d. All of the above
8. What should be the angle of a tension diagonal or zip line used in moving water?
- a. 45-60 degrees
 - b. Less than 50 degrees
 - c. 70 degrees or greater
 - d. The angle is not important

9. If the animal has to be euthanized, who has the final legal authorization?
 - a. Fire department
 - b. Law enforcement
 - c. The owner
 - d. The veterinarian

10. Which of the following are herd animals?
 - a. Horses
 - b. Cattle
 - c. Sheep
 - d. All of the above

11. In setting up your game plan for the animal rescue, who should be involved?
 - a. The owner
 - b. The fire department
 - c. Animal control
 - d. All of the above

12. Other countries have recognized the need for large animal rescue training. This statement is
 - a. true
 - b. false

13. When choosing rescue equipment, what physical characteristic(s) of the animal should be considered?
 - a. Weight
 - b. Size
 - c. Injuries
 - d. All of the above

14. Which person assesses the trailer or van with the veterinarian?
 - a. Operations
 - b. Information
 - c. Animal handler
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