

**Annual Report
For the
Charlottesville-Albemarle
Rescue Squad
Technical Rescue Team**



Fiscal Year

1999 - 2000

Technical Rescue can be defined as any operation involving extremely high risk for the rescuer with little probability for victim survivability. Because of the high risk involved, special training, tools, and techniques have been developed to help accomplish the rescue while minimizing the risk to the rescuers and maximizing the chance of survivability of the victim.

Seven years ago, the Charlottesville-Albemarle Rescue Squad decided to develop and maintain a special rescue team for the purpose of technical rescues. Other local emergency response agencies were queried for anyone who wished to participate on the new team, and these new members were added as associate-support members. An accounting of available equipment was made, a set of SOP's was written, and a request for equipment was made to the CARS Board of Directors. Since that time, the CARS Technical Rescue Team has evolved into a well equipped and trained group of rescuers who have shown their advanced capabilities time and time again rescuing victims while themselves not suffering a single reportable injury.

The one problem with having a responsibility for mitigation of technical rescue type calls is the lack of such calls. Having a technical rescue team is expensive to say the least. The lack of calls means it is difficult to justify the high cost, let alone maintaining the high degree of proficiency that is required. Technical rescue calls are rare, but when they do occur, having the capability more than pays for itself in terms of safety for the rescuers. The only way to overcome this situation is to train, and train a lot. Each year, the team has shown its cost effectiveness by increasing the total number of training hours per person. This increase in training keeps our personnel and equipment in a 100% state of readiness.

With the completion of our concrete building collapse class held in the fall of 1999, we are proud to say that the technical rescue team is now fully functional and prepared to handle any type of technical rescue situation with state of the art training and equipment. To show just how far CARS has come with our rescue capability, the following chart shows squad wide technical rescue trained personnel in 1993 in comparison to the personnel trained in 1997:

	1993		1997		
Specialty	# People	% of squad	# People	% of squad	% increase
Building Collapse	3	2.5%	24	20.0%	800%
Confined Space	7	5.8%	26	21.7%	371%
Trench	12	10.0%	28	23.3%	233%
Vertical/Rope	17	14.2%	37	30.8%	218%

This report is prepared each year to show the CARS Board of Directors what we have done and where we are going. Hopefully, this report shows that the vast amount of money that has been invested in our technical rescue capability is well spent. Each class we teach not only improves our

skills, but also shows us what equipment works well and what equipment we need to improve performance and decrease the time required mitigating an incident. One thing we have learned is that time is very much of the essence. If the rescue takes a long time, it makes us all look bad and our reputation as a rescue squad suffers. We cannot afford to make mistakes to learn from, we must do it right the first time and do it fast.

SPECIFICATIONS FOR REPLACEMENT OF SUPPORT 143

PURPOSE:

We plan to replace Support 143 with a modern, custom-built heavy-duty truck that will fit both present and projected needs of the Technical Rescue Team (TRT).

JUSTIFICATION:

This unit will replace an aging and outdated truck in our fleet with a much more capable unit.

Support 143 is a 21-year-old former Virginia Power line-truck that was converted into a squad truck by WARS. We obtained this unit 5 years ago and after much work by the Technical Rescue Team (TRT), has been converted to use as a support truck for TRT calls, lighting support for fire ground operations and to tow the squads collapse rescue and MCI trailers. The unit is already stretched to the limit to carry the technical rescue team's equipment. Towing the collapse trailer with 143 is dangerous since it lacks the required towing & braking power. There is a lack of confidence among squad members on the ability of this truck to respond when needed.

This truck no longer meets the needs of the technical rescue team for the following reasons:

- The truck is worn and has high mileage (>108,000) making it unreliable for emergency response.
- The current truck has a manual transmission with split-rear axle, making it difficult for most members to drive. Currently, only 4 CARS members are released to drive this unit.
- The only compressed air capability this unit has is 4 low-pressure SCUBA bottles, confined space rescues typically require much more air than this.
- The body on the current truck leaks and would be expensive to make it water tight.
- Most of the equipment in the current truck is carried in the rear box area and is stacked in boxes on top of each other. All of this equipment must be removed before the generator can be used.
- Current SOP's require that both Support 143 and Squad 133 respond to most technical rescues. The new truck will reduce this requirement to Support 143 by itself.
- The collapse trailer is currently overweight by 1,000 pounds. Some of the equipment now carried on the trailer could be transferred over to the new truck.
- The vehicle has been getting harder to start lately, especially in cold weather.
- EMS Task Force requires a squad truck to leave the area. This proposed unit can fill-in for vehicle rescue.

Technical rescue teams spend most of their time training, with few calls to respond and then only in special circumstances. There will be periods of time when the team and equipment doesn't seem important. But when a technical rescue emergency suddenly occurs, the team must be ready to act – quickly and correctly. Currently, the lack of a modern rescue truck prevents us from fulfilling this mission.

MEMBERSHIP REQUIREMENTS OF THE CARS TRT

VA EMT-B certification.	120 hrs.
Rope Rescue I certification.	16 hrs.
Rope Rescue II certification.	32 hrs.
Rope Rescue III certification.	24 hrs.
Trench Collapse Rescue certification.	16 hrs.
Confined Space Rescue certification.	16 hrs.
Building Collapse Rescue certification.	24 hrs.
Fire-fighter I or Basic/Light Rescue certification.	60 hrs.
Self-contained Breathing Apparatus (SCBA) and Supplied Air Breathing Apparatus training.	8 hrs.
Integrated Incident Command training.	16 hrs.
Hazardous Materials Awareness certification	8 hrs.
Any 1 other Heavy/Tactical Rescue (HTR) certification, (i.e., vehicle extrication, cave rescue, swift water rescue, farm vehicle extrication, heavy rescue, etc.)	16 hrs.
Total Number of Certification Hours =	356 hrs.

It is felt that every member of the TRT should obtain all the above certification levels and be proficient in all aspects in technical rescue. Any team member can fill the roll of incident commander of a technical rescue incident. There is no provision for support personnel since they would only serve a limited function.

In addition to the above required certifications, team members must attend 2 of 4 yearly field training exercises (FTX's), attend team meetings which are held the second Sunday of every even month, and maintain a minimum of 36 hours of continuing education hours, (or required training hours), per fiscal year.

In order to join the CARS TRT, the following requirements must be met:

- Must have at least 2 years of emergency service experience.
- Must have current EMT-B certification.
- Must have obtained certification in at least 3 HTR modules.
- Pass a background check and be accepted into CARS membership by the CARS Board of Directors.

Once accepted into membership, a TRT member is given the following:

- A pair of coveralls.

- CARS TRT pager (if available) or reed conversion for FD pager.
- CARS TRT ID card
- CARS TRT Team Information Manual

Other personal equipment such as helmets, gloves, eye protection, etc. are provided to the team as a whole and is carried on responding apparatus. The only thing a new member need provide is a desire to train.

MEMBER INFORMATION

New Members Added *(as soon as they complete the required checklists)*

Charlotte Menk
 Cliff Lewis
 Kori Hudson
 Josh Hilton
 Rob Hamilton

Members That Left the Team

Brian Kester – transferred to North Carolina
 Clint Butts – moved to Seattle, Washington
 Tim Karr – lack of training hours
 Barbi Baxter – lack of training hours
 Dayton Haugh – lack of training hours
 Hunter Ware – lack of training hours

Current TRT Members That Have MRT Certification

Kostas Alibertis
 Andrew Baxter
 John Burruss
 David Hartman
 Ty Hoeffler
 Mike Johnson
 Kelly Southard
 William Spencer
 Landon Harris
 Brett Henryon
 Todd Lucas
 Ben Sojka

(Master Rescue Technician is awarded to anyone who has completed all 12 required certifications.)

Current TRT Members

Alibertis, Kostas	Associate – Medical	Western Albemarle Rescue Squad
Baxter, Andrew	Associate – Support	Henrico Fire Department
Burruss, John	Active Life	Charlottesville Fire Department
Harris, Landon	Retired Life	Chesterfield County Fire Department
Hartman, David	Associate – Support	Charlottesville Fire Department
Henryon, Brett	Active Reserve Life	

Hoeffler, Ty	Active	
Johnson, Mike	Associate – Support	Charlottesville Fire Department
Lucas, Todd	Associate – Support	Western Albemarle Rescue Squad
Sojka, Ben	Active	Charlottesville Fire Department
Southard, Kelly	Associate – Support	Orange County Rescue Squad
Spencer, William	Active Life	

ACCOMPLISHMENTS IN PAST YEAR

The following is a list of major accomplishments we have accomplished as a team in the past fiscal year.

- Held a concrete building collapse course (Concrete '99) that was taught by members of the Federal Emergency Management's Disaster Response Team from Fairfax and Virginia Beach. Participants included:
 - 17 members of the CARS (7 from the technical rescue team)
 - 7 members of the Roanoke City Fire and EMS Service
 - 6 members of the Knoxville (TN) Rescue Squad
 - 5 members of the Washington County / Johnson City (TN) Emergency Management Agency
 - 4 members of the Harrisonburg Fire Department
 - 3 members of the Sarasota (FL) Fire Department
 - 3 members of the Albemarle County Fire and Rescue Service
 - 2 members of the Knoxville (TN) Fire Department
 - 2 members of the Charlotte (NC) Fire Department
 - 2 members of the Charlottesville City Public Works Department
 - 1 member of the Chesterfield County Fire Department
- Sent 2 members to the Fire Department Instructor's Conference in Indianapolis, IN for collapse rescue training.
- Conducted an equipment inventory and repaired/replaced damaged/missing equipment.
- Conducted the following TRT related training courses for area personnel:
 - ✓ VDFP trench rescue certification course
 - ✓ VAVRS basic and light rescue certification course
 - ✓ VDFP rope rescue I certification course
 - ✓ VDFP rope rescue II certification course
 - ✓ VDFP firefighter II certification course
 - ✓ Tree rescue class taught by Bartlett Tree Company
- Replace all gear bag tags with an updated and heavier duty type.
- Conducted FTX's of the following types:
 - CSR exercise with UVA boiler plant personnel.
 - trench rescue exercise with City Gas Dept. personnel.

- swift water rescue exercise with the CARS WRT
- Brought on 5 new members to the team.
- Dropped 4 team members that have not been actively participating.

HISTORY OF THE BUDGET

Fiscal Year	Amount & Purpose
1993 - 1994	\$3,500 for acquisition of rope equipment.
1994 - 1995	\$10,000 for acquisition of technical rescue equipment.
1995 - 1996	\$10,000 for acquisition of technical rescue equipment. 5,600 for replacement of diesel generator for Support 143
1996 - 1997	\$6,000 for building collapse class 5,000 for confined space rescue communications system 3,360 to add SABA capability to 4 SCBA's 3,000 for replacement of air monitor 2,000 for acquisition of technical rescue equipment 2,000 for repair/replacement of existing equipment 1,000 for training
1997 - 1998	\$10,000 for acquisition of technical rescue equipment 2,000 for repair/replacement of existing equipment 1,000 for training
1998 - 1999	\$2,300 for upgrade of 2 SCBA's to SABA capability 2,000 for repair/replacement of existing equipment 1,000 for training
1999-2000	200,000 for replacement of tech rescue truck 5,820 to upgrade 4 SCBA's to current standards 650 for laser transit 300 3 sets of Ellis Clamps 420 3 new SCUBA bottles 160 medical fanny pack 1,000 for GPS for Support 143 1,000 for new equipment 2,000 for repair/replacement of existing equipment 1,000 for training
2000-2001	200,000 for replacement of tech rescue truck (carry over from previous year) 4,500 for concrete chain saw 3,000 to upgrade 2 SCBA's to current standards

1,500 for 6 SCBA mask communications units
 1,500 for command board
 840 to upgrade Airshore strut collars
 2,000 for repair/replacement of existing equipment
 1,000 for new equipment
 1,000 for TRT training

FUND RAISING EVENTS

Date	Organization	Event	Money Raised
9-3-94	Sam's Club	Burgers for Bucks	\$4,000
7-1-95	Sam's Club	Burgers for Bucks	4,700
7-1-95	Sprint-Centel	Burgers for Bucks	2,000
9-2-95	Sam's Club	Burgers for Bucks	2,200
3-16-96	Rotary Club	Bowl-A-Thon	14,200
6-29-96	Sam's Club	Burgers for Bucks	5,000

(Because of the problems associated with getting the money from Sam's Club, we will probably not do anymore fund raising events with them.)

GOALS FOR THE COMING YEAR

- Review and update all related SOP's to new NFPA standard for technical rescue.
- Return to area fire/rescue organizations to refresh them on technical rescue incident first-responder.
- Replace Support 143 with a new, more capable vehicle.
- Conduct the following FTX's:
 - High-angle
 - Confined space
 - Building collapse
- Hold the following classes:
 - Rope Rescue I
 - Basic and Light Rescue
 - Confined Space Rescue

- Provide Rescue Systems I certification to those members who have completed the basic and light rescue, building collapse – wood-frame and building collapse-concrete courses.
- Evaluate possibility of holding another concrete building collapse class.
- Evaluate putting together a team to compete in the Rescue Challenge.
- Compete in the Basic and Light Rescue contest at the VAVRS convention.
- Evaluate possibility of holding a FEMA rescue specialist training program.

CARS TRT INDIVIDUAL TRAINING HOURS

NAME	HOURS FROM 7-1-99 to 6-30-00
John Burruss	653
Ben Sojka	343
Kelly Southard	231
David Hartman	206
Landon Harris	174
Charlotte Menk	144
Kori Hudson	141
Josh Hilton	128
Ty Hoeffler	124
Cliff Lewis	99
Rob Hamilton	96
Kostas Alibertis	70
William Spencer	62
Andrew Baxter	48
Mike Johnson	40
Todd Lucas	23
Brett Henyon	19
Dayton Haugh	7
Clint Butts	3
Barbi Baxter	0
Tim Karr	0
Hunter Ware	0
Total Number of Training Hours =	2,603
Average Number of Hours Per Member =	124

TOTAL TRAINING HOURS PER YEAR

YEAR	TOTAL HOURS	AVG HOURS
1994	2,234	90

1995	2,415	101
1996	3,606	157
1997	3,352	167
1998	1,614	85
1999	1,706	100
2000	2,603	124
TOTAL	17,530	118 (avg)

MOST INDIVIDUAL TRAINING HOURS PER YEAR

YEAR	MEMBER	TOTAL HOURS
1993-1994	Kate Granger	223
1994-1995	Wayne Perry	340
1995-1996	Ben Sojka	448
1996-1997	John Burruss	533
1997-1998	John Burruss	299
1998-1999	Landon Harris	391
1999-2000	John Burruss	653

TOTAL NUMBER OF CALLS PER YEAR

Year	# Calls
1993 – 1994	23
1994 – 1995	29
1995 – 1996	17
1996 – 1997	32
1997 – 1998	21
1998 – 1999	17
1999 – 2000	29
average per year =	24

EQUIPMENT ADDED THIS YEAR

rescue backpack for confined space rescues	\$129.95
3 SCUBA bottles for CSR	375.00
2 templates for Raker shore construction	donated
David White transit	480.00
Honda 3” electric trash pump	424.00

Color coded decals for ART struts	72.00
Replaced lost/broken rope equipment	1,165.00
4 SCBA to SCUBA adapters	452.00
4 SCBA upgraded to current standards	5,773.92
4 sets of Ellis clamps	donated
TOTAL	\$8,871.87

TRAINING

- Sent 7 TRT members to Concrete '99 concrete building collapse rescue course.
- Sent 2 TRT members to collapse rescue training in Indianapolis, IN.
- Sent 4 CARS members to trench rescue class in Charlottesville.
- Sent 13 CARS members to tree rescue class in Charlottesville (Bartlett Tree Company)
- Sent 6 CARS members to basic and light rescue class in Charlottesville.
- Sent 16 CARS members to rope rescue I class in Charlottesville.
- Sent 9 CARS members to rope rescue II class in Charlottesville.
- Sent 2 TRT members to firefighter II class in Charlottesville.

NUMBER OF NEW/UPDATED CERTIFICATIONS ADDED PER YEAR

Year	Number
1993 – 1994	68
1994 – 1995	50
1995 – 1996	50
1996 – 1997	39
1997 – 1998	29
1998 – 1999	23
1999 - 2000	34

AMOUNT OF EQUIPMENT ACQUIRED PER YEAR

Year	Amount
1993-1994	3,500.00
1994-1995	12,760.64
1995-1996	28,993.22

1996-1997	14,385.02
1997-1998	10,675.76
1998-1999	3,128.00
1999-2000	9,871.87
TOTAL	83,314.51

(This represents the amount of money actually spent by CARS in addition to outside funds received, (i.e., Bowl-A-Thon, collapse school, etc.). Not included in the above is cost of the truck and trailer received in the 94-96 budget year.