

# **Overview and Needs Assessment of the Virginia Search & Rescue System 1997**

Conducted by the Virginia Search & Rescue Council Inc.

## Contributors

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Angel Search and Rescue  
Dry Fork, VA

Blue & Gray Search Dogs  
Harrisonburg, VA

Blue Ridge Mountain Rescue Group/ASRC  
Charlottesville, VA

Commonwealth Search and Rescue  
Daleville, VA

DOGS-East  
Spotsylvania, VA

K-9 Alert Search and Rescue Dogs  
Midlothian, VA

Mid-Atlantic DOGS  
Rockville, MD

Piedmont Search and Rescue/ASRC  
Midlothian, VA

Richmond Search and Rescue  
Chesterfield, VA

Search Services America  
Falls Church, VA

Shenandoah Mountain Rescue Group/ASRC  
Vienna, VA

Southwest Virginia Mountain Rescue  
Group/ASRC, Blacksburg, VA

Tidewater Search and Rescue/ASRC  
Norfolk, VA

Top of Virginia Search and Rescue  
Winchester, VA

Tracking Institute  
Onancock, VA

Triangle Rescue Group  
Jonesville, VA

Virginia Association of Volunteer Rescue  
Squads, Richmond, VA

43rd Virginia Search and Rescue  
Chesapeake, VA

Virginia Department of Emergency  
Management  
Richmond, VA

Virginia Search and Rescue Dog  
Association  
Bumpass, VA

Virginia Wing, Civil Air Patrol  
Richmond, VA

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## Summary of Significant Findings

- On average, more fatalities occur each year from Search incidents in the Commonwealth than the combined totals of all natural disasters and hazardous material incidents.

- State Search & Rescue (SAR) volunteers for 1997 have already contributed over 133 man-hours and traveled over 167,773 miles during SAR incidents. This represents a savings of over \$917,000.00 to the Commonwealth of Virginia and local governments. This figure does not include the cost of equipment or training.

- State volunteer SAR teams do not have adequate funding to purchase equipment, cover basic operating costs, and are at financial risk due to potential damage of equipment during incidents. Individual members spend over \$910,000.00 each year on direct out-of-pocket SAR expenses such as mileage, equipment, uniforms, training courses, and animal costs. The indirect cost of time-spent training amounted to \$4,927,260.00. The cost of replacing the entire volunteer SAR system with a paid system would amount to a direct yearly cost of over \$7,260.00

- The Virginia Department of Emergency Management lacks a direct legislative mandate to conduct SAR activities.

- The Commonwealth of Virginia needs to offer an increased number of training opportunities for existing State SAR training courses, update current courses, develop new courses, and provide additional administrative support.

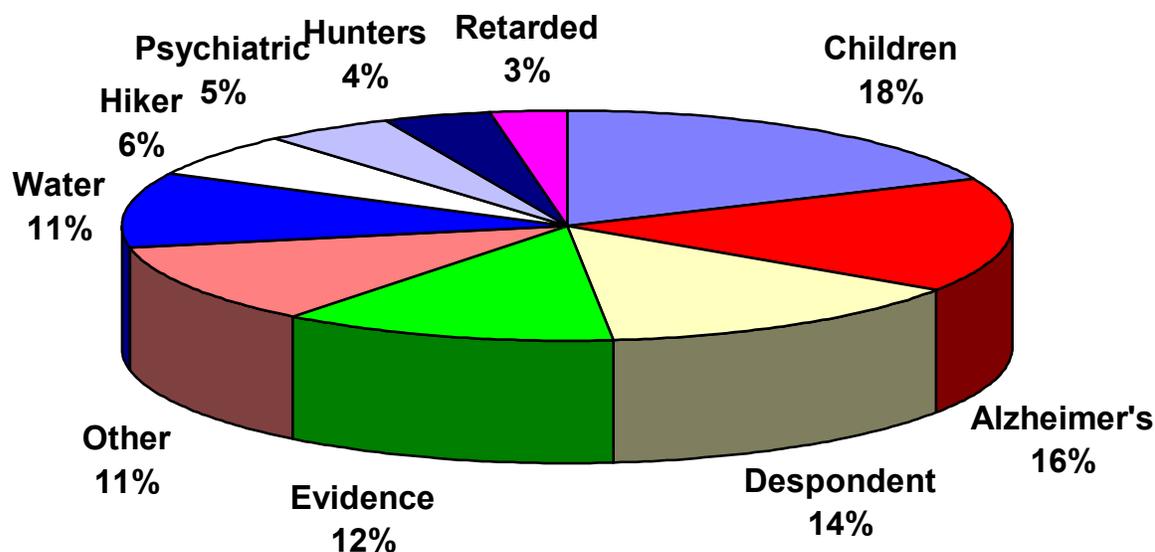
- State volunteer SAR teams lack basic governmental support provided other volunteer public safety providers.

- State volunteer SAR teams provided a unique resource that can be enhanced to provide additional statewide disaster response teams while utilizing equipment and training currently funding to SAR incidents.

## Overview of the Present SAR System

A two year-old child playing outside is suddenly gone. A loved grandmother with Alzheimer's disease wanders away. The public turns to local government. The family expects an immediate response from trained providers who know how to search. Yet actual searches with a field response are a rare event in any county. While largely unknown, due to a lack of research and reporting mechanisms, it is estimated the search rate is three searches per 100,000 people per year. However, search and rescue (SAR) incidents are complex events that require extensive training to properly execute. The initial actions of law enforcement at the onset of the incident often mean the difference of life and death. Some law enforcement officials have taken SAR training, most have not.

### Virginia Missing Person Searches



Local law enforcement depending upon training may launch an immediate search with local resources; turn the search over to fire and/or rescue, delay action, or request state SAR resources. Some trained law enforcement officials have learned to properly conduct initial stages of SAR incidents while also requesting additional state SAR resources. Unfortunately, mission logs also document cases of officials stopping searches because of nightfall, using untrained searchers, and refusing state assistance. Lack of education has resulted in deaths to children in Virginia.

Local law enforcement may request state assistance through the Virginia Emergency Operations Center (EOC) operated by the Virginia Department of Emergency Management (VDEM). The VDEM keeps a SAR duty officer on call 24 hours a day to help local law enforcement officials determine an appropriate response. VDEM is able to dispatch a variety of trained volunteer SAR resources that hold a Memorandum of Understanding (MOU) with the Commonwealth. In order to qualify for the MOU they must have training standards that meet or

exceed state training standards, pass an administrative review, and pass a group practical evaluation. The Virginia Search & Rescue Council (VASARCO) administers the recognition standards and testing. Individual groups respond to the SAR incident and work effectively through the VASARCO Standard Operating Procedures and the Incident Command System. In 1996, the volunteer resources consisting of dog handlers, foot searchers, team leaders, incident commanders and staff, cave and technical rescuers, and air resources responded to 118 incidents. These resources primarily come out of the 11 volunteer SAR groups that currently hold a MOU, including the Civil Air Patrol. This represents a core of approximately 901 volunteers that are based all across the state. Some resources drive up to 5 hours to respond to an incident. Regional boundaries are not drawn. Instead, due to the large complex nature of searches, all teams provide mutual-aid to each other in fulfilling state requests for resources. This has created a default regional and statewide response capability. In addition, most of the teams also respond to mutual aid requests from neighboring states (MD, PA, WVA, NC).

Once on-scene, state resources report to the State Incident Commander (IC) under the Incident Command System. The IC reports directly to the legal responsible agent (typically local law enforcement) and coordinates with the VDEM. The on-scene IC may request additional state resources through the Virginia EOC acting in its Rescue Coordination Center capability. The IC in conjunction with the local responsible agent establishes search objectives, strategy, supervises staff, requests resources, and suggests suspending the search. Since the state has only a small number of type I and type II Incident Commanders who respond around the state, they are highly experienced and maintain their skills.

Volunteer searchers put in 20,000 man-hours working search incident in 1996. Figures are variable due to the nature of large incidents. The total for 1997 will include 21,690 hours spent on the Lisk sisters' incident in Spotsylvania County and over 16,000 hours spent on the 2-year-old Sheldon search in Prince William County. Savings of over \$300,000.00 to the commonwealth and its jurisdictions occurred in 1996. The figure for 1997 will be well over \$860,000.00 in direct personnel costs. Cost estimates are based upon emergency firefighter salaries without benefits derived from FEMA urban search and rescue teams. These figures do not include the thousands of dollars of equipment volunteers bring to a search and the put on their personal vehicles and aircrafts. In 1996 volunteer searchers traveled over 23,164 miles on incidents. In 1997, it is estimated this figure will be in excess of 167,730 miles. This figure does not include mileage spent on training or administrative tasks. Estimates indicate SAR incidents represent 33% of total SAR related mileage (additional mileage spent on training and administrative meetings.)

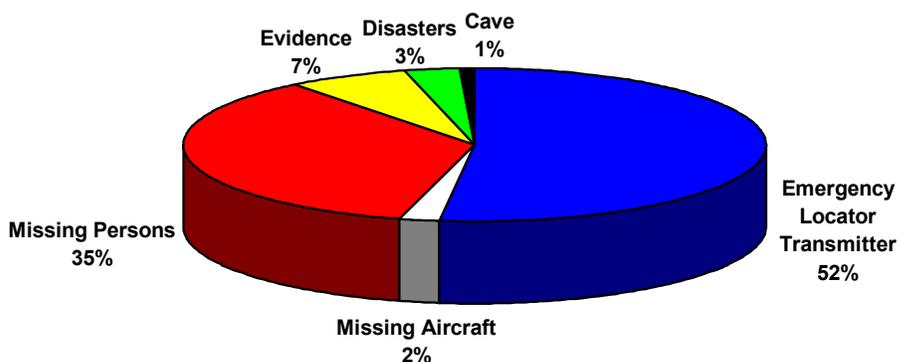
	1996	1997
<b>Incident Man-hours</b>	20,000	57,333
<b>Personnel Savings</b>	\$300,000	\$860,000
<b>Incident Mileage</b>	23,164	167,730
<b>TOTAL Incident SAVINGS</b>	<b>\$307,875.00</b>	<b>\$917,120.00</b>

**Average Personal Expenses borne by a single SAR Provider**

<b>Personal Mileage</b>	\$351	<b>Animal Costs*</b>	\$2423
<b>Equipment</b>	\$351	<b>Uniforms</b>	\$50
<b>Training courses</b>	\$75	<b>Total Ground/Dog</b>	\$827/\$3260

\* Costs for operational dog-handlers and mounted teams.

**Virginia SAR Incidents**



**Scope of Search**

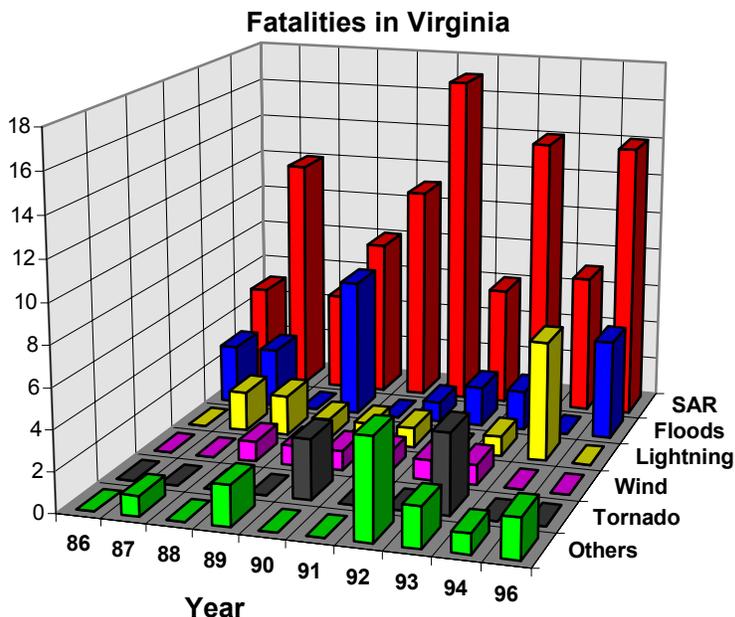
**Incidents**

Search & Rescue Incidents are complex events that require coordination and cooperation among several different organizations. Local law enforcement officials are required to fulfill an on-scene legal responsible agent role. In addition, officials are needed for possible criminal investigation, patrol, collection of evidence, coordination with local resources, and field resources. Some searches will require the presence of the county emergency services coordinator, or a representative from the board of supervisor's. Either the Virginia State Police or a regional representative from the Virginia Department of Emergency Management establishes a state presence. Provision of search management and trained field resources (team leaders, team members, dog handlers, trackers, fixed wing aircraft) is provided by the 11 volunteer MOU groups. Law enforcement agencies and the Virginia Department of Correction's handlers who are allowed to travel on a regional basis typically provide bloodhound dog handlers. Local fire departments, rescue squads, Red Cross, Salvation Army, Fire and Rescue Auxiliaries, schools, churches, funeral homes, private citizens, and businesses provide logistical support. The volunteer SAR teams typically provide communications. The Civil Air Patrol, Virginia State Police, Fairfax County Police, U.S. Coast Guard, or military resources provide air resources. Local fire and rescue departments and citizens also typically provide additional field resources. On larger searches military resources are often used as additional field resources. The smallest search typically involves at least five different agencies. Large searches such as the Lisk and Sheldon incidents involved all 11 state MOU SAR teams, over 30 different fire and rescue organizations, over 5 state agencies, and over 6 different federal agencies.

## Search Outcomes

The large expenditures of resources are easily justified by the severity of the threat to life or limb a search incident poses to the victim. Using data from *Storm Data* and the VDEM technological hazards division, more deaths occur from SAR incidents than all other natural hazards (flooding, hurricanes, wind events, lightning, tornadoes, blizzards, wildland fires) and hazardous materials incidents combined. The cause of death during SAR incidents is not captured by the current method of data collection. However, a study of Alzheimer's disease searches that occurred within Virginia found all fatalities resulted from exposure to the elements.

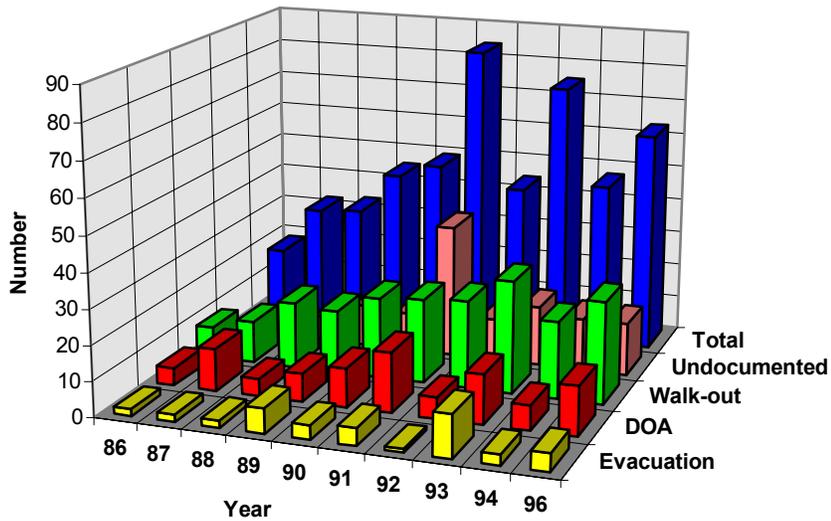
The number of recorded SAR deaths is under-reported. Many SAR incidents are not



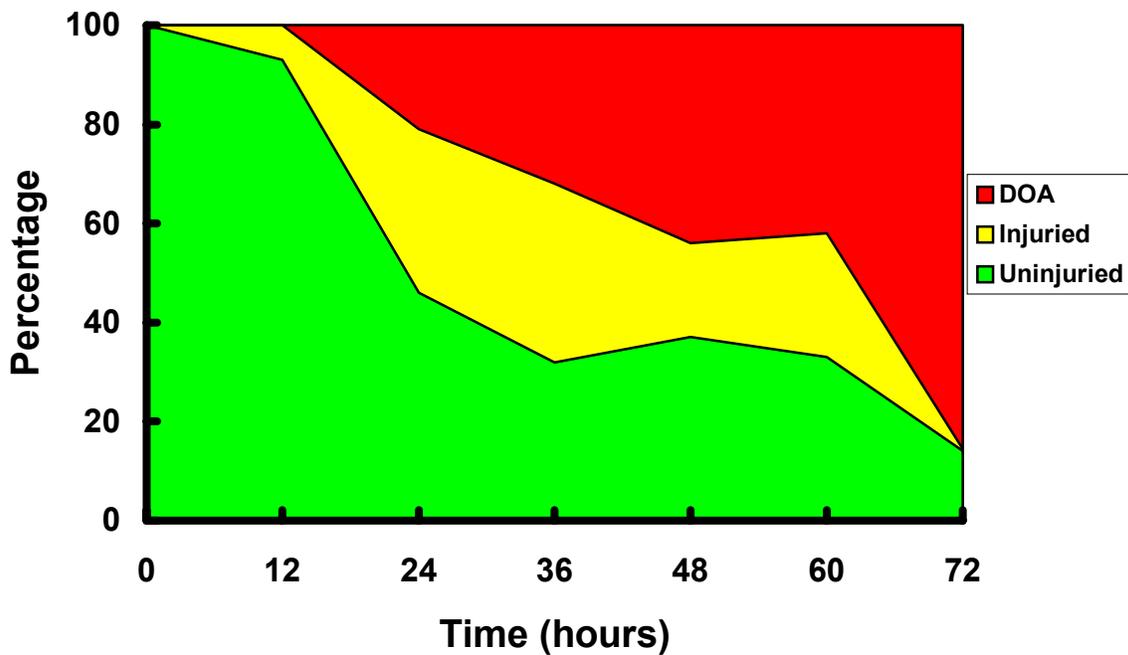
reported to the State EOC and over 28% of those reported did not list the subjects' outcome. However, a consistent pattern emerges of in 60% of searches the subject is able to walkout, 12% requires an evacuation team for the injured subject, and 28% of incidents end in fatalities. Therefore, the average of 10 SAR fatalities/ year could easily be adjusted upward to 14 per year if not higher.

Disaster Type	Average Deaths/yr	Government Spending	Lead Department
Search & Rescue	9.9	\$94,000	VDEM-operations
Floods/hurricanes	2.3	\$6,724,000	VDEM
Lightning	1.4		VDEM-PIO
Tornados	0.7	\$1500	VDEM-PIO
Wind	0.6	\$1500	VDEM-PIO
Wildland Fires	0.0	\$644,000	VA Dept of Forestry
Hazardous Materials	0.0	\$1,200,000	VDEM-Tech Hazards

**Missing Person Searches in Virginia**



Insufficient research has been conducted to determine how many of the deaths are preventable. No follow-up investigations are made of SAR fatality cases. However, the amount of time required before state SAR resources are contacted strongly correlates with the fatality



rate. Research on lost Alzheimer's disease search subjects clearly shows the relationship.

Looking specifically at the amount of time required to contact State SAR resources the following findings were made.

<b>Alzheimer's Survival Statistics</b>
<b>● No deaths when subject found within 12 hours of the time last seen.</b>
<b>● When subject found Dead, average time to contact SAR = 50 hours</b>

### **Virginia Department of Emergency Management SAR Program Overview**

The Department of Emergency Services is designated as the states SAR coordinating agency by the Commonwealth of Virginia's *Emergency Operations Plan* (EOP). In addition, the Commonwealth is a signatory to the National Search and Rescue Plan. Within the National SAR Plan federal, state, and local government responsibilities are defined and cooperation is assured for incidents involving the use of federal resources and incidents of national concern.

The Commonwealth of Virginia is dedicated to providing comprehensive search and rescue (SAR) services to its citizens, and to assist other states during a SAR emergency. SAR emergencies include stranded or lost persons, missing/overdue aircraft or boats, or persons missing or in distress as a result of natural or manmade disasters, like the floods in Madison and Greene Counties during the spring of 1995, and the winter blizzards of 1996. SAR emergencies can occur in wilderness, rural, suburban, or urban environments.

In 1986 the Operations Division of VDEM initiated a major effort to upgrade the state's SAR capability in both coordination and training. The SAR annex of the EOP was revised to reflect new operational strategies. The Virginia Emergency Operations Center began to formally function as the state's Rescue Coordination Center (RCC) with a Search and Rescue Duty Officer on call 24 hours a day to assist localities in handling SAR incidents. Statewide training for both organized volunteer SAR groups and local and state emergency services and law enforcement agencies began to be encouraged and supported, to a limited degree, by VDEM. Support was based on availability of personnel time and any unused training money.

The VDEM helps coordinate SAR incidents by utilization of the agencies and volunteer groups that make up the SAR system. The largest resource is volunteer SAR groups. State resources include the Virginia State Police, Virginia Department of Forestry, Virginia Department of Game and Inland Fisheries, and the Virginia Department of Emergency Management. Additional resources are available from federal and local government.

## Profile of SAR Resources

### Volunteer Agencies

The Virginia search and rescue system is made up almost entirely of 901 volunteers who contribute their time and expertise to respond to SAR emergencies. Most of the groups listed respond statewide. All have extensive training in the specialty areas listed, but group capability is not necessarily limited to those areas. Some law enforcement agencies also have SAR capability, but are not listed here. Those agencies with a SAR MOU are indicated with a \*. The number of operational members qualified to respond to a search incident is indicated within the ( ).

### Ground Teams

<b>Angel SAR (10)</b>	Dry Fork, VA
<b>Appalachian Search &amp; Rescue Conference (ASRC)* (400)</b>	Charlottesville, VA
<b>43rd Virginia Volunteer Search and Rescue Company (15)</b>	Chesapeake, VA
<b>Baywood Search and Rescue Group (10)</b>	Galax, VA
<b>Commonwealth Search and Rescue* (30)</b>	Daleville, VA
<b>Rockingham/Augusta Search and Rescue Team (15)</b>	Singers Glen, VA
<b>Top of Virginia (22)</b>	Winchester, VA

### Dog Teams

<b>Blue &amp; Gray Search Dogs* (2)</b>	Hinton, VA
<b>D.O.G.S.-East* (18)</b>	King George, VA
<b>K-9 Alert Search and Rescue Dogs* (10)</b>	Richmond, VA
<b>Mid-Atlantic D.O.G.S.* (11)</b>	Rockville, MD
<b>Search Services America* (4)</b>	Falls Church, VA
<b>Virginia Bloodhound Search and Rescue Association (14)</b>	Berryville, VA
<b>Virginia Search and Rescue Dog Association (VSARDA)* (5)</b>	Woodford, VA

### Cave Rescue

<b>Triangle Rescue* (35)</b>	Jonesville, VA
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### Air Search

<b>Civil Air Patrol, Virginia Wing* (300)</b>	Richmond, VA
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### Volunteer SAR Team Financial Profile

All of the volunteer SAR teams are non-profit organizations. However, all of the teams suffer from a weak financial status. This may be due to the small number of searches that occur in any one county each year. Counties may find it difficult to justify making a contribution to a resource that may not respond to that county during the fiscal year. It is not surprising that none of the teams receive financial support from a local government. This regional response also makes it difficult to receive direct contributions from citizens. In fact, due to the regional response, and the team's close working association with VDEM, many citizens are under the false impression the volunteer teams are supported by the state. SAR teams do not wish to appear to be competing with local volunteer fire departments or rescue squads and have avoided direct appeals. Volunteer SAR teams also do not have access to volunteer funding programs similar to the Rescue Squad Assistance Fund (VDH- \$3,097,924.59) or the Fire Programs Fund (Virginia Department of Fire Programs- \$9,689,104.00). No federal programs or granting mechanisms exist to support SAR response or research. These factors have caused volunteer SAR teams to have small operating budgets and shift the burden of expenses to the individual members.

<b>AVERAGE CASH OPERATIONS STATEMENT FOR LAST FINANCIAL YEAR</b>			
<b>Receipts</b>		<b>Expenditures</b>	
Local government	71	Operations	2890
Donations, contributions, bequests, memorials, etc.	4264	Non-operational (i.e. Fund raising costs)	30
Fundraising	328	Capital	371
Members dues	200	Insurance	228
Interest & dividends	214	Salaries, Etc.	0
Grants	71	Other	42
<b>TOTAL RECEIPTS</b>	<b>\$5148</b>	<b>TOTAL EXPENDITURES</b>	<b>\$3561</b>

The preceding table summarizes the financial statements from 9 of 10 volunteer SAR response teams that hold a MOU with VDEM. It is important to note the lack of support from local government, state government, and grants. The small amount spent on insurance is a reflection that 86% of the teams cannot afford insurance and do not carry any type of property or liability insurance. The lack of team operating funds has shifted the financial burden to members. The only financial assistance provided by the Commonwealth to volunteer groups and individuals is tort and workman’s compensation (only during state approved incidents.)

**AVERAGE EXPENDITURES BY INDIVIDUAL SAR MEMBERS EACH YEAR**

Personal Mileage	\$351	Uniforms	\$50
Equipment	\$351	Training courses	\$75
Animal Costs*	<b>\$2423.00</b>	<b>SUB-TOTAL</b>	<b>\$827.00</b>
Number of Operational SAR Providers (ground)	837	\$827	\$692,199.00
Number of Operational Dog/horse providers	67	\$3260	\$218,420.00
<b>TOTAL PERSONAL COSTS</b>			<b>\$910,619.00</b>

Individuals bear the largest burden of supporting SAR services in the Commonwealth. The figure for personal mileage represents mileage responding to incidents, training, and administrative tasks. Due to the regional and statewide response requirements members travel large distances to searches. Members must also travel long distances to train in different terrain, for state training courses, and for joint team training sessions. The figure of \$351 is greatly reduced since it also reflects less active operational members. The cost of equipment, uniforms, and training courses remains constant for all members. Teams with minimal funding also tend to require their members to purchase handheld radios and pagers. Operational Dog handlers and Horse riders bear significantly higher costs. Working animals have higher dietary requirements and veterinary costs than pets. In addition, working animals become injured during training and incidents. Due to the high demand of the specialized services of dog teams, travel costs tend to be higher. The figures listed above do not contain any training costs. Law enforcement agencies that purchase trained animals often pay upwards to \$7,000. The total direct costs borne by operational dog and horse teams is \$218,420.00 per year. The total direct costs for ground team members are \$692,199.00 for a combined total of \$910,619.00 of out of pocket expenses.

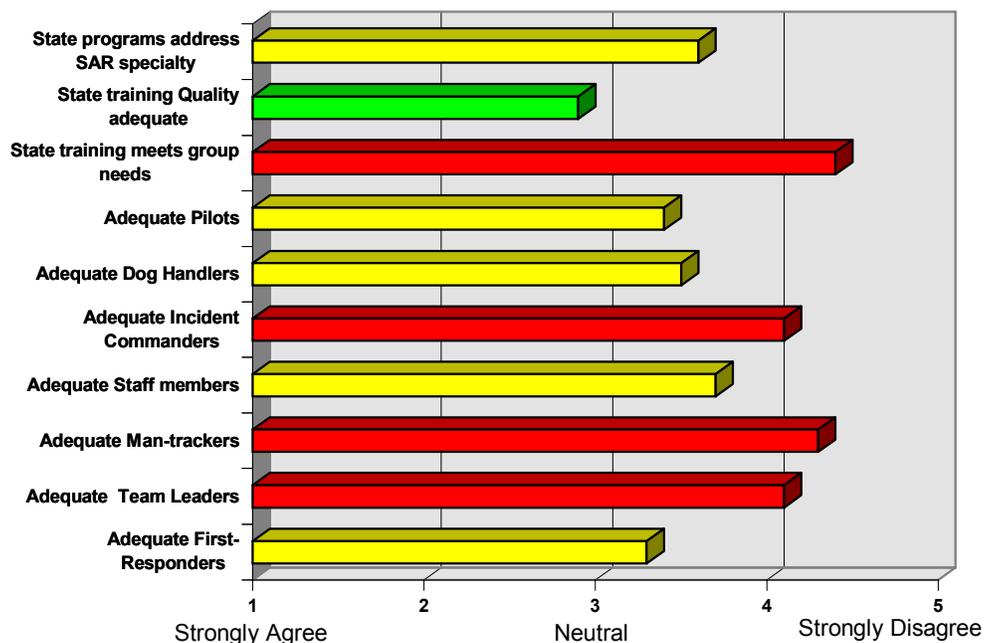
Individual members also contribute to the Commonwealth by spending considerable time training. Training effort is spent both obtaining the various state training levels (Field Team Member, Field Team Signcutter, Field Team Leader, Signcutter, Operational Dog Handler, Rescue Specialist, Incident Staff, and Incident Commander - Ground) and maintaining skills. Since specialized SAR skills such as dog handling and tracking degrade rapidly with time, continuous practice and performance is required. Operational dog handlers spend 10-15 hours per week both training and maintaining the skills of their dogs. Trained trackers need to spend 5-10 hours per week to maintain their skill levels. These are in addition to the hours required to become and maintain operational ground status. Ground operational members spend an average of 6 hours per week obtaining and practicing SAR skills.

## Profile of Current SAR Training

The Virginia Department of Emergency Management SAR program conducts limited search and the agency and personnel can provide rescue training, based on available funding that. Current courses include three field skill courses; Field Team Member, Field Team Leader, and Field Team Signcutter. SAR theory and management is covered with Managing Search Operations, Practical Search Operations, and Incident Commander - Ground. A SAR First Responder course exists that combines basic theory and SAR skills for jurisdictional personnel who are not interested in pursuing the Search and Rescue avocation, but are typically the first on-scene to local SAR incidents.

During 1996 the VDEM SAR program trained 175 personnel around the state in various SAR skills and theory. There is no identified funding for this training program. Although some funding has been made available by the agency on a case-by-case basis from other agency money. Training will continue to be offered in 1997 at a very basic level, as funds are available until additional funding and staff can be identified specifically for SAR. The SAR program will recognize equivalent training conducted by outside groups if it meets state standards. However, this training has proved, for the most part, to be much too costly and too infrequent to help most of our volunteer providers. Getting quality training has become a problem for the SAR volunteers as they try to meet state and federal standards. For many teams, the state is the only place where volunteers can get affordable and comprehensive training in search and rescue. Since most state training courses only have two slots for team members, it cannot fulfill the requirements of the larger volunteer teams. For this reason, larger teams must conduct both their basic and advanced training. The lack of sufficient training is clearly demonstrated in the survey of SAR providers. For local law enforcement and local jurisdictions the VDEM program is the only source of training.

Survey participants consisted of the leaders of SAR teams on the Virginia Search & Rescue Council mailing list. The mailing list contains both teams that currently have a MOU and newer teams who are affiliate members of the council working on receiving a MOU. The



fact that VDEM training courses provided a quality training experience was the only statement participants agreed with. Response to VDEM offering adequate types of training produced a slightly bipolar response. The ground teams felt the program offering was adequate. However, specialty groups such as dog handlers, mounted teams, man-trackers, cavers, technical rescuers, disaster responders, and air resources disagreed strongly. No special training courses are currently provided for these unique resources. Responders identified a shortage of all trained SAR resources. The most serious shortages were found for Incident Commanders, Man-trackers, and Field Team Leaders. The greatest deficiency noted in the survey was a shortage of training opportunities. This is especially a problem among the larger teams. State SAR training courses are always filled with waiting lists and students being turned away.

The amount of time spent on training by SAR teams and individuals is staggering. It represents yet another important contribution of SAR teams to the State.

	<b>Hours training/yr</b>	<b>Number of providers</b>	<b>Total hours of training/year</b>
<b>Operational SAR Providers (ground)</b>	312	837	261,144
<b>Operational Dog/horse/tracking providers</b>	962	70	67,340
<b>Total Hours</b>			<b>328,484</b>
<b>Cost Savings</b>			<b>\$4,927,260.00</b>

The VDEM SAR training program has identified the need for several additional courses. Needs have been identified for more advanced man-tracking courses, wilderness technical rescue, air-scent dog training, wilderness first aid, and first-responder specific for law enforcement. In addition, the program does not have the funding or resources to support a statewide conference similar to Emergency Medical Symposium or Firefighting Conferences. Therefore, SAR teams are solely responsible for providing continuing education opportunities to already certified members. This is an additional administrative burden to the smaller SAR teams. No resources are available to update or perform quality control of existing programs. Currently, the program has 0.75 FTE to manage the entire SAR program and 17 P-14 adjunct technical instructors, who along with the program manager conduct training activities in the field for jurisdictions and the SAR volunteers. In 1994 the SAR program was staffed by 1.5 FTE. The P-14 technical instructors are part time employees brought in on a case-by-case basis, under a specific contract for a specific class or project as money permits. These instructors are usually volunteer SAR providers. No funding exists to support the technical instructors in continuing education. The technical instructors represent an invaluable resource for conducting training and special projects without incurring any benefit costs to the state.

## **Search and Rescue Research**

Currently, little research exists in the field of search and rescue. Basic computer databases do not exist. Collection and analysis of critical information does not occur. The Virginia Department of Fire programs includes within its mission statement; provide statewide fire operational and incident statistics and fire training records; facilitate development and delivery of public fire education; and provide technical expertise and response to the members of Virginia's Fire Services. At current funding and staffing levels, the VDEM cannot begin to provide a similar service to SAR teams and the citizens of the Commonwealth. Almost all the research statistics gathered for this report was done on a volunteer basis or with limited grant funding for Alzheimer's disease wandering research.

The need for additional research is nearly unlimited. No agency in the United States has developed objective performance measures for Search & Rescue. Development of a complete SAR database allows SAR providers and academic researchers to conduct practical research. No data exists for Virginia that would allow the identification of hazards assessment and development of prevention programs. There has been no research conducted to examine the most efficient deployment of resources. Considerable funds have been expended on emerging technologies such as forward-looking infrared and airborne platforms. However, no objective research has measured the effectiveness of such technology on searches in Virginia. Research needs to be conducted specific to Virginia terrain and resources. Computers and GPS units have not been successfully introduced to SAR due to funding and the need for research. No research has been conducted to perform a hazards analysis for SAR across the Commonwealth. Earlier sections of this report cited an unknown number of SAR incidents that occur within the Commonwealth. Well-controlled and more systematic collection of cost to individuals and SAR teams have not occurred. Current projections represent conservative figures. Research has not been conducted on the impact of fatigue on the safety of searchers. The one SAR related fatalities to a searcher occurred as a result of fatigue. The full extent of the fatigue problem among SAR providers is currently unknown. Additional SAR staff at VDEM could handle some of the research questions. While, other questions would require formal research grants.

## **Disasters; SAR the Untapped Resource**

The VDEM SAR program administers the FEMA grants for the Federal Urban Search & Rescue Task Forces. Virginia has two of these task forces, one in Fairfax and one in Virginia Beach. These Task Forces represent large Type I resources that field deploy with over 53 responders. These teams often require six hours to mobilize. They are primarily focused at locating and rescuing subjects trapped in debris common in urban disasters. They have been designed to best handle earthquakes and terrorism incidents. However, deaths from Virginia Disasters are usually due to flooding, lightning, wind, snowstorms, and tornadoes. Flooding incidents have usually occurred in more rural areas of the Commonwealth. Experience has demonstrated the need for smaller teams organized to handle disasters in a more rural setting. During recent hurricanes and flooding incidents SAR resources were put on alert and dispatched to flood related incidents. SAR resources are uniquely predisposed to disaster service. Field teams are used to being self-supporting in all weather conditions for extended periods of time, prepare to work outdoors, have wilderness medical skills, and a large mobile communications system. All searches are mini-disasters that require the coordination of multiple resources, a large planning staff, great flexibility, the use of the Incident Command System, occur with insufficient personnel and equipment resources, and require a rapid response. Every search incident demands the creation of infrastructure and logistics required to support the search incident. Type I SAR Incident Commanders have extensive experience supervising operations with over 500 participants. SAR team members typically respond prepared to be self-sufficient for 48 hours only 30-60 minutes after being notified. Unlike most fire and rescue volunteers, SAR resources have no local obligations and are prepared for regional responses.

Additional study, training, equipment, and work are required to unlock the full potential of SAR teams for disaster assistance. Study is required to determine how to best organize SAR teams into effective disaster response teams. During past disasters, SAR teams informally organized themselves into task forces. Potential relationships between SAR teams, the EMS Disaster tasks forces, and the VDEM Disaster reservist program needs to be established. Additional training needs must be identified and courses provided to SAR disaster providers. Additional training in swiftwater awareness, swiftwater rescue, disaster assessments, deep snow operations, advanced helicopter operations, and Wilderness EMT courses are potential topics. Additional equipment placed with SAR teams could provide an enhanced regional response capability for both searches and disasters. Potential caches of equipment could include snowshoes, large tents, generators, lights, GPS units, satellite telephones, mobile faxes, cell phones, copiers, computers, specialized disaster software, and mobile command units. These resources could be used and maintained for regional response by SAR teams, Hazardous Material response, large event response, and disaster response teams. Clearly further study is warranted.