



## **SAR VOLUNTEERS REVIEW**

Approved by the  
Interdepartmental Committee on Search and Rescue (ICSAR)  
October 10, 1996



## Review Scope and Objectives

The objective and scope of the review study was to assess the use of federal search and rescue volunteers in the following organizations: the Civil Air Search and Rescue Association, the Canadian Marine Rescue Auxiliary, the Volunteer Program of Parks Canada, and Weather Watchers of the Atmospheric Environmental Service. In particular, the evaluation was required to answer seven questions (Appendix A) aimed at measuring the effectiveness of volunteers in search and rescue.

## Results in Brief

The long-standing partnership between SAR volunteers and the federal government is an investment in which both sides of the partnership have benefitted.

Use of volunteers has been cost beneficial to government and maintained services to the public. Two and a half million dollars have been identified in this study as direct costs of using volunteers in air and marine SAR. Approximately 23 per cent of total marine incidents and 20 per cent of total air incidents are being addressed by volunteers.

To maintain the investment in volunteers, departments should increase communications both formally and informally with volunteer agencies. Heightened recognition of volunteer efforts is a prerequisite for keeping the partnership in good health.

To further improve on the investment in volunteers, more resources should be allocated to increase SAR coverage in identified geographic areas of need and to provide better risk management.

It must be realized that increased training, insurance costs, better equipment and more departmental staff time expended in supporting volunteer efforts will be required. In certain instances, increased costs can be addressed through the use of fund raising efforts or expanding the partnership to private enterprise. As well, allocation of more departmental staff time in supporting volunteer efforts may be required.

## The Role of Volunteers in Search and Rescue

### *CMRA*

Created in 1978, the **Canadian Marine Rescue Auxiliary (CMRA)** consists of 3,340 members on a national basis which participate in marine search and rescue and related prevention activities, primarily on



both coasts and the Great Lakes system. The Department of Fisheries and Oceans gave a \$1.5 million annual contribution to this organization in 1995/96.

### *CASARA*

Created in 1986, the **Civil Aviation Search and Rescue Association** (CASARA) consists of 3,900 members in 105 locations across Canada. As pilots, spotters or navigators, members search for and locate downed aircraft and locate the origin of ELT signals, whether they are incidents or false alarms. As well, CASARA volunteers participate in prevention activities. Transport Canada and the Department of National Defence gave a \$1.0 million annual contribution to this organization in 1995/96.

### *Weather Watchers*

Created in the 1970s, the **Weather Watchers** program is managed by the Atmospheric Environment Service, Environment Canada. Under this program, 4,000 volunteers visually identify and report signs of severe weather to weather offices. As volunteers are managed directly by the Service and no equipment is required, no contribution is involved.

### *Parks Canada*

Parks Canada has comprehensive policies, guidelines and criteria guiding the use of volunteers (including contracts, insurance etc.) In developing site specific search and rescue and prevention plans and activities, individual Parks of **Parks Canada** of Canadian Heritage may and occasionally have used volunteers that are trained and supported by other organizations. While the Volunteer Program of Parks Canada encourages the use of volunteers in a number of parks activities, historically, under this site-specific approach that reflects the accountability of park management, the use of pre-trained volunteers in search and rescue and its prevention has been limited. The relevance of many of the following statements to Parks volunteers is limited.

## Review Methodology

Multiple lines of evidence were used in this review study. Comprehensive literature and file reviews, a systematic analysis of data, four case studies, as well as a comprehensive interview program were conducted.

## Major Findings



*“Can’t do the job without them; volunteers come through in the crunch.” (RCC OIC)*

### ***Trends (mainly Question 7)***

SAR Volunteers are playing a significant and growing role in SAR and related activities. This is apparent in their improving self-management capabilities and training standards, their operational and prevention roles, strong evidence of their cost-effectiveness, and the levels of satisfaction identified. Furthermore, the risks associated with using volunteers in SAR are being systematically addressed. At the same time, retention, coverage, and response to the trends that SAR volunteers are facing continue to be issues. The future potential of volunteers is evolving.

The findings and conclusions of this study can be grouped under six major headings: trends, scope, evaluating, reliability, cost effectiveness and risk management.

**Trends** refers to the scientific, technical, operational, and socio-economic factors that are having an impact on the evolving role of volunteers in search and rescue. Four major trends are affecting volunteer efforts.

The first is the **changing role of governments** in Canada, symbolized by severe budgetary restraint and emphasis on alternative delivery and devolution. In this context, volunteers and increased community involvement represent alternative delivery options. Volunteers are being tasked more, in part because of federal cost savings involved, although federal resources expended in support of volunteer efforts have remained about the same.

The second is the **steadily improving and more widespread use of technologies** relating to search and rescue. Improved locating and homing devices and their availability at increasingly reasonable prices are contributing among other things to the reduction of scope and duration of searches. This in turn is having an effect on how and what SAR volunteers are being asked to do.

The third is the **decline in recreational aviation** in Canada. Increasing insurance and other costs associated with non-commercial aircraft operation and ownership, along with the enduring effects of the recession of the early nineties, among other factors, are leading to decreased aircraft ownership and decreased levels of recreational flying in Canada, particularly in less populated locations and regions. The effect on CASARA of this particular trend is that the number of low risk incidents has been declining (a large part of CASARA’s workload) and the pool of persons available for recruitment is not increasing.

Finally, **demographic and behavioural (leisure) trends** are affecting the search and rescue function in



general and the kinds of taskings given to volunteers. The aging boating population and the increased preference for adventure recreation among the younger demographic population suggest that the nature of incidents that volunteers may be assigned will be changing.

These trends therefore could potentially have the effect of undermining the significance of volunteer organizations. For instance, one effect of these trends on volunteers has been to stabilize or even decrease their numbers in recent years, through reduced recruitment efforts, attrition, and the “culling” of membership lists through annual renewal requirements, etc.

It can also be concluded that partially as a result of these trends, reduced and more focussed volunteer forces are emerging, particularly in the cases of CMRA and CASARA.

#### ***Scope (mainly Questions 1, 3 and 4)***

*“Volunteers are proud of what they do. The professionalism has increased and it is continuing to improve.” ( CMRA Volunteer)*

*“Volunteers are located where the population is. (RCC OIC)*

**Scope** refers to the operational, geographic, and institutional parameters under which volunteers carry out their tasks. For reasons relating to effectiveness, efficiency and risk management, the scope of volunteer activity has been carefully delineated in the past. Issues of scoping are, however, posing strong challenges for volunteer activity in SAR. For example:

**Operationally**, volunteers view themselves as increasingly more professional, and increasingly ready to taking on a broader range of taskings. The role of volunteers in terms of taskings has been expanding. For example, in CASARA, volunteers interviewed would like increased authority to turn off false alarm ELTs, while in CMRA, “stand by” procedures are being strengthened to facilitate RCC tasking and assignment to taskings in areas such as aids to navigation, and marine pollution countermeasures are being considered. In both organizations, greater interaction and integration of volunteer and civil servant efforts may bring further operational advantages and further increase cost-effectiveness.

**Geographically**, the coverage that volunteers have been able to provide has been significant and problematic at the same time. It is significant in that volunteers are able to provide coverage in virtually all “high activity” areas. In recent years, coverage provided by volunteers has more or less stabilized, with few gains or losses in coverage occurring. At the same time, it is problematic in that largely in low population, low incident locations, coverage has been sparse or non-existent. The northern sectors of many



of Canada's provinces, and various large segments of the territories are experiencing low volunteer coverage.

Expanding geographic coverage into remoter zones has proven to be very challenging for volunteer organizations, especially within available resources, well-recognized gaps in coverage have remained. It should be noted, however, that there is little evidence to suggest that the gaps identified are "burning issues".

**Institutionally**, the relationships of volunteers with non-federal institutions have been strengthening. For example, CASARA provincial units have been developing memoranda of understanding with provincial police forces and emergency preparedness programs; many CASARA provincial units are now set up to carry out provincial taskings. Both CASARA and CMRA recognize that a high level of awareness of their roles in local communities and among local and regional institutions can produce significant benefits in raising recognition levels and fundraising.

#### *Availability (mainly Questions 3 and 4)*

*"There is lots of room for expansion in all categories and in new categories." (CASARA Zone Director)*

**Availability** refers to the considerable range of factors that contribute to the recruitment, training, and retention of a qualified cadre of volunteers, ready and willing to be deployed. Recruitment in itself has proven to be relatively easy in populated areas, while retention has been a continuing challenge, particularly for CASARA and CMRA. Retention of members depends heavily on maintaining high motivation and their sense of satisfaction. By-and-large, this study found that volunteers are satisfied with their role. The motivation of SAR volunteers, however, has many complex facets such as: the development of a sense of community, an optimal frequency and reasonableness of taskings, an appropriate training framework, expense recovery and the risk orientation of the volunteer and related insurance considerations, reasonable time commitment requirements, and perception of value added and related public recognition. For example, particular, low frequency of taskings, which has beset CASARA and some CMRA members in recent years, have led to higher rates of turnover, according to elected leaders of these volunteer units. The turnover rate of volunteers is probably the main ongoing factor capable of eroding the effective use of volunteers, especially in view of the investment in training.

The availability of volunteers for SAR response also depends on accurate information on volunteer resources being available within RCCs. There is evidence that in some cases, this has not been achieved, and that taskings of volunteers were limited as a result.



### ***Reliability (mainly Questions 1 and 2)***

**Reliability** refers to the performance of volunteers in SAR response and SAR prevention activities.

In terms of **SAR response**, volunteers are playing a significant and growing role. CMRA volunteers were called out in support of 23 per cent of 18,400 reported marine SAR incidents between 1992 to 1994. In the same time period, CASARA taskings increased over the period and covered about 20 per cent of the 1,558 air SAR incidents in that time period. Volunteers have provided significant value added in SAR response, in terms of: improving strategic and tactical coverage, improving timeliness of response, contributing local knowledge, and reducing the use of primary (governmental) resources. Volunteers have thereby contributed to operating savings, extending the economic life of federally owned SAR response assets, and reserving primary SAR for allocation to more serious incidents as they occur. No particular evidence emerged that volunteers were being overtasked to SAR incidents.

### ***Cost-Effectiveness (mainly Question 6)***

In terms of **prevention**, volunteers are undertaking a range of prevention activities, benefitting from local presence, credibility among peers, and personal exposure to deliver safety messages as required.

In terms of **cost-effectiveness**, the low cost of deployment of volunteer vessels and aircraft and the absence of any salary and overtime payments by and large make tasking and involvement of volunteers a particularly cost-effective proposition. There is little doubt that without volunteers in CASARA, the CMRA, and Weather Watchers, an equivalent public sector response system would cost considerably more. Cost effectiveness is clearly enhanced through training of low turnover volunteers.

*“It doesn’t get any cheaper. In fact, they are too cheap and not enough money is spent on training them.” (RCC/MRSC)*

### ***Risk and Risk Management (mainly Question 5)***

Generally speaking, volunteers face four categories of risk: the normal risk associated with conduct of the activity; the increased risks associated with the conditions of training and tasking; the accountability and legal risks associated with assuming a SAR role; and, job related risks, insofar as extended absences from work may be required. Generally, volunteers are aware of the risks and significant risk management and mitigation measures are in place. These measures include, for example, intensive ab initio training, strict RCC command and control procedures in tasking volunteers, some currency training, unit safety officers and insurance.

## **Recommendations**

### ***Recommendation 1 (Future Trends)***

Based on the above findings and conclusions the following recommendations emerge:

***It is recommended that SAR volunteer organizations and their respective departmental programs strengthen their ability to understand and respond to societal trends.***

This recommendation has the effect of enabling volunteer organizations on their own or in cooperation with their departmental programs to reach significant conclusions and to adapt their mission, roles and activities as a result. In this way, volunteers are more able to assure their continuing relevance and effectiveness in the face of the significant identified trends.

### ***Recommendation 2 (Scope)***

***It is recommended that SAR volunteer organizations and their respective departmental programs give consideration to judicious expansion of their roles, operationally, geographically and institutionally as appropriate.***

This recommendation has the effect of encouraging volunteer organizations and their supporting departments and programs to work together in establishing what steps can be taken to ensure continuing interesting, challenging opportunities for volunteers, within the limits of their capabilities. This recommendation also includes prevention activities.

### ***Recommendation 3 (Availability)***

***It is recommended that departments and volunteer organizations work together to assess the potential for extending coverage to areas of Canada that have been identified as geographic areas of need.***

This recommendation has the effect of encouraging both volunteer organizations and their respective departmental programs to address issues relating to coverage on a systematic, analytic and documented basis. The need for extended coverage should be explicitly defined based on incident probability analysis, and the barriers to coverage should be explicitly identified. In cases where there are two or more areas, considered to be gaps, methodologies should be made available to prioritize the area or areas of need.





Additional resources should be made available for the start up of units in high priority areas of need.

*Agree - A Strategic Needs Analysis for the NIF (which has historically included funding for volunteers) will be conducted in 1996/97 and this exercise will include consideration of future volunteer requirements as they relate to SAR and how the NIF should address federal SAR needs as they evolve.*

*In addition, certain ICSAR departments have or are formulating “Business Plans” which include improving the role of their volunteers. Business Plans include assumptions on future societal trends.*

*Finally, consideration is being given to more interaction between senior management in the departments and the heads of CASARA and CCGA attend meetings of ICSAR Sub Committees when matters affecting the future deployment and use of volunteers are discussed.*

*It is recommended that volunteer organizations and RCC and program personnel increase the number of occasions for formal and informal contact and that formal procedures be put in place to ensure the currency of information on volunteers available in RCCs.*

***Recommendation 4 (Availability)***

***It is recommended that volunteer organizations and RCC and program personnel increase the number of occasions for formal and informal contact and that formal procedures be put in place to ensure the currency of information on volunteers available in RCCs.***

This recommendation promotes harmonization between critical players in the deployment of SAR volunteers. It has the effect of encouraging volunteer organizations and supporting program officials to cooperate in ensuring that an accurate knowledge base on volunteer capabilities continues to be in place and that an informed, cooperative and mutually supportive framework for SAR taskings and prevention supporting program officials activities is in place.

***Management Response to Recommendation Four***

*Agree - DND will be reviewing the feasibility of CASARA and CCGA attending national level meetings between RCCs and headquarters SAR staff.*

*In addition, RCCs will be reviewing their database information to ensure information on volunteers*



*is accurate and reliable.*

***Recommendation 5 (Reliability and Risk Management)***

***It is recommended that departments and volunteer organizations ensure that the criteria for admitting new members and for maintaining current membership be made more explicit and be applied consistently, especially where risk issues are involved.***

This recommendation has the effect of: (a) encouraging both partners to manage the risks associated with SAR activity in a more explicit manner, using training as a key means for increasing reliability and improving risk management; (b) encouraging ongoing contact between departments and volunteers throughout the duration of the volunteer experience as a means to retain motivation; (c) encouraging both partners to address the questions of risk in a systematic and more formal way, particularly with newer volunteer members.

***Management Response to Recommendation Five***

*Agree - DND and CCG will continue to consult with their respective volunteers on a regular basis. In particular, CCG will be producing a CCGA (CMRA) Training Manual.*

**Volunteer Suggestions**

During interviews, RCC personnel and volunteers made the following suggestions for improving volunteer SAR activities:

**CASARA**

- Address the equipment shortages.
- C Improve cooperation with local police authorities.
- C Increase CASARA access to the search master course.
- C Increase the number of CASARA taskings
- C Do more prevention activities.
- C Supply members with better equipment.
- C The organization is in need of more and better search masters.

**CMRA**



- C Increase training and develop a better integrated exercise program.
- C Make available specialized training for volunteers.
- C Allow volunteers to be more involved in planning incident responses with RCCs.
- C Improve coordination with law enforcement services.
- C Continue movement towards dedicated, community-owned vessels.
- C Issue new videos to CMRA members on improving safe boating practices.
- C CMRA in the Atlantic Provinces should overcome its reluctance to undertake prevention activities and should institute a better prevention program.
- C Conduct occasional audits of courtesy small vessel examinations, in order to quality control inspections.

### *Parks Canada*

- Consider using volunteers in the provision of rescue dogs.

### *Weather Watchers*

- C Provide periodic refresher training and occasional feedback.
- C Use Weather Watchers to inform visitors to the area of weather patterns to watch out for.

## Appendix A

The following are the volunteer review study questions used to assess the utilization of federal volunteer organization in SAR.

### **Question 1**

*What are the impacts and effects of volunteers' activities on SAR? What is the magnitude of these impacts?*

### **Question 2**

*What are the impacts and effects of volunteers' activities on Prevention? What is the magnitude?*

### **Question 3**

*To what extent does the distribution of volunteers across the country match the geographic areas of need?*

### **Question 4**

*To what extent are stakeholders satisfied with the services provided? To what extent are the volunteers themselves contented with their role?*

### **Question 5**

*What are the risks associated with volunteers activities and to what extent are these risks addressed by the parties involved?*

### **Question 6**

*To what extent are the volunteer activities relating to SAR cost effective? In particular, what are the departmental costs, cost avoidance and cost savings associated with volunteers?*

### **Question 7**

*What would be the risks, impediments, impacts and effects of an orderly expansion or contraction*



*of volunteer activities? To what extent are the risks and impediments manageable?*