

ALTERNATIVE SUPPORT MODEL FOR GROUND AND INLAND SEARCH AND RESCUE IN BRITISH COLUMBIA

PROPOSAL



British Columbia Search and Rescue Association (BCSARA)

September 2015

ALTERNATIVE SUPPORT MODEL FOR GROUND AND INLAND SEARCH AND RESCUE IN BRITISH COLUMBIA PROPOSAL

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1.0 Overview

The British Columbia Search and Rescue Association (BCSARA), representing the 80 Search and Rescue (SAR) groups and their volunteer members, and Emergency Management British Columbia (EMBC) representing the Province of British Columbia, continue to work together towards a new approach to providing funding and reducing the administrative workload for SAR volunteers.

In October 2013 the president of BCSARA presented the Minister of Justice with a discussion document titled '*ALTERNATIVE FUNDING MODEL FOR GROUND AND INLAND SEARCH AND RESCUE IN BRITISH COLUMBIA*', which provided details on the structure of SAR in B.C., the challenges faced by the SAR groups and their members, the current funding, what funding is required to sustain the service, and offered a new model to address the challenges. The document also outlined some potential funding sources, however it is made clear that is the purview of the Province.

Recent developments towards further refinement of the model in preparation for engaging other levels and areas of the Provincial government include:

- Changing the name from the Alternative Funding Model to Alternative Support Model as the intent is to alleviate as much of the administrative workload off of SAR volunteers as possible, increase coordination of all SAR training and address the recommendations within the *Review of SAR Training in B.C. report*, support prevention activities critical to reducing the number and severity of SAR incidents; as well as addressing funding concerns.
- At a conceptual level agreeing on what supports should rest with the SAR Foundation (as described within the proposed model), be provided by BCSARA, or be provided by EMBC/other provincial agencies within their mandate; while offering several versions of the model for consideration.
- Drafting of a workplan with timelines and decisions points for the project, to ensure it remains a priority despite emerging issues and day to day pressures.
- Development of draft funding formulas, for the annual disbursements to SAR Groups, and versions of the support model to present for discussions with the SAR volunteer community and agencies.

2.0 Purpose

The over 4.3 million citizens of British Columbia, and millions of visitors each year that enjoy this beautiful province, have access to one of the best Ground and Inland Water Search and Rescue (SAR) services in North America. The current system utilizes paid responsible agency staff with trained volunteers (unpaid professionals), and a high degree of interagency co-operation to effect searches and technical rescues in often difficult terrain. This system has been developed and enhanced over many years, in response to the appropriately 1,300 SAR incidents annually, which is more than the rest of Canada combined.

While the current system is effective and efficient the critical volunteer component is facing challenges that continue to grow in scale due to;

- increasing numbers of SAR incidents in B.C., from approximately 400 in 1991, to 900 in 2002, and over 1,300 annually since 2012 (see Appendix A),
- escalating public expectations that responses will be immediate, effective, and using new technologies; whether it is to a lost child in a urban environment or a recreationist injured in a remote location,
- increasing expectations on volunteers to respond to non-search and rescue events, such as assisting the police to evacuate residences during fires and floods in support of local authorities,
- recreationists accessing the British Columbia backcountry in increasing numbers and in remote areas eg, snowmobilers with advanced powerful machines climbing into difficult terrain,
- loss of volunteer base in small communities due to downsizing of industry, requiring volunteers from distant communities to cover larger areas and increased number of responses,
- evolving liability issues and concerns surrounding volunteer society roles in supporting search and rescue groups,
- more demands on fund raising to purchase technology and equipment which has become standard and essential to ground searches and technical rescue disciplines such as swiftwater and avalanche rescue,
- increasing Health and Safety requirements, while the safety of volunteers is paramount there is an impact on time for training and expenses for Personal Protective Equipment and training.

While the 2,500 plus dedicated search and rescue volunteers in B.C. are willing to evolve it is becoming difficult to maintain even current service due to increasing funding needs, static funding levels, and onerous processes to access funding. This is further exacerbated as non-operational funding comes from many different sources and, albeit most welcome, is often one time, not recognizing the need for maintenance and recertification.

Through a Search and Rescue New Initiatives Fund (SAR-NIF) project, titled 'Leveling the Playing Field' regional workshops were held by the B.C. Search and Rescue Association (BCSARA) in 2011/12 with SAR Group and agency members to gather input into best practices and challenges encountered in the delivery of SAR services. One of the major challenges identified is the amount of time volunteers have to commit to fund raising and administration, while trying to maintain training and response capability. These same challenges face the volunteer board and officers of the BCSARA in their efforts to support the SAR volunteers.

In November 2012 the Coroner's Inquest jury into the death of a SAR volunteer during a swiftwater response made nine recommendations¹, one of them being 'That EMBC review and evaluate funding

¹ 'Verdict at Inquest, Jury Recommendations'

models to better support SAR operations, training, and equipment similar to volunteer fire departments funding.’ BCSARA and EMBC, through the Swiftwater Taskforce and the SAR Volunteer Joint Health and Safety Committee, have addressed the other eight recommendations work on this one continues with a focus on the Alternative Support Model as potentially addressing the issue.

A review of the Search and Rescue Training Program was conducted by an independent contractor within the ‘Leveling the Playing Field’ SAR-NIF project in early 2013. Within the final report² there are a number of recommendations including the need to firmly identify which agencies are responsible for funding training, requirement for standards for all training, the need for tracking and monitoring training courses, and that additional administrative and coordination resources are required. It is clear that currently the required resources are not available to address the identified issues.

The model presented within this document offers an opportunity to improve supports for this very critical service for the residents and visitors in British Columbia, reduces administrative and fundraising demands on volunteers, and addresses the Coroner’s inquest and training review recommendations.

3.0 Background

The following information is provided to inform readers on the historic and current structure (model) of Search and Rescue in a brief format.

3.1 Evolution of Search and Rescue in B.C.

Although people have always sought to assist others in need, including searching for lost people or attempting to rescue those in peril, the organizing and formalizing of ground Search and Rescue groups in British Columbia is an outcome of civil defence activities in the 1950s and 60s.

With the demise of the cold war threat civil defence volunteers started specializing in various disciplines, such as ‘wilderness’ Search and Rescue, while others continue to evolve support for local government response to emergencies. The establishment of the Provincial Emergency Program (PEP) in the early seventies provided the critical provincial level support and coordination for the ‘Public Safety Lifeline’ volunteers, initially with most remaining part of the local government emergency programs.

Initially Search and Rescue training was very basic, search techniques based on military ‘shoulder to shoulder’ techniques, and rope rescue using equipment and techniques from the mountain climbing community. The need for equipment and training designed specific for these tasks, and for additional specialized rescue disciplines such as swift water and avalanche rescue

² ‘A Review of the Search and Rescue Training Program in B.C., Kathie Stenton’

quickly became apparent. The evolution of equipment, techniques, and training has been driven mostly by the volunteers in response to identified need.

Since the 1960/70s most SAR groups have become independent societies which support their volunteer members towards assisting the police and other responsible agencies response to a variety of emergencies. Following the firestorm 2003 and a number of large scale flood and other fire events many groups have once again become part of local authorities' emergency programs again while maintaining their ability to respond to incidents outside the area and in support of other agencies.

3.2 Current Model

A diagram showing the responsibilities and linkages of the agencies involved in search and rescue is attached as Appendix B. Note this diagram is simplified to show the overall provincial model, there are a number of variations, linkages and supports not shown. While the model may seem complex the best practices generated by the relationships are recognized nationally.

The Province retains the overall responsibility for ground and inland water search and rescue, while the federal government is responsible for marine and air search and rescue. The following is a brief recap of operational responsibilities and roles within the current model;

- Search and Rescue volunteers within the 80 groups located across the province assist agencies by providing trained and equipped personnel during ground and inland water incidents requiring search and/or technical rescue expertise and personnel, and during civil emergencies. In B.C. volunteers trained in Search Management act in Unified Command with the responsible agency to oversee the response.

SAR Groups respond within a geographical area, typically based on a combination of RCMP detachment boundaries. Each SAR group operates as the primary or lead group within their area, while providing mutual support to adjoining groups and across the province when requested.

- RCMP and municipal police forces are responsible for searches for lost and missing persons within their jurisdictions; often searches result in the need for rescue of those injured or trapped hence considered the same incident.
- British Columbia Ambulance Service (BCAS) is responsible for the pre-hospital care and transportation of injured persons. Most BCAS staff are not trained or equipped to access subjects in difficult terrain or remote areas, hence BCAS requests SAR volunteers to reach, stabilize, and transport subjects to a transfer location.

- The Office of the Coroner is responsible for the recovery of human remains, SAR volunteers may be requested to assist with the task in non-urban settings.
- The Federal Department of National Defence (DND) is responsible for the search for missing aircraft. While their primary provincial support is through the Civil Air Search and Rescue Association (CASARA). They also request ground SAR volunteer assistance for specific tasks such as responding to a possible crash site.
- Canadian Coast Guard (CCG) is responsible for search and rescue in the tidal marine environment, while their primary support is Royal Canadian Marine Search and Rescue (RCM-SAR) volunteers, in some cases ground SAR volunteers are requested to conduct shoreline searches.
- The Parks Canada Warden Service is responsible for search and rescue within National Parks, under a long standing agreement with the Province SAR volunteers may be requested to assist.
- Fire Departments in many communities are tasked with rescue within their Fire Protection Area as part of the local authorities' emergency program. Fire Departments may request SAR volunteer assistance to provide additional personnel and/or expertise and equipment.
- Local Authorities (municipalities and Regional Districts) are responsible for response to emergencies within their boundaries. SAR volunteers may be requested to assist with SAR incidents (eg swift water rescue during a flood) or in non-traditional SAR roles (eg evacuation of residents due to interface fire threat).
- Emergency Management B.C. is responsible for supporting the emergency plans and response of local authorities and provincial agencies. Critical coordination and support is provided through the Emergency Coordination Centre (ECC) in Victoria, the provincial SAR Specialist, and regional staff. Operational support for SAR is consistent with that provided during other emergencies involving risk to human life, and is consistent with the B.C. Emergency Management System (BCERMS) objectives.

It should be noted that the above agencies, and other local/provincial/federal agencies, may also respond to assist SAR volunteers and responsible agencies in other types of responses. For example Parks Canada may respond when requested to assist with incidents outside a National Park, DND may affect night time flights to access subjects in remote areas, and Coast Guard may assist with a ground search by transporting volunteers to an island.

3.3 Non-Operational Roles

To support the operational model outlined above a well established structure is required to maintain and enhance response capabilities, the following are the primary roles of the agencies and volunteer organizations;

- The British Columbia Search and Rescue Association (BCSARA) represents and supports the 80 SAR groups in the Province. The BCSARA evolved from the SAR Advisory Committee in 2004, adding the ability to raise funds to the advisory function.

The BCSARA board includes regional volunteer directors, and representatives from the RCMP, Municipal Chiefs of Police Association, B.C. Fire Chiefs Association, and BCAS.

BSCARA participates as a member of the Search and Rescue Volunteer Association of Canada (SARVAC), which in turn represents the interest of SAR volunteers nationally including participating on the Ground Search and Rescue Council of Canada (GSARCC) which also has representation from all Provinces/Territories, RCMP, Parks Canada, and the National Search and Rescue Secretariat (NSS).

- Emergency Management British Columbia (EMBC) provides support to SAR Volunteers by;
 - Developing policies and procedures
 - funding to the Justice Institute of British Columbia (JIBC) for training
 - reimbursement of out of pocket expenses incurred during responses
 - Worker Compensation Board (WCB) coverage during responses and training
 - Liability coverage during approved training and response
 - expertise through the SAR Specialist
 - recognition of volunteer contribution through years of service pins and annual awards
 - supports to the BCSARA through a annual grant and access to conference lines
 - Co-chairing the SAR Volunteer Joint Health and Safety Committee

EMBC also chairs the Search and Rescue Advisory Committee which has representation from all agencies and volunteer organizations for air, marine and ground search and rescue in B.C. This committee plays a critical role in furthering interagency cooperation.

EMBC and the BCSARA cooperate in the application for, and administration of, funding under the Search and Rescue New Initiatives Fund (SAR-NIF) funding, in past years this has provided substantial gains for the SAR volunteers such as radio kits for every team.

- The RCMP, as the Provincial police force, have provided support in the past such as access to fixed wing transport. Since 2002 the RCMP, 'E' Division has provided additional funding for volunteer training.
- The National Search and Rescue Secretariat (NSS) provides critical coordination for all aspects of SAR nationally, including holding national conferences (SARscene), supporting the GSARCC and SARVAC, and managing the SAR-NIF program.

4.0 Funding

4.1 Current funding Sources

The overall costs of SAR responses are covered by the responsible agencies, with EMBC covering costs associated with the volunteer component. For example, the RCMP are responsible for rotary wing (helicopters) utilized to search for a lost person. EMBC covers rotary wing expenses to transport volunteers and to conduct rescues when conditions meet policy. As mentioned above EMBC reimburses volunteers for out of pocket expenses, as well for SAR group equipment and vehicles utilized during a response according to policy.

The annual response reimbursement to volunteers covered by EMBC is approximately \$2,200,000; other costs such helicopter charter were \$1,250,000 in 2012/13. It has been estimated that the volunteer time on response, based on a RCMP constable wages would exceed \$20,000,000; including training and administration this would likely exceed \$50,000,000, a good return on investment! While reimbursement levels are mostly adequate, increasing use of new technology and increasing costs indicated a review is required.

Non-operational funding comes from a variety of sources, including these at the provincial level;

- \$250,000 for training through the JIBC from EMBC. This amount was reduced from \$350,000 in 2002 and has remained constant since. Prior to 2014 administrative support for the BCSARA board, and previously the SAR Advisory Committee was provided within this funding, it is now dedicated to training.
- \$95,000 for training through the JIBC from the RCMP 'E' Division initially provided in 2002 to offset the reduction from EMBC it has become annual.

- \$60,000 for meeting expenses and administrative support for the BCSARA from EMBC, previous to 2014 the Board received \$25,000 annually for meetings with administrative support being provided by the JIBC under EMBC funding.
- \$250,000 annually has been accessed by the BCSARA through Gaming direct grant application since 2006; in 2004 and 2005 lower levels were also granted. The majority of this funding has gone to training courses to supplement the EMBC and RCMP funding, regional allocations for group/regional training, some specialized training (eg swiftwater), and supports for volunteers to attend training (travel is not covered for most courses). Initially some funding was allocated to SAR prevention, including for the highly successful AdventureSmart program, but other funding pressures has not allowed any for several years.
- As previously mentioned B.C. has been successful in achieving funding for projects such as equipment purchases through the federal SAR-NIF program. Such funding has averaged approximately \$250,000 annually since 2009.
- \$233,000 (increased in 2015) provided through Gaming to cover the cost of liability insurance for SAR Societies for several years. Previously SAR groups were either operating without director's insurance, or paid through funding raised as outlined below.

At the local level SAR groups are innovative by necessity in accessing funding wherever and whenever possible to cover non-operational (but operationally required) costs such as equipment, vehicles, insurance, licences, and training not otherwise provided. Some sources (note these vary greatly by group and community);

- Gaming direct grants; Last fiscal year \$2,300,000 was approved to individual groups.
- Mill rate funding through local governments: appropriately \$1,000,000 annually, not including in-kind support such as access to buildings and vehicle use.
- Other fundraising; appropriately \$1,000,000 from local organizations (service clubs), corporate, donations from family and friends of subjects.

Currently SAR Groups, as individual societies own and operate appropriately \$7.8m in capital assets, including buildings, vehicles, boats, and other equipment.

Individual SAR volunteers also contribute financially through purchasing suitable clothing and footwear, providing their own 72 hour packs, some Personal Protective Equipment such as eye protection and gloves, and in some cases their travel for training courses not otherwise covered.

Current overall funding sources for Search and Rescue in B.C.

Source	Amount
Gaming	\$ 2,300,000
Local Authorities ³	\$ 1,000,000
EMBC (Support)	\$ 275,000
RCMP (Support)	\$ 95,000
EMBC(Response reimbursement)	\$ 2,200,000
EMBC (Other response costs)	\$ 1,250,000
Other fundraising	\$ 1,500,000
SAR-NIF (average)	\$ 250,000
Total	\$ 8,870,000

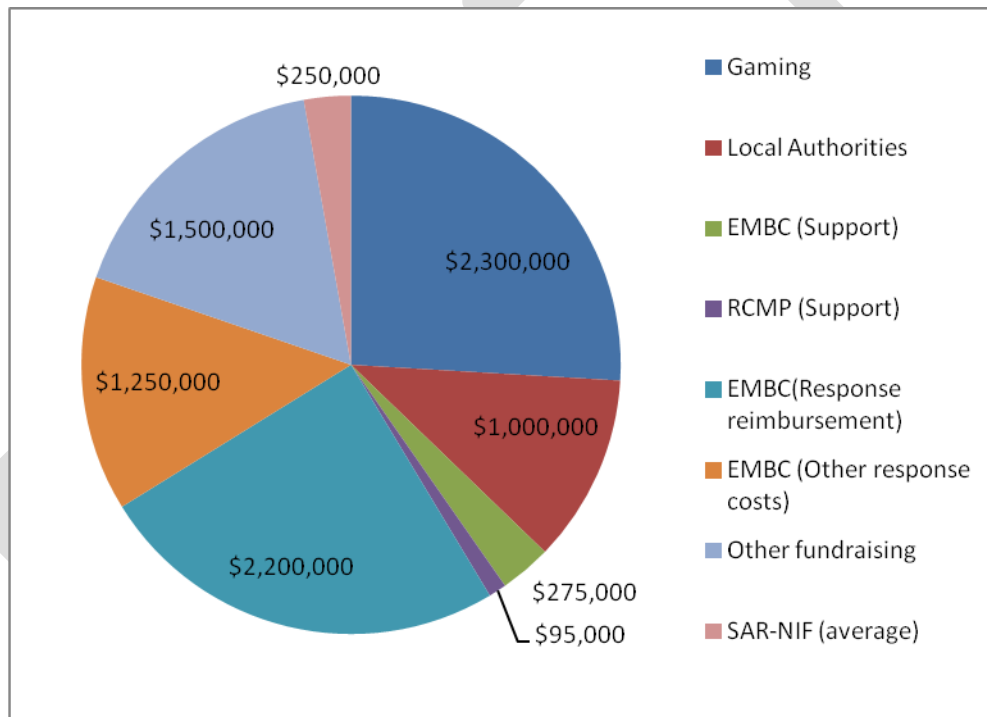


Figure 1

³ The amount shown is funding only, some Local Authorities also provide in-kind support for SAR Groups such as building space for meetings and storage, use of vehicles, and/or use of other equipment.

4.2 level of Funding required for Search and Rescue

An extensive study of SAR Groups responses over 10 years was conducted in 2004 in order to forecast funding required to support training. The study⁴ concluded that substantial additional funding is required to maintain response capability and volunteer safety.

The report presented to the Solicitor General centered on a request for increased training funding for SAR volunteers, with the cost for maintaining and replacing equipment also shown. Not included was the initial cost of group equipment (although a value of \$15m was provided), purchase of Personal Protective Equipment (PPE,) and ongoing costs for insurances (vehicles/ equipment/ liability) and licensing (eg radios).The Solicitor General expressed appreciation for the service provided by the SAR Volunteers, however additional funding was not granted.

In addition SAR volunteers are active in SAR prevention; within the AdventureSmart program they present programs such as Hug A Tree and Survive to young children in schools, snow safety programs to older students, and Survive Outside to adults. All are designed to reduce the number and severity of SAR responses. This highly effective program designed and implemented in B.C., and now national in scope, requires support to continue.

The burden of administrating funding and coordination of training has exceeded volunteer resources, it is recommended that additional provincial resources be dedicated to these roles, or funding be provided for such support.

The Critical Stress Incident Management (CISM) program developed by BCSARA based on the Ministry of Forests program consists of SAR peers trained to facilitate debriefs following incidents that may trigger CISM, and provide awareness sessions to SAR volunteers. Currently funding for this important program is year to year from the BCSARA gaming grants, while travel for debriefs is covered within response reimbursement from EMBC. In order to provide the required level of training and recruitment of CISM peers the funding needs to be sustainable.

Currently reporting on responses by SAR Groups is done through a variety of means, a on-line system 'British Columbia Search and Rescue Information System (BCSARIS)' was developed through provincial funding in 2004 to collect data, and updated with SAR-NIF funding in 2008 to provide for on-line reimbursement claims and tracking training. Unfortunately the system is not fully functional, resulting in many SAR Groups submitting data and claims in paper format. The results are a lack of data management ability to support research on lost person behaviour, inability to draw information on response types and resource utilization, and onerous administration for SAR volunteers. BCSARA, with the support of EMBC, applied for SAR-NIF

⁴ 'Volunteer Ground and Inland Water Search and Rescue Service Business Plan, Neil Brewer'

funding to source an on-line reporting system, unfortunately the application was not approved, but is being resubmitted for 2016. If approved it would cover costs for a maximum of 3 years.

These factors are included in the proposed model and funding levels in the following section.

4.3 Possible model for managing funding

In order to properly manage funding for SAR, and reduce the administrative demands on SAR volunteers to apply, track, and report on funds their group's raise, it is critical that a different overall funding model in B.C. be implemented.

The model suggested is used by several U.S. States, including Colorado which can be referenced at <http://dola.colorado.gov/dlg/fa/sar/index.html#overview> . The model includes a Search and Rescue Fund established in state legislation into which funding flows from various sources, and a board which oversees the distribution of the funds. In Colorado funding comes from fishing and hunting licences, a standalone wildlife habitat stamp, off-highway vehicle registration, and through voluntary purchase of Outdoor Recreation Search and Rescue Cards available at retailers and on-line.

There is precedent in British Columbia for such a model; the Habitat Conservation Trust Fund (HCTF) established under the Wildlife Act receives revenue collected from surcharges on hunting, fishing and other licenses. These funds, along with donations, are administered by the Habitat Conservation Trust Foundation. Since 1981 the trust has received and disbursed over \$140,000,000.⁵

The SAR Fund model has the potential to ease demands on Ministry budget lines, as well as reduce the administrative workload on staff and volunteers involved with applications and grants. For instance, should a set amount be transferred to the SAR Fund from Gaming outside the Direct Grant program the allocation of funding to the 80 SAR groups and for SAR training would be made by the fund management under direction of the board. This is similar to the structure⁶ established in New Zealand for SAR.

Funds within the SAR Fund would be distributed to SAR Groups using a formula based on the type of response capability (eg. Search, Swiftwater, Rope, Avalanche) recognizing the training, equipment and other costs associated with maintaining that service. A set amount would be provided each fiscal year to pay insurance and licensing fees, and for training upon receipt of a training plan. Response costs could continue to be reimbursed following each response as the scale and scope of each varies substantially, an option would be to provide an advance to each SAR group at the start of a fiscal year however that would become onerous administratively.

⁵ <http://www.hctf.ca/who-we-are/history>

⁶ <http://www.landsar.org.nz/Article.aspx?ID=874>

Such a model requires funding to support the management and disbursement of funds to SAR Groups; this would include staff and office space for the SAR Fund Foundation under the direction of a Board consisting of BCSARA and other SAR Stakeholder Representatives. The coordination of training and administrative support to BCSARA and SAR groups could be included in the funding for the Foundation, or flow from the SAR Fund to BCSARA. The amount required for managing and administering the fund will depend on the model chosen, for the purpose of this paper a 10% of the total annual amount of the Fund is used.

4.4 Options for alternative sustainable funding

The following potential additional sources for funding of a SAR Fund are offered as ideas only; the SAR community recognizes that the Province of B.C. may decide to use existing sources at the required level to supplement the SAR Fund model.

An extensive review of the SAR service in B.C. was conducted in 1995/96, the final report⁷, commonly referred to as the SAR Strategic Plan, suggested a number of potential sources for funding;

User fees – fees as a small cost added to selected recreation fees/licences/registration

- Hunting licences
- Fishing licences
- Alpine ski-lift tickets
- Commercial cross-country skier visits
- Snowmobile registration
- ATV registration
- Provincial park camping
- Free miner certificates (annual)
- Surcharge on outdoor equipment
- Surcharge on commercial recreational licences
- Cost recovery (charging subjects who are found/rescued)

Potential partnerships with the HCTF could be explored if the decision is to look at additional surcharges on licenses; those currently within the HCTF, and others such as ATV licenses.

The response to several of these ideas being ‘sounded’ off representative organizations was very negative. For example the ski hills felt the surcharge on ski lift tickets would be detrimental to business, and was targeting a sector which only accounted for 3% of SAR incidents (out of bound skiers). Given the type of activities that subjects are engaged in encompasses most self

⁷ ‘Land and Inland Water Search and Rescue Strategic Plan for British Columbia’

powered and powered sports, to 'walkaways' in urban settings it is likely any models will have this challenge.

The concept of Cost Recovery is often raised by the public as a penalty to subjects after high profile incidents; it is not supported by the SAR Community given concerns over delayed calling for assistance. As well it would be a burdensome process likely resulting in very little incremental revenue.

Some commercial operations, such as backcountry lodges, have SAR resources listed as the primary response agency in case of an incident involving their clients and are requiring guests to purchase evacuation insurance. Consideration could be given to recovering costs from these businesses or through the insurance, the possible amount is not known at this time.

Some additional concepts that have been discussed are:

Charge to responsible agencies, this option would see a 'fee for service' for the SAR volunteer portion of the response to the Police, BCAS, Office of the Coroner, etc. This would be simple to manage, but as these are mostly Provincial agencies it would still be provincial tax based. It is also likely that in some cases a timely response would not be initiated if the local office/ministry did not have the funds in their operating budget.

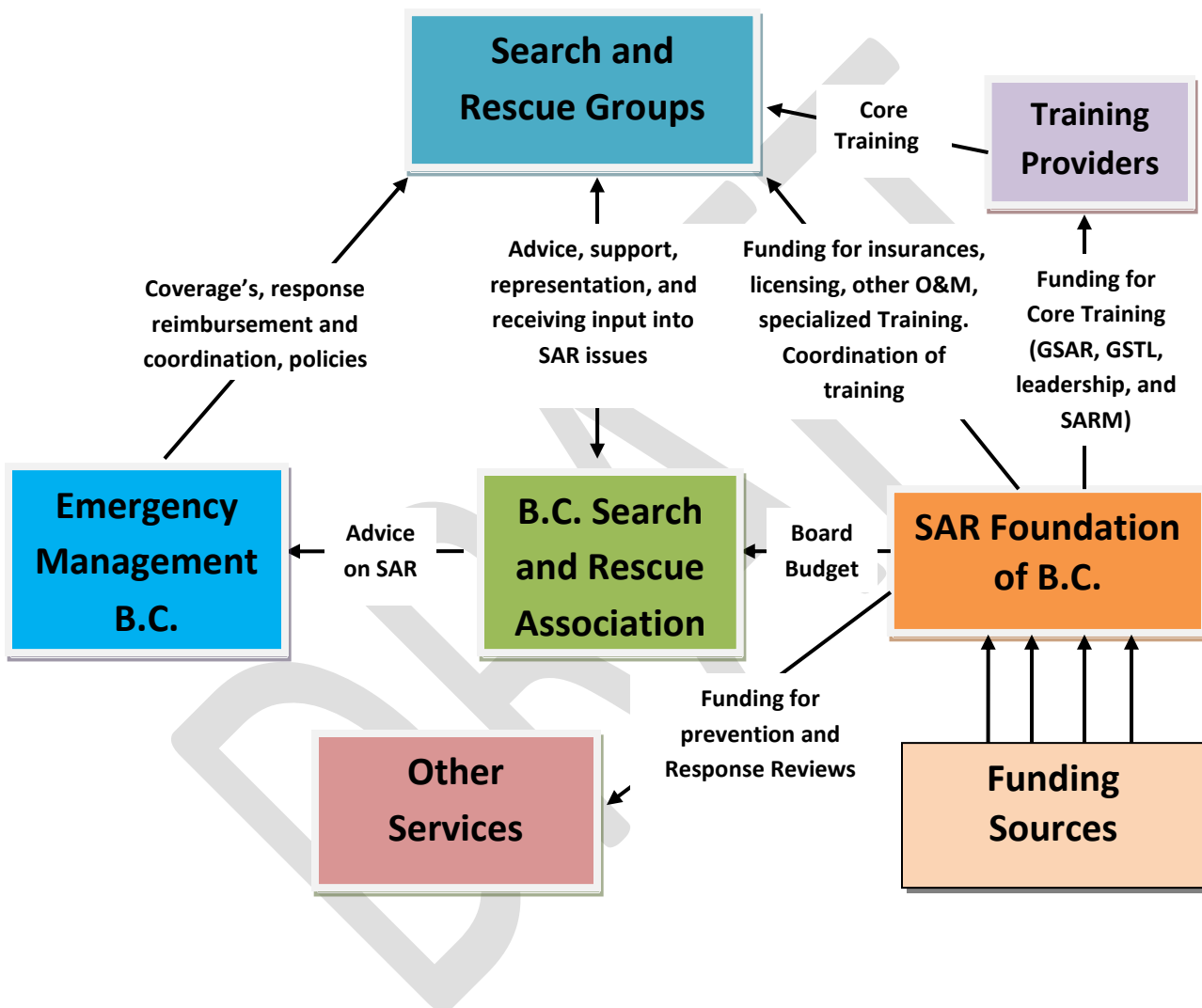
Charging for air transport of injured persons, this option has not been raised formally in the past. Basically it is to level the playing field in that if BCAS can land a rotary wing aircraft and 'cold load' the subject they are charged an air ambulance fee. Currently if SAR Volunteers utilizing a rotary wing aircraft funded by PEP/EMBC transport a subject to a waiting ambulance, or direct to hospital if critical, then the subject is not billed. While this could recover some funds for the Province it would not have the desired effect unless directed to SAR. An estimate would be \$350,000 a year, if based on the BCAS rates, however this does not allow for the cost to recover and non-payments which would probably be significant.

Outdoor Recreation Search and Rescue Cards: similar to those sold in Colorado and some other U. S. States, provide a quick and low cost means for the public to show their support for SAR, could be made available at retailers and on-line.

Requiring rescue insurance: rescue insurance is available through private providers and organizations such as the American Alpine Club for members. While it may be possible to require purchase of insurance for some activities and/or specific areas it faces similar challenges to cost recovery related to the scale and scope of SAR incidents.

4.5 Management model with funding levels

The following diagram is a visually representation of the Support Model which includes additional details on the concept, as mentioned above the intent is to present several version for considerations hence the indicated roles/responsibilities may change.



Search and Rescue Foundation of British Columbia

The following is a draft of responsibilities and funding levels within 3 different versions of the Alternative Support Model. All versions include the establishment of a foundation under legislation, for purposes of this paper referred to as Search and Rescue Foundation of British Columbia (SARFOBC).

Version # 1.

- Intake of annual funding
- Managing and disbursement of funding for:
 - Insurances (vehicle/equipment), licensing (vehicle/radios), and specialized training based on operational needs analysis based formula to SAR Groups,
 - Core training, including Ground Search and Rescue (GSAR), Ground Search Team Leader (GSTL), Search and Rescue Manager (SARM) levels 1 and 2, and Leadership through the Justice Institute of British Columbia,
 - Meeting and administration costs for the British Columbia Search and Rescue Association (BCSARA) to fulfill their advisory role to the provincial government,
 - Training and coordination of Critical Incident Stress Management (CISM) peer support group,
 - Reimbursement of travel costs for SAR volunteers attending training *(need to discuss whether covered within annual disbursement to SAR Groups, within core training, or separately).
- Coordination (internal or by funding) of:
 - Training by establishing and maintaining a calendar of all core and specialized training, ensuring access to courses regardless of student location, review of training courses against established competencies (standards),
 - Prevention activities within the AdventureSmart program, such as organizing volunteer presenters and supplying resources for programs such as Hug-A-Tree and Survive.
- Support (internal or through funding) of:
 - Implementation of the SAR Safety Program in cooperation with the SAR Volunteer Joint Health and Safety Committee by conducting reviews with SAR Groups as part of a assurance program,
 - SAR Response Reviews, by providing note keeping and report drafting for the volunteer facilitators to ensure timely and accurate recording.
- Collection of data (through funded on-line reporting system)for:
 - Evidence based decision making on funding allocations and prevention activities,
 - Supplying data to EMBC for decisions related to support decisions on SAR Group capabilities,
 - Providing data to Lost Person Behaviour researchers to further develop search techniques.

Version # 2

All the responsibilities listed in Version # 1, plus:

- Managing and disbursement of funding for;

- Maintenance and replacement (outside of response) of Personal Protective Equipment (PPE) required for SAR volunteers to participate in approved activities according to their SAR Groups capabilities,
- Capital purchases by SAR Groups such as vehicles and major equipment, through a formula based on approved response capability requiring long term planning, or grant by application.

Version #3

All the responsibilities listed in Versions #1 and #2, plus:

- Managing and disbursement of funding (including from a contingency fund) for;
 - Repair and/or replacement of equipment damaged or lost during response,
 - Reimbursement of SAR volunteer expenses during response.

Note: in addition to the funding and support within these versions is funding and in-kind from local authorities, this is a critical linkage given the role SAR Volunteers can and do take within civil emergency response. SAR Groups currently receive a variety of levels and type of support from municipalities and Regional Districts, to further improve sustainability it is recommended that all local authorities offer long term support by way of non grant based funding and/or in-kind contributions.

Funding levels required for the three versions

	Version 1	Version 2	Version 3
Training ⁸	\$ 2,000,000.00	\$ 2,000,000.00	\$ 2,000,000.00
Licensing and Insurance	\$ 400,000.00	\$ 400,000.00	\$ 400,000.00
Liability Insurance	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00
Personal Protective Equipment	\$ 800,000.00	\$ 800,000.00	\$ 800,000.00
Radio Licensing	\$ 75,000.00	\$ 75,000.00	\$ 75,000.00
Administrative and Coordination	\$ 350,000.00	\$ 425,000.00	\$ 550,000.00
Funding for BCSARA Meetings	\$ 75,000.00	\$ 75,000.00	\$ 75,000.00
SAR Prevention	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00
SAR Response Reviews ⁹	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00
Critical Incident Stress Management ¹⁰	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00
Data Collection	\$ 75,000.00	\$ 75,000.00	\$ 75,000.00
Capital replacement ¹¹		\$ 1,300,000.00	\$ 1,300,000.00
Building Costs		\$ 800,000.00	\$ 800,000.00
Response Reimbursement			\$ 2,500,000.00
Totals	\$ 4,360,000.00	\$ 6,535,000.00	\$ 9,160,000.00
Funding from Local Authorities ¹²	\$ 2,000,000.00	\$ 2,000,000.00	\$ 2,000,000.00
Totals	\$ 6,360,000.00	\$ 8,535,000.00	\$ 11,160,000.00

Not included in the above funding Levels:

- Other response costs which would remain the responsibility of EMBC, including chartered aircraft; both rotary (helicopters) and fixed wing used to transport SAR volunteers, aerial search and/or to effect helicopter rescue (Class D Fixed Line), and other contracted resources.
- Building (vehicle and equipment storage, training and meeting space) acquisition

⁸ Amount adjusted to include new requirements for first aid training for all SAR volunteers, and higher levels of first aid for large responses and technical rescues

⁹ Does not include travel costs, which would continue to be covered under Response Reimbursement for the incident

¹⁰ For training and awareness, travel for CISM sessions would continue to be covered under Response Reimbursement for the incident

¹¹ If capital replacement is not included access to direct grants through Gaming will still be required

¹² Estimated based on current funding levels

4.6 Funding Disbursement

A critical aspect of the funding component of the Support Model is how the funds are allocated to SAR Groups. Providing an annual disbursement to cover such costs as licensing and insurance is a major improvement for SAR Groups, typically grant programs do not cover operating and maintenance costs requiring the groups to find other funding to 'front' such costs.

SAR Groups vary in size of membership, equipment, and technical rescue training; while this makes sense if the capacity meets the requirements for the number and type of incidents within their area of response it may also be affected by the ability to raise funds locally/regionally based on population and industry base. Some of the very remote SAR Groups, which are very critical given the response time and cost for other groups to respond, also lack the capacity to develop grant application and meet reporting requirements for grants. Extensive work has led to a funding allotment model which would address these issues in a fair and equitable manner.

The disbursement model is based on the costs associated with maintaining a SAR Group's capability for delivering core Search and Rescue functions which is the requirement to be recognized as a SAR Group. Costs such as First Aid training in addition to licensing and insurance are included. Within this component of the disbursement model several levels will reflect whether call volume and SAR Group operations include vehicles such as a mobile command post. The model also includes a level of funding for Initial Response Teams (IRT) which, when recognized by EMBC, can initiate search efforts through techniques such as confinement and attraction while a SAR Group is responding to manage the search.

In addition, should a SAR Group be approved (currently required by EMBC based on historic incident data and other availability) to develop additional capabilities they will receive funding to cover costs associated to maintain the skill level and equipment required. Additional capabilities include:

- Marine (boat based, inland waters)
- Tracking
- Canine Search
- Mounted Search
- Rope Rescue
- Avalanche Search and Rescue
- Swiftwater Rescue
- Flat Ice Rescue
- Mountain Rescue
- Helicopter Rescue (hover exit, hot loading)
- Class D Fixed Line (helicopter rescue using long line)

The disbursement model assigns a cost based on research to each capability, which in turn produces a percentage of the funding assigned for direct disbursement to SAR Groups. As noted funding for core training would continue to the training provider to support the 'centre of excellence'. This approach to funding also addresses the long standing need for a comprehensive database on SAR Group capability

for response purposes, as well provides an opportunity to address the recommendation in the *Report on SAR Training* to track all training as each SAR Group would need to provide training plans and reports.

The formula for training is based on an annual attrition rate for membership, as well as recognizes recertification required for training, for example Swiftwater Rescue requires recertification every 3 years. Appendix 'C' provides a breakdown of training and equipment costs by capacity and whether part of proposed disbursement to SAR Groups or to the provider of core training.

5.0 Recommendations

The Board of the BCSARA, within its' role of advising government on all matters pertaining to ground and inland SAR, recommends:

1. That the Province of B.C. proceeds to establish a foundation within legislation for the stated purpose of supporting Search and Rescue. BCSARA is prepared to work with EMBC staff and other Provincial agencies to further define the model to benefit all parties, once agreement in principle is reached.
2. That the Province of B.C. provide assured adequate annual funding for the foundation, while BCSARA suggests consideration of funding from gaming proceeds outside direct grants it is recognized the source of funding is the Provinces purview.

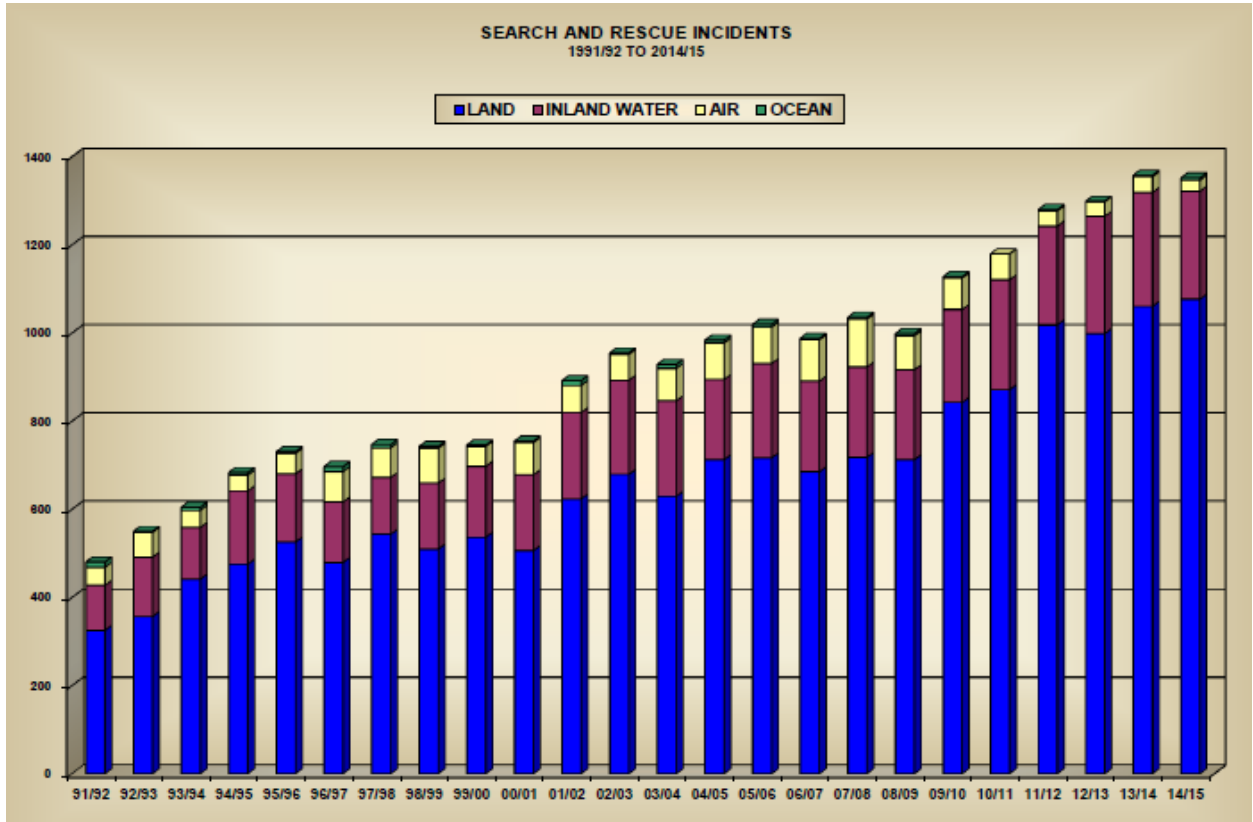
The Directors and Officers of BCSARA, representing the 80 Search and Rescue Groups and their 2,500 members, believe that the support model defined in this paper will greatly reduce the demands on volunteers associated with fundraising and administration. The result will be a search and rescue service which will continue to serve the citizens and visitors within British Columbia, and evolve to meet increasing demands.

Approved by,

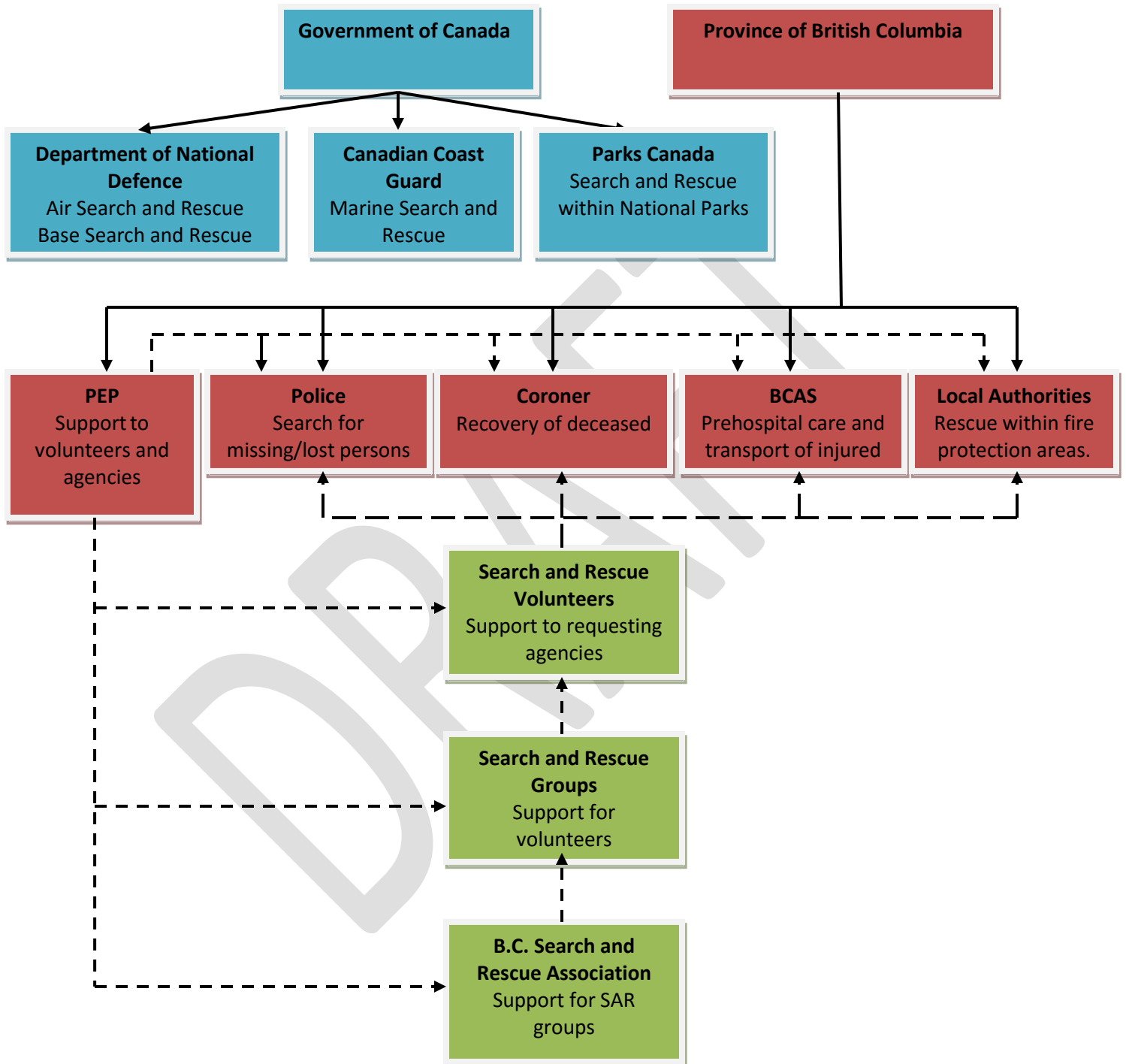
Chris Kelly
President
British Columbia Search and Rescue Association

Appendix 'A'

Search and Rescue Incidents 1991 to 2014



Appendix 'B'
OVERVIEW OF RESPONSIBILITIES FOR SEARCH AND RESCUE IN CANADA and BRITISH COLUMBIA



Notes: Solid lines indicate responsibility, dashed lines indicate support provided.
 Only main relationships are shown for purpose of clarity

Appendix 'C'

TRAINING					
	SAR Group or Training Provider	COST	CERTIFICATION PERIOD (YEARS)	ATTRITION (%)	COSTS PER ANNUM
0					
Ground SAR	Split	\$ 300.00	0	20%	\$ 60.00
Ground Search Team Leader	Training provider	\$ 515.00	0	10%	\$ 51.50
Search Management	Training provider	\$ 1,275.00	0	10%	\$ 127.50
OFA1	SAR Group	\$ 100.00	3	10%	\$ 43.33
OFA1 TRANSPORT	SAR Group	\$ 100.00	3	10%	\$ 43.33
PCOC	SAR Group	\$ 75.00	0	10%	\$ 7.50
MED-A3	SAR Group	\$ 250.00	0	10%	\$ 25.00
SVOP	SAR Group	\$ 650.00	0	10%	\$ 650.00
TRACK AWARE	SAR Group	\$ 740.00	0	10%	\$ 74.00
TRACKER 1	SAR Group	\$ 1,200.00	0	10%	120.00
TRACKER 2	SAR Group	\$ 2,000.00	0	10%	\$ 200.00
SAR DOG CERTIFICATION	SAR Group	\$ 1,000.00	0	10%	\$ 100.00
Rope Rescue Team Member	SAR Group	\$ 540.00	0	10%	\$ 54.00
Rope Rescue Team Leader	SAR Group	\$ 540.00	0	10%	\$ 54.00
Organized Avalanche Rescue	SAR Group	\$ 600.00	0	10%	\$ 60.00
Organized Avalanche Rescue Team Leader	SAR Group	\$ 1,000.00	0	10%	\$ 100.00
HOVER EXIT	SAR Group	\$ 500.00	0	10%	\$ 25.00
Class 'D' Fixed Line	SAR Group	\$ 1,000.00	1	10%	\$ 100.00
SWIFTWATER AWARENESS	SAR Group	\$ -	0	10%	\$ -
SWIFTWATER OPERATIONS	SAR Group	\$ 500.00	3	10%	\$ 216.67
SWIFTWATER TECHNICIAN	SAR Group	\$ 600.00	3	10%	\$ 260.00
SWIFTWATER ADVANCED	SAR Group	\$ 700.00	3	10%	\$ 303.33
SWIFTWATER TEAM LEADER	SAR Group	\$ 800.00	3	10%	\$ 346.67
ICE RESCUE	SAR Group	\$ 550.00	0	10%	\$ 55.00
MOUNTAIN RESCUE 1	SAR Group	\$ 1,100.00	0	10%	\$ 110.00
MOUNTAIN RESCUE 2	SAR Group	\$ 1,600.00	0	10%	\$ 1600.00
MOUNTAIN RESCUE 3	SAR Group	\$ 1,600.00	0	10%	\$ 1600.00

EQUIPMENT

0	COST	LIFE CYCLE	ATTRITION	INSURANCE	MAINT.	COSTS PER ANNUM
GSAR PPE (Clothing, Helmet, Glasses, Lights etc.)	\$ 1,000.00	5	10%	0	0	\$ 300.00
GSAR Kit (Radio, GPS etc.)	\$ 1,500.00	10	5%	0	0	\$ 225.00
Rescue Truck	\$ 125,000.00	15	0	\$ 2,500.00	\$ 500.00	\$ 11,333.33
Command Vehicle	\$ 225,000.00	20	0	\$ 3,500.00	\$ 750.00	\$ 15,500.00
Crew Transport/Auxiliary Vehicle	\$ 75,000.00	15	0	\$ 2,000.00	\$ 400.00	\$ 7,400.00
ATV	\$ 12,000.00	10	0	\$ 500.00	\$ 200.00	\$ 1,900.00
UTV	\$ 16,000.00	10	0	\$ 600.00	\$ 300.00	\$ 2,500.00
Lake Boat (Large - >8M)	\$ 250,000.00	20	0	\$ 3,000.00	\$ 1,200.00	\$ 16,700.00
Lake Boat (Medium <8M)	\$ 150,000.00	20	0	\$ 2,500.00	\$ 750.00	\$ 10,750.00
River Boat	\$ 90,000.00	20	0	\$ 1,750.00	\$ 750.00	\$ 7,000.00
PWC	\$ 18,000.00	10	0	\$ 750.00	\$ 400.00	\$ 2,950.00
Raft	\$ 12,000.00	10	0	0	0	\$ 1,200.00
Small boat (Inflatable - 12')	\$ 16,000.00	10	0	250	75	\$ 1,925.00
RRTM PPE	\$ 500.00	5	10%	0	0	\$ 150.00
Rope Rescue Rigging	\$ 10,000.00	5	0	0	0	\$ 2,000.00
Swiftwater Kit/PPE	\$ 2,500.00	5	10%	0	0	\$ 750.00
Swiftwater Rigging	\$ 5,000.00	5	0	0	0	\$ 1,000.00
Avalanche PPE	\$ 1,500.00	5	10%	0	0	\$ 450.00
Snowmobile	\$ 14,000.00	10	0	500	300	\$ 2,200.00
CDFL PPE	\$ 500.00	5	10%	0	0	\$ 150.00
CDFL Rigging	\$ 40,000.00	10	0	0	0	\$ 4,000.00

Appendix 'D'

	SPREADSHEET TOTALS
1	Training Attrition ONLY
2	Training Attrition + Fixed Costs
3	Training Attrition + Fixed Costs + Capital Amortization
4	Capital Value (Equipment, Boats, Vehicles etc.)
5	Total Value of SAR Service (Training + Capital)
3	CHOOSE OPTION 1-5 FROM LIST ON LEFT

CAPABILITIES AS APPROVED BY EMBC

Group	Initial Response + First Aid		GSAR + First Aid		Water		Tracking		Canine		Mounted		Rope		Avalanche		Hover Exit		Class D Fixed Line		Swiftwater		Flat Ice		Mountain		Distribution of Costs	
	L	VALUE	L	VALUE	L	VALUE	L	VALUE	L	VALUE	L	VALUE	L	VALUE	L	VALUE	L	VALUE	L	VALUE	L	VALUE	L	VALUE	L	VALUE	\$	%
1	0		3	\$69,149.83	1	\$1,970.00	1	\$444.00	1		0		2	\$4,448.00	0	-	2	\$300.00	0		1	\$2,600.00	0	\$	0	\$	\$78,911.83	1.67%
2	0	-	1	\$32,928.83	0		1	\$444.00	0		0		1	\$3,428.00	0		1	\$150.00	0		1	\$2,600.00	0	\$	0	\$	\$39,550.83	0.84%
3	0		2	\$45,324.33	0		1	\$444.00	0	-	0		1	\$3,428.00	0		1	\$150.00	0		1	\$2,600.00	0	\$	0	\$	\$51,946.33	1.10%
4	0		1	\$32,928.83	0	-	1	\$444.00	0	-	0		0	-	0		1	\$150.00	0	-	0	-	0	\$	0	\$	\$33,522.83	0.71%
5	1	\$4,693.17	0		0		0	-	0	-	0		0	-	0		1	\$150.00	0	-	0	-	0	\$	0	\$	\$4,843.17	0.10%
6	1	\$4,693.17	0		0		0		0	-	0		0		0		1	\$150.00	0		0	-	0	\$	0	\$	\$4,843.17	0.10%
7	0	-	2	\$45,324.33	0	-	1	\$444.00	0	-	0		2	\$4,448.00	0	-	1	\$150.00	0	-	0	-	0	\$	0	\$	\$50,366.33	1.07%
8	0	-	2	\$45,324.33	0		1	\$444.00	0		0		2	\$4,448.00	1	\$460.00	1	\$150.00	0	-	2	\$17,840.00	0	\$	0	\$	\$68,666.33	1.46%
9	0	-	2	\$45,324.33	0		1	\$444.00	0		0		1	\$3,428.00	0	-	1	\$150.00	0	-	0	-	0	\$	0	\$	\$49,346.33	1.05%
10	0		4	\$85,728.00	2	\$8,970.00	2	\$832.00	0		0		3	\$6,856.00	2	\$800.00	3	\$600.00	2	\$10,000.00	3	\$33,213.33	0	\$	2	\$1,360.00	\$148,359.33	3.15%

Notes: 'L' is level, which allows for scale within each capability, as in Swiftwater Rescue technical level.

This spreadsheet is provided as an example of how the allocation of funds to SAR Groups can be managed; the amounts shown are only for demonstration purposes

The 5 choices at the total of the spreadsheet amends the amounts depending on what is to be included in the disbursement to SAR Groups

The percentage in the last column would be used to determine actual amounts based on the amount of funding available