

Connecting the Search and Rescue Sector

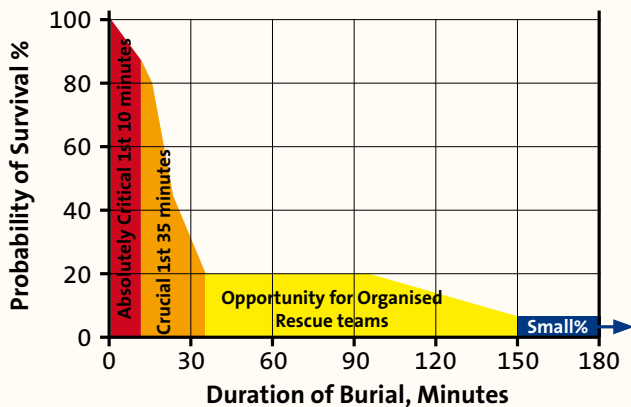
news

Planning an Avalanche Rescue

It is described as being like a wave of snow coming at you VERY fast – people are buried immediately.



Underlying Generic Principles of Avalanche Rescue



As this graph shows, time is the critical factor in avalanche rescue.

NZSAR, in consultation with experts from New Zealand and international avalanche and search and rescue agencies, has developed guidelines to help agencies to pre-plan for an avalanche search and rescue operation.

The guidelines are flexible to allow regions to design pre-plans that suit their circumstances, but they aim to enhance the quality and consistency of avalanche rescue readiness, response and recovery in New Zealand.

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The Guidelines spell out a series of principles that pre-plans can work to:

- **Safety**
- Avalanche rescue is exceptionally **time critical – minutes matter**
- **Avalanche Site Command** is essential and pre-identified, personnel should be transported to site as soon as practicable
- All efforts must focus on the **first response** team(s) getting to the site. This includes **trained** avalanche rescuers and certified **avalanche dog** team(s)
- All avalanche burials should be considered **medical emergencies** and appropriate resources applied as such
- Effective **communications** are vital to a successful avalanche rescue.

For a full copy of the Guidelines go to www.nzsar.org.nz

Senior Constable Brent Swanson from Lake Tekapo Police was involved in developing the guide to pre-planning avalanche rescue. He believes that an effective pre-plan allows those responding to know what, where and how to rescue. "All elements of the rescue are included, for example, the medical response, helicopters, experienced rescuers and communication lines. It is really a response plan; all rescuers involved do not need to wait for a tasking, but can react and be deployed automatically."

Brent was very keen to get people up to speed with an avalanche pre-plan in his area, so he held Operation Pukaki in August at Tasman Valley, Aoraki/Mt Cook, with the Mackenzie Winter Response Group.

A scenario was laid out where six skiers were 'avalanched'. Five of them were buried, one was partially buried. It was staged on avalanche debris to make it as realistic as possible.

Brent says teams followed the pre-plan and went to three staging areas where helicopters were waiting to transport them.

"They were on site and had the first person recovered within 45 minutes of the first call. The feedback from the rescuers was very positive. They made particular mention of how realistic the operation was, which I think is an important factor in training."

Two mentors, Don Bogie and Andrew Welsh, attended Operation Pukaki. They are presently writing a report which will be available on NZSAR's website www.nzsar.org.nz.

Brent hopes other SAR groups will make use of the feedback. **"I'd like to think others will use our experience to build on their pre-plans. There are bound to be issues identified that are relevant to their region and their pre-plans. Collaborating like this can only make us all better at what we do – saving lives buried in snow."**

Air Operators Workshop

Air Operators, who often work in isolation, took the opportunity to receive an update on national developments, share best practice and swap a few stories and ideas with their colleagues in May.

The NZ Air Search and Rescue Operators and associated agencies gathered in Wellington for a two-day Air Operators Workshop, organised by NZSAR.

Sixty people were there, including both fixed and rotary wing operators, RNZAF, CAA, NZ Police, RCCNZ, AIA, Ambulance NZ, LandSAR, Coastguard and NZSAR.

The workshop concentrated on developments in technology and safety within the air SAR environment. Some of which are outlined below.



Technical Developments:

- RCCNZ developing the ability to export their search area determinations and search patterns directly to GPX files, which operators can download to their GPS units.
- The use of air tracking systems and how these are utilised by RCCNZ within a search.
- An update on the developments with the COSPAS SARSAT beacon distress alerting system as the world moves towards the new MEOSAR system.
- A guide through the use and advantages of the SAR asset database, which can be found on the NZSAR website: www.nzsar.org.nz.
- Exploring the possibilities of using high definition video to review searches once the aircraft have landed.

Operational Safety:

- CAA's Peter Kirker discussed the safety of first responders to an air accident scene. In particular, the hazards of rocket propelled aircraft parachute systems and the biohazard of burnt carbon fibre.
- David Waters from Ambulance NZ gave an update on the Air Ambulance Standards.
- RCCNZ examined safe operations in general, including crewing requirements, chain of command and separation issues.

news continued

Throughout the two days there were also presentations from the RNZAF on the capabilities of their new helicopters, discussions on the factors and considerations of a response to a large scale SAR event, and an update about the new SLAs, which RCCNZ is currently working through with a number of operators.

Many people who attended the workshop commented on the great benefit of being able to gather in one place and share their experiences – another step towards NZSAR's goal of a "One SAR Body".

Marine SAR Workshop II

When people get into difficulty in the marine environment, survival time can be measured in hours – or even in minutes, especially if life jackets are not worn. This places pressure on our SAR sector to respond to marine incidents in a timely and effective manner in order to save lives. It is clear from our statistics, and from the people in our sector, that we provide a good response to marine incidents.



Just over 90 people attended the second NZSAR workshop on marine SAR that was held in Auckland in early August, which was a follow-up to one held in May 2010. The focus of this workshop was to look for ways that we can make further improvements to the good job our marine SAR sector is currently doing. There were a total of 1,077 marine SAR incidents in New Zealand during the 10/11 year, which shows how important and busy this section of our SAR sector is.



Marine SAR

An analysis of category 1 marine SAR incidents over the last year shows that 90% of incidents are resolved within 4 hours of the victim first getting into difficulty (see the stats attack). This was a useful statistic for the participants to keep in mind during the workshop, as it demonstrates the fast nature of marine SAR activity.

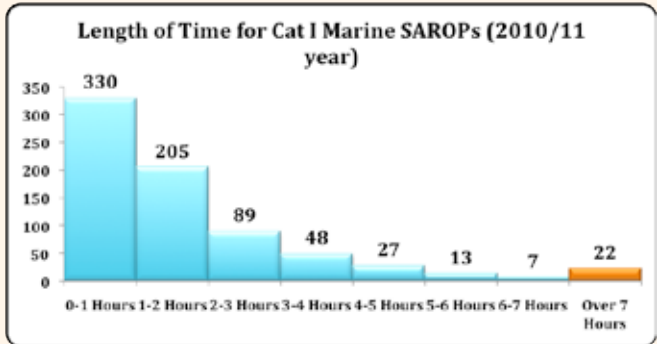
There were a variety of information-based presentations and the focus of the workshop was discussed in a series of open forum and breakout sessions. The first sessions were used to define a list of particular issues that the participants wanted to examine. These were collated into four main topics:

1. The escalation of marine SAR incidents
2. Operational sharing of knowledge
3. Non-operational sharing of knowledge
4. A 'list' of remaining issues.

Four groups looked at each of these topics and provided feedback to the full workshop on their discussions. This included a series of action points that each group felt would help make improvements in the topics they covered. Examples include: having full time Police SAR Coordinators in each Police District; establishing regional SAR forums to get local SAR partners together; developing guidelines for consistent escalation of SAR incidents; and creating a marine SAR response assessment form. The Secretariat will prepare a programme of follow-up work from the action points.

One thing that was very apparent during the workshop was the collective approach of the participants, who came from a number of different organisations to work together. Working together as 'one SAR body' during workshops, and during operations, enhances the effectiveness of our SAR sector, improves our collective efficiency and will help to save more lives.

stats attack



This graph shows the length of time it took to resolve a marine SAR incident (category 1 only) from when it occurred. 44% of marine incidents were resolved within the first hour, and 90% within four hours during the 2010/11 year.

AdventureSmart – Improved and Enhanced

AdventureSmart has undergone a transformation and it is now even easier for people to find simple yet essential safety information.

The AdventureSmart website is a portal designed to provide residents and visitors to New Zealand with one online location for safety information and planning support, prior to engaging in land, snow, water, boating and air activities here.

Access to this information means that those taking part in the many recreational activities on offer in New Zealand will be better prepared and make better decisions, which will in turn hopefully reduce incidents.

The website was initially launched in December 2010 and since then much planning and work has gone into its improvement and expansion. Large numbers of activities have been added along with significantly more content and links to safety information from various sources, including Government departments, governing and regulatory bodies and land, snow, water, boating and air organisations.

NZSAR Secretariat Manager Duncan Ferner says, “We know that visitors to New Zealand often engage in a variety of activities and we also know that the majority of SAR incidents are avoidable with good planning, knowledge and skills.

“Whilst there is excellent safety information available, it can sometimes be difficult and time consuming to locate it. AdventureSmart has been designed to bring the existing safety information together under one umbrella as a sort of ‘one stop shop’. This makes it easy for people to plan and prepare for their adventures and to take responsibility for their own safety,” he added.

The AdventureSmart website is a collaborative project funded by NZSAR and managed on its behalf by the New Zealand Mountain Safety Council (MSC). Both organisations would like to thank the many representatives sector-wide who contributed their advice and knowledge to the project.

A promotional campaign is now underway to raise the awareness of AdventureSmart. We encourage you to check it out at www.adventuresmart.org.nz and to promote it wherever and whenever you can. ●



New features include:

- Providing the outdoors intentions process for land-based activities within the land and snow sections. It shows visitors that a process exists to tell people where you are going plus when and how to raise the alarm if you haven't returned.
- Splitting water activities to define safety information specific to boating and other water-based activities.
- Embedding the Safety Codes for Outdoor, Water, Boating, Snow and Firearms throughout the website and making them easily downloadable.
- Adding other helpful videos and links, including Avalanche Awareness and Recreational Boating.

SAR insights

Experience and Technology – A Good Mix in the Search for ZK-SML

When the Microlight ZK-SML was reported overdue late on the afternoon of Saturday 9 April this year, there was no signal from the pilot's distress beacon. The crashed aircraft was located in dense beech forest near the summit of Mt Duppa at about 2:00 pm the following day. The pilot who was the sole occupant tragically died in the crash. RCCNZ managed the search, the early phases of which were hindered by the lack of definitive information on the route the pilot intended to fly from Auckland to Ashburton, the weather conditions, and the limited daylight hours available for searching after the aircraft was reported overdue.

Information received by RCCNZ from the pilot's family, close friend and members of the public helped refine the search area. Then, critically, Airways NZ radar provided a trace in the vicinity of D'Urville Island, subsequently leading towards Mt Duppa. While the trace did not identify the aircraft, intelligence gave RCCNZ a high level of confidence that it was ZK-SML. This information helped refine the search area even further.

Helicopters had been searching the wider area for some time on Sunday morning and LandSAR teams had been put on standby. Before they were tasked to begin their ground search RCCNZ directed another helicopter to thoroughly search around the last radar position again. ZK-SML was quickly found because



of discolouration of foliage in the beech trees; a tell-tale sign that would easily have been missed in poorer light conditions, which had existed earlier in the day.

RCCNZ comprehensively reviewed this incident to determine what went well, problems encountered, what could have been done better, learning points and recommendations for changes. The following Insights are based on that review.

Insights

- Most searches are intelligence-driven. It is important that adequate staff are available to deal with this aspect of search management and that they also have the right tools.
- Good relationships lead to effective searches. The radar data from Airways was a key element of the intelligence gathered for this search. Well established relationships between RCCNZ and Airways ensured the data was quickly provided and well utilised.
- Use previous knowledge and experience. A lesson from the November 2005 search for helicopter ZK-HTF is that the area around the last radar plot is a very high probability area. It was this lesson that drove the incident management team's decision to search Mt Duppa again.
- Be aware of the hazards of new technology. This aircraft was constructed of composite materials and had a parachute attached to the aircraft and operated by an explosive device. These present a hazard to anyone attending an aircraft accident site and SAR responders in future will be warned by RCCNZ if these hazards might be encountered.
- Right people, right tools. An effective search is reliant on everyone involved, including the incident management team and the responders, having the skills to do their bit along with adequate means of communicating with each other. This search in general showed that everyone was well prepared and resourced, and that the procedures were adequate for this type of search. ●

NZSAR Awards

Do you know of an organisation, group or individual who should be acknowledged by their search and rescue peers?

The NZSAR Awards celebrate the success and effort of people who work or volunteer their time and skills in the field of search and rescue in New Zealand's Search and Rescue Region.

There are two awards:

1. The NZSAR Gold Award
2. The NZSAR Certificates of Achievement

Go to www.nzsar.org.nz. You will find more information about the awards along with details on the simple nominations process. Nominations for the 2011 awards close on 31 January 2012.

SAR in action

When Diving is the Last Hope



With SAR operations the Police National Dive Squad's focus on recovery, rather than rescue, can be a grim one for its squad members, but it is also very challenging and rewarding, according to Senior Sergeant Bruce Adams, Officer in Charge of the Police National Dive Squad.

This is a small part of the team's role within Police which sees them completing evidential recoveries and other duties such as homicide scene examinations and safety support to other police groups.

"Yes, it's a difficult job. We are expected to jump into an environment that is hazardous – quite often you're one breath away from drowning – and for maybe 90% of the jobs we can't see what we're doing because of poor water visibility, so it's a challenge," says Bruce. "But it's part of why we joined the Police in the first place – to make a difference."

The Police National Dive Squad is based in Wellington and responds to requests for assistance from all over New Zealand. Bruce says the Squad interacts with other SAR people on SAROPs.

"We rely heavily on the SAR organisations that are providing specialist transport for us, which could be jet boats, helicopters or four wheel drives, as well as all the local knowledge that goes with it. No two jobs are the same; we need local police and SAR people to evaluate a lot of information and gather all that together for us. Without it we're hamstrung."

The rigorous process to become a Squad member starts with an experienced police officer submitting an expression of interest. Next, they go through a selection process, which might take 6 months or a year, and includes diving, physical and psychological assessments. Once they've met all the requirements, they are sent to Devonport where they complete a month-long Defence Diver course alongside Navy and Army personnel – which has a 50% pass rate.

If they get through that, they have earned a minimum six month probationary period in the Squad. There are four fulltime squad members, all the others do this on top of their 'day job'.

"The guys are extremely dedicated to take on an extra duty as we're very independent. They can be deployed anywhere in the country so they also need to know how to work around helicopters and deal with difficult access, as well as a whole lot of extra skills that help support the role, which could be anything from abseiling to administering IV fluids or oxygen therapy," Bruce explains.

Sonar technology complements grid, arc or circular search methods on the seabed, although Bruce says the grid method is their "bread and butter".

"We lay a datum line along the seabed, marked off in 25m increments with buoys at each end. Depending on what we're looking for and the conditions, our divers work side by side. But if we are searching for something small or we've got no visibility, we search shoulder to shoulder with our searching hands banging into each other. If we've got some visibility, we'll be up off the seabed making the most of that and we expand from there. If we have no luck, we lay another datum line parallel to that one and we just keep going."

Bruce says it's important that other SAR groups know that they should contact the Squad as early as possible, especially when there are witnesses or survivors.

"That's a big one for us. Getting that witness onsite and getting their recollection as accurately as possible helps us to narrow down that last known point. Get a call to us early, even if it's a conversation to evaluate a job and whether or not it's viable. The sooner we get there, the sooner we can start looking and hopefully get a result." ●



SAR in action

Out of the Office into the Operation



It happens more often than you'd expect. A SAREX turns into a SAROP – but NZSAR's Secretariat Manager Duncan Ferner is not usually involved.

Duncan spends time with the various agencies involved in SAR as often as he can. He recently visited Christchurch to speak to the Coastguard Southern Region AGM and visit a planned marine SAREX. This activity took on a whole new dimension when a kayaker was reported missing for real in Akaroa Harbour.

"It was perhaps fortunate that Coastguard, Police, SLSNZ and LandSAR were already gearing up for a SAREX at that time and in that area but it was great to see the SAR agencies swing into action and put their impressive skills to use."

Duncan says staying in touch with organisations on the ground is a vital part of his job "so getting the opportunity to see the real thing in action drove home to him the intensity, commitment and skills of SAR people. The Incident Control team was particularly impressive and I can only hope my tea, coffee & milo making skills passed muster."

The kayaker who was on a two day planned trip, had made his way to Lyttleton where he made contact with the Police and the SAROP was called off. ●



Search and Rescue Support Programme Coordinator – 18 month fixed term

Would you like to play a key role in leading the planning, coordination and implementation of the New Zealand Search and Rescue Support Programme? We are looking for someone with training design and facilitation experience to join the New Zealand SAR Secretariat.

As the Search and Rescue Support Programme Coordinator you will be expected to lead and moderate the design, development and delivery of SAR management training across the sector. There are also elements of project management, research, event management, monitoring and reporting to the role.

You will use your strong relationship management skills to identify professional development requirements with key stakeholders at the national, regional and local level and engage with education and qualification sector providers regarding the design and delivery of training activities.

Good communication skills, the ability to present complex information to a wide range of audiences and experience in training, planning and project management are essential.

The successful candidate must have the capacity to work weekends as required. The role is for a fixed term of 18 months and is Wellington based.

If this sounds like you, please send a CV and cover letter to applications@transport.govt.nz. Applications close 5.00pm Monday 26 September 2011

A full position description is available on the NZSAR and Ministry of Transport websites www.nzsar.org.nz and www.transport.govt.nz

Duncan's desk



While we typically see fewer search and rescue incidents over the winter months, the ones we do respond to are often difficult for us and therefore positive outcomes are harder to achieve. SAR people know all too well that our environment can be unforgiving for the

unwary, unprepared or unlucky. The three Safety Codes for Boating, Water and the Outdoors are intended to help get positive safety messages to the public by providing simple steps people can take to stay safe. Furthermore, they ask them to take personal responsibility and make smart decisions about their own safety.

The three Safety Codes are supported by the AdventureSmart website – www.adventuresmart.org.nz. The AdventureSmart website builds on the family of Safety Codes, providing additional safety information and advice for a broad range of activities and directing people to more in-depth information about the pursuit of their choice. AdventureSmart is designed to be a 'one stop shop' that provides links to a wide range of safety information from one central point – making it easier for people to be better informed before they undertake their activities, whatever they may be.

I would be grateful if SAR people throughout New Zealand could get in behind the Safety Codes and the AdventureSmart website. If we all promote the same messages in a consistent way, then we have a better chance of reducing the overall need for search and rescue. The Rugby World Cup is bringing a huge number of visitors to our shores. Before they get into non-rugby adventures, it would be great if they could all be informed about the Safety Codes and AdventureSmart (see article page 4).

Over the past few months the Secretariat has had a busy time on a wide range of projects. The four Service Level Agreements have been successfully re-negotiated and are now in place for a three-year period. In June, I attended a second Avalanche Workshop, this time run by the Mountain Safety Council. It was great to see the widespread adoption of the Avalanche SAR pre-plan, and a recent avalanche SAREX in the Mackenzie Basin has served to validate the pre-plan approach to this form of SAR. (See story page 1)

After a lot of preparatory work, a very successful inaugural On Scene Coordinators course was run at the end of June. It was really good to see a wide range of SAR experts get together for a few days to further enhance their skills. The benefits of investing in our people take time to realise, but I am convinced that the 'continuous improvement' approach we use is the best one for our sector.

You'll see we have placed an advertisement for a national search and rescue support programme coordinator in this Link newsletter. This is an exciting opportunity to consolidate and build on the work we've been doing around individual and collective training for the SAR sector. If you are interested or know someone with these skills please look at the position description.

It has also been great to get the snowboard out and get back into carving down the slopes while there is snow about – and before Rugby World Cup matches. While on that subject...

Go the All Blacks! ●

Duncan Ferner
NZSAR Secretariat Manager
d.ferner@transport.govt.nz

calendar

SAREXs and SAR training – for information on what's coming up see: <http://searchandrescuecouncil.org.nz/nzsar-calendar>

EMQUAL Conference, Christchurch, 10 – 13 October 2011

NZSAR Consultative Committee Meeting, 9 November 2011

Australian National Council SAR Meeting, 15 – 17 November 2011

NZSAR Council Meeting, 22 November 2011

Water Safety New Zealand Conference, Wellington, 24 – 25 November 2011

LandSAR AGM, Wellington, 26 November 2011

Coastguard Conference, Nelson, 26 – 27 November 2011

useful website links

www.nzsar.org.nz – New Zealand Search and Rescue Council
 This newsletter is available as a PDF on this website

www.beacons.org.nz – Information about 406 Beacons, including where to purchase, rent and register a distress beacon

www.adventuresmart.org.nz – General safety information and tips for the public planning outdoor activities as well as links to organisations with specific safety information about their chosen pursuit

www.avalanche.net.nz – Avalanche advisory service

www.metservice.co.nz – Comprehensive weather reports

<http://www.emqual.org.nz> – EMQUAL is the Industry Training Organisation and standard setting body for both the fire and search and rescue industry

<http://smartboater.ca/> A Canadian website for boating safety information