

Pincher Creek Search & Rescue Operating Profile - Snowmobile

PCSAR Doc-96-Snowmobile

This document describes what PCSAR is asked to do and can do with snowmobiles.

Definitions:

The following terms are used in this document:

Optimum Minimum - If we're at this level we can do the job. Below this level, we will be struggling to do the job.

Roles:

<i>Situation</i>	<i>Details</i>	
Wilderness Search	<i>Description</i>	Search wilderness, often hazardous and mountainous areas for missing snowmobilers.
	<i>PCSAR experience</i>	Approximately a dozen searches of this type.
	<i>Forecast</i>	2 incidents of 1 or 2 op periods every year
	<i>Optimum Minimum</i>	2 op periods with 1 team of 3 expert-level sledders, at least one of which has Basic SAR Skills. (At least 3 team members are needed to dig out equipment.)
	<i>PCSAR role</i>	PCSAR normally provides
	<i>Need met?</i>	No – short on personnel
Wilderness Rescue	<i>Description</i>	Occasionally the subject's general location is known but additional resources (e.g. medical or 10 avalanche searchers) are needed on the scene that is only reachable by snowmobile. Snowmobilers may provide the needed skills or may shuttle in non-snowmobilers that have the skills. The terrain may be mountainous and hazardous.
	<i>PCSAR experience</i>	1 major incident of this type: 2000-02-12-Bowman
	<i>Forecast</i>	1 incident of 1 op period every 5 years
	<i>Optimum Minimum</i>	1 team of 3 expert-level sledders to transport up to 10 non-sledders. (At least 3 team members needed to dig out equipment.)
	<i>PCSAR role</i>	PCSAR normally provides.
	<i>Need met?</i>	No – short on rescue equipment

<i>Situation</i>	<i>Details</i>	
Rural SAR under Extreme Weather	<i>Description</i>	Under extreme weather conditions (e.g. spring snowstorms) some rural areas are not accessible by conventional vehicles. The weather generates simultaneous SAR incidents in the affected region. SAR functions which would normally be performed by other means of access must be replaced by snowmobile.
	<i>PCSAR experience</i>	4 incident of this type: 2001-05-24-Eagle-Tail-Feathers-Knife, 2008-01-30-scout, 2008-02-29-ma
	<i>Forecast</i>	2 simultaneous incidents of 1 or 2 op periods every 3 years
	<i>Optimum Minimum</i>	2 teams of 2 expert-level sledders or 3 intermediate-level sledders.
	<i>PCSAR role</i>	PCSAR normally provides.
	<i>Need met?</i>	Yes
Event Safety	<i>Description</i>	Major winter wilderness events such as the CNP Snowmobile Jamboree request rescue personnel to be on standby in the event area.
	<i>PCSAR experience</i>	1 event of this type
	<i>Forecast</i>	1 event every 5 years
	<i>Optimum Minimum</i>	1 team of 3 expert-level sledders.
	<i>PCSAR role</i>	Not PCSAR mandate. PCSAR provides when possible but does not prepare for this role.
	<i>Need met?</i>	Yes (not required)

Personnel Required (for above roles):

<i>Skill</i>	<i>Details</i>	
Expert-Level Mountain Sledders	<i>Description</i>	Achieve their skill by aggressively riding off-trail in mountains on a regular basis for at least five years. There is no formal training or certification available. Expert sledders can only be recognized by other expert sledders. Such recognition may require that they be seen operating in the field. Many sledders over-estimate their own skills or under-estimate the terrain. In mountainous heavy snow conditions, 3 sledders need to work together in order to be able to dig out their machines as they become stuck.
	<i>Optimum Minimum</i>	6 responding sledders for worst case role (2 op periods of Wilderness Search). Assuming a 50% availability of a sledder at any given time, a roster of 12 expert-level sledders is needed.
	<i>Need Met?</i>	No – 10 expert-level sledders currently on roster. Recommendation to Board: Approach other SAR groups: CNP, Sparwood, Fernie.
Intermediate-Level Mountain Sledders	<i>Description</i>	Achieve their skill by riding on an occasional basis off-trail, exploring and hill-climbing in the mountains. There is no formal training or certification available. Intermediate sledders can only be recognized by other intermediate and expert sledders. In many scenarios pairing an intermediate sledder with an expert sledder will force the expert sledder to limit travel to the intermediate sledder's skills. Under good conditions (springtime, hard pack), teams of intermediate sledders can be used in any terrain. Under poor conditions, teams of intermediate sledders should be used only in valley bottoms and flatlands.
	<i>Optimum Minimum</i>	When there is the Optimum Minimum of expert sledders, no intermediate sledders are needed in addition. If there are less than the Optimum Minimum of expert sledders, intermediate sledders are needed for the rural SAR profile.
	<i>Need Met?</i>	
Snowmobile Safety Course	<i>Description</i>	A provincially-recognized SAR course. It provides a basic orientation on the use of snowmobiles. Certificate holders should not be assumed to necessarily have more than a rudimentary skill level suitable for flatland trail riding. Tasking Agencies may start to require sledders working on incidents to have this certificate.
	<i>Optimum Minimum</i>	Not required. Recommend new people take course.
	<i>Need Met?</i>	Yes

<i>Skill</i>	<i>Details</i>	
Mountain Snowmobile SAR Skills	<i>Description</i>	A range of skills needed to perform snowmobile SAR in mountains. A locally developed course is planned to teach these skills, designed in partnership with an avalanche instructor Avalanche safety, hazard recognition, terrain recognition (course to include field trip). Rescue focused. Operating at night with known high hazards. How to be a better sledder. Survival skills. Equipment. How to be a better searcher. Why a command structure is needed. Sled tracking. Allows areas to be eliminated. Similar to man-tracking skill. Avoid destroying track before determining where sledders have gone. Most Expert-Level Mountain Sledders will have this skill. Intermediate-Level sledders should be developing this skill.
	<i>Optimum Minimum</i>	80% of the roster of sledders have course within the last 2 years.
	<i>Need Met?</i>	No
Avalanche Tech 1	<i>Description</i>	Needed for safe entry into risky avalanche terrain. Could be non-sledder. Get more description from people that have it.
	<i>Optimum Minimum</i>	
	<i>Need Met?</i>	? - Pick up from ski hill
Basic SAR Skills	<i>Description</i>	Sledders need basic SAR skills. Local expert sledders available from outside PCSAR generally do not have SAR training. They should be grouped with sledders that do. The team leader should have SAR Fundamentals certification.
	<i>Optimum Minimum</i>	50% of the roster of sledders have SAR Fundamentals certification.
	<i>Need Met?</i>	Yes
Subject Matter Expert	<i>Description</i>	A sledder who will advise the overhead team on the use of sledders and problems likely to be found in the terrain. Could be a retired expert-level mountain sledder.
	<i>Optimum Minimum</i>	2 for worst case (2 op periods). Assuming 50% availability, a roster of 4 is needed.
	<i>Need Met?</i>	No

Equipment Required (for above roles):

<i>Equipment</i>	<i>Details</i>	
Mountain Sleds	<i>Description</i>	A mountain-ready sled with helmet, for each sledder.
	<i>Optimum Minimum</i>	6 sleds
	<i>Need Met?</i>	Yes , sledder supplied
2 person Mountain Sleds	<i>Description</i>	Mountain-ready sleds that are approved to carry 2 riders.
	<i>Optimum Minimum</i>	Not required. Nice to have.
	<i>Need Met?</i>	Yes
Passenger Helmets	<i>Description</i>	A helmet for each non -sledder while en-route
	<i>Optimum Minimum</i>	3 helmets of each of 3 sizes, with face shield
	<i>Need Met?</i>	No Recommendation to Board: Seek donations or purchase at approximately \$1000.
Sledder's Avalanche Equipment	<i>Description</i>	An avalanche transceiver, shovel and probe for each sledder
	<i>Optimum Minimum</i>	6 of each
	<i>Need Met?</i>	Yes , sledder supplied
Avalanche Transceiver Supplement	<i>Description</i>	Avalanche transceivers beyond those normally carried by sledder.
	<i>Optimum Minimum</i>	An avalanche transceiver for each shuttled non-sledder (10) or spontaneous guide (1)
	<i>Need Met?</i>	No Recommendation to Board: Build list of members that have extra transceivers. Ask for donations. Arrange to borrow from ski hill or dealership.
Avalanche Probe Supplement	<i>Description</i>	Avalanche probes beyond those normally carried by sledder.
	<i>Optimum Minimum</i>	A probe for each shuttled non-sledder (10)
	<i>Need Met?</i>	Yes , tubing (20) to be transported with rescue sleigh
Avalanche Shovel Supplement	<i>Description</i>	Avalanche shovels beyond those normally carried by sledder.
	<i>Optimum Minimum</i>	3 high quality shovels for avalanche search team.
	<i>Need Met?</i>	Yes

<i>Equipment</i>	<i>Details</i>	
Rescue Sleigh	<i>Description</i>	A sleigh for carrying an injured subject. Designed for mountainous terrain.
	<i>Optimum Minimum</i>	1 rescue sleigh.
	<i>Need Met?</i>	Yes
Sled with hitch for rescue sleigh	<i>Description</i>	Very few sleds have a hitch to pull a sleigh these days. Mountain sleds typically don't have hitches. They aren't designed to go slow pulling weight.
	<i>Optimum Minimum</i>	
	<i>Need Met?</i>	No Encourage roster members to add hitch.
VOX Radio for subject	<i>Description</i>	A subject being transported in the rescue sleigh cannot be accompanied by a first-aider because of weight limits. While travelling for short periods, it would be useful to stay in touch with the subject using a voice-activated radio in a helmet.
	<i>Optimum Minimum</i>	Not required. Nice to have.
	<i>Need Met?</i>	Yes (because not required)
Sat Phones	<i>Description</i>	Satellite phone for communicating from the field to the Command Post.
	<i>Optimum Minimum</i>	A sat phone for each team fielded (2 – Rural SAR).
	<i>Need Met?</i>	Yes
Radios	<i>Description</i>	Radios for talking between members within the same team and possibly between teams. Communication from field to Command Post requires Satellite phone.
	<i>Optimum Minimum</i>	A portable radio (possibly FRS) for each sledder (6 – Rural Search).
	<i>Need Met</i>	Yes – 9 portables, many FRS
GPS	<i>Description</i>	Handheld GPS for aiding in navigation.
	<i>Optimum Minimum</i>	1 for each team in the field. (2 – Rural Search).
	<i>Need Met</i>	Yes

<i>Equipment</i>	<i>Details</i>	
Snowshoes	<i>Description</i>	For searching by foot into terrain where it would be difficult to ride out.
	<i>Optimum Minimum</i>	A pair of snowshoes for each sledder (6 – Rural Search).
	<i>Need Met?</i>	Yes
Flares	<i>Description</i>	For signalling to the lost subject. But how do they signal back?
	<i>Optimum Minimum</i>	Not required. Useful.
	<i>Need Met?</i>	Yes (because not required)
Skimmer	<i>Description</i>	A light sled for hauling equipment.
	<i>Optimum Minimum</i>	Not required. But nice to have.
	<i>Need Met?</i>	Yes (because not required)
Overnight equipment	<i>Description</i>	Equipment needed for an overnight stay with the subject. Shelter.
	<i>Optimum Minimum</i>	Not required. Useful.
	<i>Need Met?</i>	Yes (because not required)