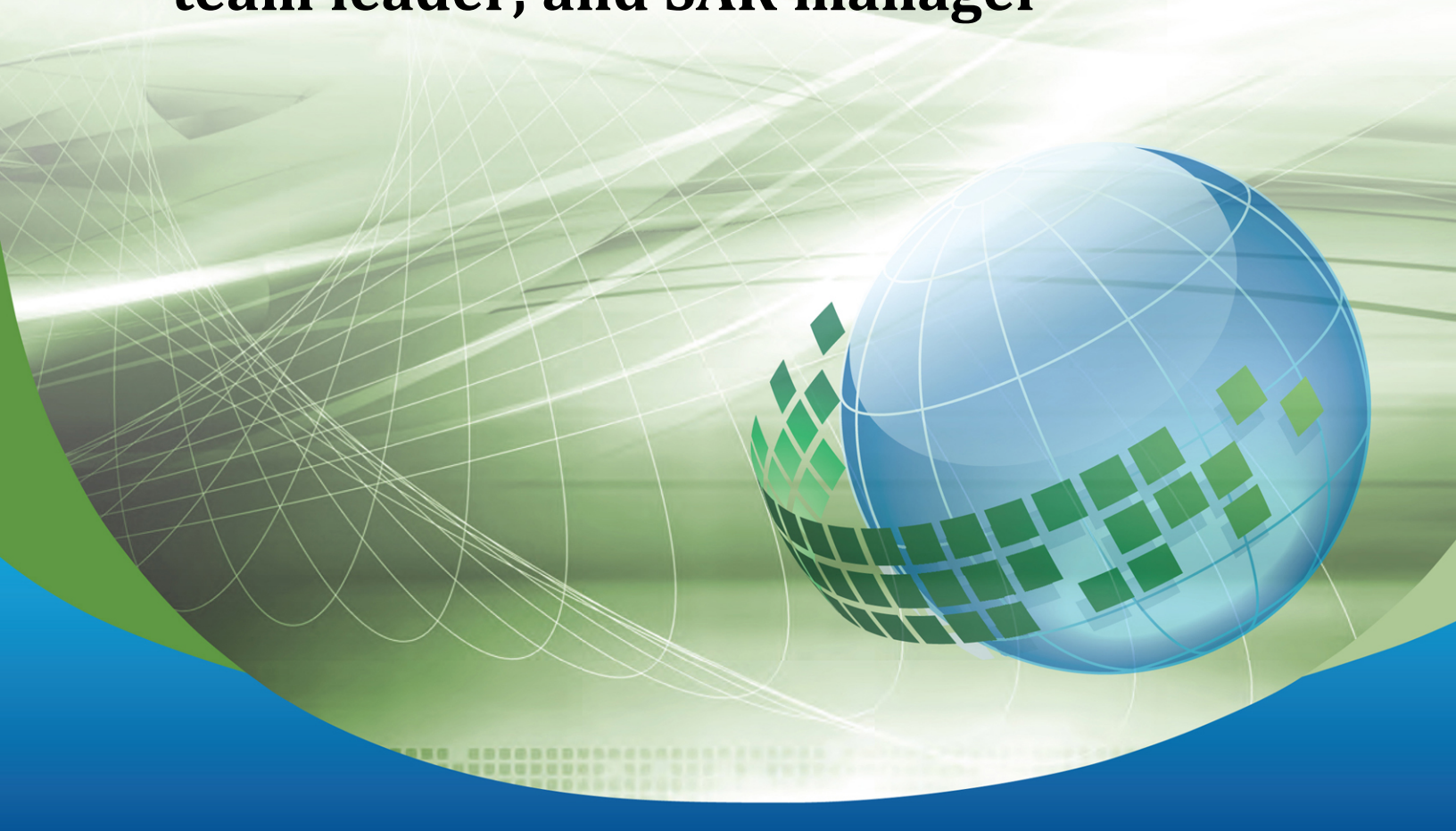


Core competency standards for ground search and rescue operations: Searcher, team leader, and SAR manager



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Core competency standards for ground search and rescue operations: Searcher, team leader, and SAR manager



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Preface

This is the first edition of CSA Z1620, *Core competency standards for ground search and rescue operations: Searcher, team leader, and SAR manager*. The Standard contains requirements and performance specifications for determining and evaluating competency for three core roles in ground search and rescue operations: searcher, team leader, and SAR manager.

Users of this Standard should understand that the requirements contained herein are minimum levels. This Standard does not have the force of law unless mandated by legislation or referenced in regulations of the authority having jurisdiction (AHJ). Users of this Standard are advised to contact the AHJ in their area to determine the extent this Standard is referenced.

This Standard was developed through a highly collaborative effort between federal, provincial/territorial, local, and volunteer search and/or rescue agencies and organizations. The *National Criteria for Ground Search and Rescue* was used to develop the framework of the Standard. Numerous training manuals and reference materials were consulted in the development of the content of the Standard. CSA Group sincerely acknowledges the contributions of those ground search and rescue agencies and organizations that provided their educational materials to help inform the Technical Committee developing the Standard.

The requirements of this Standard result from consensus of the CSA Technical Committee on Ground Search and Rescue that represents a broad spectrum of stakeholder interests. The Technical Committee received input from other stakeholders during the development of the Standard and through public comments received as a result of a wide distribution of the draft Standard during the CSA Public Review and Comment period.

CSA Group gratefully acknowledges the financial and in-kind support from the Search and Rescue Volunteers Association of Canada and other agencies responsible for search and rescue, and the financial support of the Government of Canada through the Search and Rescue New Initiatives Fund (SAR NIF), for the development of this Standard.

This Standard was prepared by the Technical Committee on Ground Search and Rescue, under the jurisdiction of the Strategic Steering Committee on Occupational Health and Safety, and has been approved by the Technical Committee.

Notes:

- 1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- 2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
- 3) *This Standard was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as “substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity”. It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
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- a) *Standard designation (number);*
 - b) *relevant clause, table, and/or figure number;*
 - c) *wording of the proposed change; and*
 - d) *rationale for the change.*

Z1620-15

Core competency standards for ground search and rescue operations: Searcher, team leader, and SAR manager

0 Introduction

0.1 Background information

In Canada, search and rescue (SAR) is a shared responsibility among federal, provincial or territorial, and municipal governments, and air, ground, and maritime volunteer SAR organizations. Because of Canada's vast size and range of environments, Canada relies on a diverse group of government, military, volunteer, academic, and industry partners to provide overall SAR services to the Canadian public.

Provincial and territorial governments are responsible for conducting searches for persons who are lost or overdue on land or inland waters. These persons are referred to as “being lost” or “missing”; the search is commonly known as “ground search and rescue” (GSAR), and it is often delegated to the police service of the jurisdiction. In Canada there are over 300 volunteer GSAR teams that assist the responding police service by providing the human resources necessary for a ground search, as well as specialized expertise, equipment, and local knowledge. GSAR programs, equipment, and personnel vary geographically in accordance with local needs and available resources. GSAR team members require specialized training, practice, dedication, and hard work. While the organizations and agencies involved in GSAR have developed extensive training programs and reference materials, no national competency or training curriculum standard currently exists.

In 2002, *National Criteria for Ground Search and Rescue* was developed to be used as the basis for formal GSAR competency and training in Canadian provinces and territories. In 2012, with the support of the federal government's SAR New Initiatives Fund (NIF), the Search and Rescue Volunteer Association of Canada (SARVAC) initiated a project to develop national GSAR core competencies as the foundation for the interoperability and portability of GSAR skills within Canada. The goals of the project include

- a) the development of a national set of common skills and competencies;
- b) the interoperability of teams among provinces and territories;
- c) the portability of skills across the country;
- d) the economies of scale in the development and delivery of training, and
- e) minimizing duplication of effort.

The scope of the overall project includes the development of competency standards, training curriculum standards, and a model for program delivery. The results of this project will not replace existing provincial training standards and programs, but will create a national benchmark to augment and provide guidance on what currently exists and provide for future initiatives.

In 2012, CSA Group was contracted by SARVAC to undertake Phase 1 of the project, the facilitation of a stakeholder consultation process, which resulted in the development of a *Consensus Statement on National Standards for Ground Search and Rescue in Canada*. This document provided a clear roadmap

for the development of national competency standards for GSAR, including guiding principles for the document development process.

Phase 2 of the project, the development of national competency standards for GSAR, was initiated in late 2012 with the establishment of a CSA Group multi-stakeholder Technical Committee on Ground Search and Rescue. The Committee comprises representatives from GSAR volunteer organizations, training providers, policing agencies, Parks Canada, Canadian Forces, and government agencies responsible for GSAR. The Technical Committee has been aided in its work through regular input from a larger stakeholder group.

This Standard combines the efforts of the Technical Committee members as well as other stakeholders who have contributed to the project and amalgamates both current thinking and previously published competency and training documents into one comprehensive reference document. This voluntary Standard will serve as an important tool for documenting and communicating the knowledge and skills of competent GSAR practitioners to the public, government agencies, training providers, and other stakeholders. This Standard provides a starting point for the development of guidance on GSAR curriculum, training materials, certification, recertification, and accreditation programs. As the champion for this initiative, SARVAC intends to work with stakeholders to establish national educational and certification programs based on this Standard that benefit and support GSAR activities in Canada.

0.2 How to use this Standard

0.2.1 Core roles

For each of the core roles of searcher, team leader, and SAR manager, the core competencies are organized within a set of competency categories (e.g., program, human factors, and environment). Under each competency category are a set of competency elements (e.g., SAR, ICS, role and responsibilities). The competency categories and competency elements are based on the *National Criteria for Ground Search and Rescue* developed in 2002. See also Figures 1, 2, and 3.

There are ten matching competency categories for the core roles of searcher and team leader. There are eight competency categories for the core role of SAR manager. The core competencies describe the knowledge, skills, abilities, and attributes required to perform an assigned task or role at an acceptable level of performance. Core competencies are presented in the following format to specify both knowledge and understanding criteria and observable performance criteria.

XXX Competency element	
Knowledge and understanding of	Specifies the essential knowledge and understanding criteria that searchers, team leaders, or SAR managers need to know in order to effectively perform their functions or assigned tasks.
Observable performance (do)	Specifies core competencies where performance can be demonstrated and observed. Searchers, team leaders, or SAR managers will effectively demonstrate their ability to perform the task or skill.

0.2.2 Core competencies build on each core role

This Standard provides core competencies for each of the three core roles of searcher, team leader, and SAR manager. Searcher competencies are the foundation for the team leader competencies, and the team leader competencies are the foundation for the SAR manager competencies. That is, it is a prerequisite for team leaders to meet the competencies of the searcher first before they can be considered as team leaders, and it is a prerequisite for SAR managers to meet the competency

requirements of both the searcher and the team leader before they can be considered for the position of SAR manager.

0.2.3 Foundation for a training curriculum

It is important to understand that this Standard outlines core competency requirements and is not a training curriculum. However, this Standard will be the foundation for the development of a training curriculum. The training curriculum will include learning objectives and additional information that facilitate meeting the core competencies as outlined in this Standard. This Standard can also be used to measure performance, for workforce planning, and for preparing professional development plans so that competence is maintained and enhanced. Annex A summarizes the competency categories and the competency elements for the core roles of searcher, team leader, and SAR manager.

0.2.4 Evaluation of core competencies

While a number of the core competencies can be evaluated in a relatively short time, such as immediately following a training event or a field exercise, many are intended to be measured over time, and are based on knowledge, experience, and performance. This Standard does not specify how competencies are to be evaluated. Core competencies can be measured in many different ways, and this can vary from jurisdiction to jurisdiction. While written or verbal evaluations or interviews are appropriate to demonstrate many of the knowledge and understanding competencies, demonstrating the ability to perform required tasks or skills (i.e., observable performance competencies) will be accomplished through practical simulated and/or field exercises or through observation during a search mission.

0.2.5 Recognition for regional or jurisdictional differences

Not all competency elements are applicable in every region or jurisdiction, or for every GSAR organization. In some jurisdictions, searchers might not be required to operate specialized equipment or vehicles such as ATVs or snowmobiles, and meeting those associated competency requirements would not be applicable. As well, the use of certain specialized resources might only be applicable or available in certain regions or jurisdictions; each GSAR organization will determine those core competency requirements that are not applicable for their operations.

1 Scope

1.1 Scope

The Standard provides core competency requirements for ground search and rescue (GSAR) operations for the three core roles of searcher, team leader, and SAR manager.

1.2 Purpose

This Standard was developed to provide a foundation for interoperability and portability of GSAR skills within Canada. This Standard will facilitate training curriculum development and professional development planning so that competence is maintained and enhanced. This Standard is an important tool for documenting and communicating the knowledge, skills, and abilities for those involved in ground search and rescue operations and for evaluating performance. It provides a reference tool for multiple stakeholders and presents a starting point for meaningful discussion about the future direction of GSAR in Canada.

2 Reference publication

This Standard refers to the following publication, and where such reference is made, it shall be to the edition listed below.

Government of Canada

Canada Labour Code, R.S.C. 1985 c. L-2

Criminal Code of Canada, R.S.C. 1985 c. C-46

National Search and Rescue Secretariat (NSS)

National Criteria for Ground Search and Rescue, 2002

3 Definitions

The following definitions shall apply in this Standard:

Agency — a division of government with a specific function, or a non-governmental organization (e.g., private contractor, business, etc.) that offers a particular kind of assistance.

Note: *In ICS, agencies are jurisdictional (i.e., having statutory responsibility for incident mitigation) or assisting or cooperating (i.e., providing resources or assistance).*

Assignment — a task assigned to a search team that falls within their scope of training.

Authority having jurisdiction (AHJ) — the agency established by a federal, provincial, or territorial government that has responsibility for search and rescue.

Base — the location at which primary logistics functions for an incident are coordinated and administered. There is only one base per incident (an incident name or other designator will be added to the term “base”). The incident command post can be co-located or shared with the base.

Bearing — the direction of travel from your current position to a landmark or destination expressed in degrees from 1 to 360.

Briefing — the process of providing searchers with the information they need to adequately perform their task.

Call-out — the authority having jurisdiction's call to conduct a search and rescue operation whereby GSAR personnel are requested to respond.

Camp — a geographical site, within the general incident area separate from the incident base, equipped and staffed to provide sleeping, food, water, and sanitary services to incident personnel.

Clue — a tangible or non-tangible piece of evidence.

Clue awareness — the ability to perceive clues left by the subject (e.g., tracks and other signs), rather than just the subject.

Confinement — a strategy used to ensure the subject cannot leave a specific location in the search area without the searchers being aware of the departure.

Containment — a tactic, or geological feature such as a large body of water, which very likely will keep a subject within the limits of a search.

Convergent volunteer — an individual that offers his or her service and/or expertise for no remuneration during a recognized public safety line activity and is signed into the task and is not already registered as a public safety line volunteer.

Core competency — the essential knowledge, skills, abilities, and attributes required to successfully accomplish assigned tasks or roles.

Craft — any air or water-surface vehicle, or submersible of any kind or size.

Critical incident stress (CIS) — a stress reaction experienced by searchers and/or emergency responders during the incident that could have long-term, debilitating psychological and physiological effects upon them.

Critical separation — critical separation is determined by two searchers walking away from a simulated subject in opposite directions, until each searcher can just see the simulated subject. The distance between them is the critical separation.

Cumulative probability of detection — the overall probability of detection that results when a segment has been searched more than once.

Debriefing — the exchange of information, usually at the close of a tasking, that conveys important knowledge and experience. A SAR team will be debriefed when it returns from the field so important information can be gathered to help with the search planning. At the end of a SAR incident all those who participated are usually debriefed on the event and how it unfolded.

Declination — the angle between true north (geodetic north) from magnetic north (the direction a compass points toward the magnetic north pole).

Decision points — positions on trails, climbing routes, and rivers where decisions must be made on a direction to take. Often, spots where people can make mistakes and take wrong directions.

Delegation of authority — a statement provided to the incident commander by the agency executive delegating authority and assigning responsibility. The delegation of authority can include objectives, priorities, expectations, constraints, and other considerations or guidelines as needed. Many agencies require written delegation of authority to be given to incident commanders prior to their assuming command on larger incidents.

Demobilization — occurs at the end of a search successful or otherwise and includes all of the sign-out procedures and the return of equipment and the debriefing, as well as the reorganization of personal gear for the next response.

Despondent — a category of missing person who is characterized at the time as being depressed and having lost courage and hope.

Distress — an aspect of a search and rescue incident where there is a reasonable certainty that one or more individuals are threatened by grave and imminent danger and require immediate assistance.

Distress beacon — a generic term used to describe any emergency locator transmitter (ELT), emergency position-indicating radio beacon (EPIRB), or personal locator beacon (PLB).

Elopement — the act of leaving without permission the place you are expected to be. (See **Walk-away**.)

Emergency locator transmitter (ELT) — aeronautical radio distress beacon for alerting and enabling rescue units to locate the scene of the distress.

Evidence — something legally acceptable before a court, such as an object or a witness, which bears on or establishes an issue. In tracking, evidence is divided into physical and incorporeal.

Evidence search — a search for evidence that could be used in a court of law.

Extrication — the act of releasing people trapped in or under vehicles, industrial machines, or natural or man-made enclosures or crevices as a result of an accident. These people might or might not be injured.

Global positioning system (GPS) — a specific satellite-based system used in conjunction with mobile equipment to determine the precise position of the mobile equipment.

Grid search — an attempt to find the subject (or clues) by lining up three or more searchers and having them proceed in a parallel fashion through their assigned search area (aka “sweep,” “line,” or “creeping line” search).

Ground search and rescue (GSAR) — the conduct of a search and rescue operation to assist persons lost, missing, or in distress on land and inland waters.

Hasty search — an initial response, usually by hasty teams, aimed at searching high-probability areas. Decisions will be focused around lost-person behaviour with concentration on trails, decision points, and other likely spots.

Hasty team — a group of trained individuals, usually, that can be convened quickly for the purpose of responding to an emergency situation.

Incident action plan — a document outlining search objectives for the current operational period.

Incident commander — an individual (i.e., not necessarily the highest-ranking official) charged with functional responsibility for an entire incident.

Incident command post (CP) — a location, usually located with the search base, at which the primary command and control functions are executed.

Incident command system (ICS) — a widely applied management system for handling any type of emergency incident or public event.

Initial planning point — a point that is initially used to plan the search incident (IPP) based on last known position (LKP) or point last seen (PLS).

Initial response — the first response to a search event, usually by a small team of three searchers who are fit, fast and skilled that can quickly search high-probability areas. Also known as “initial response teams” or “hasty teams.”

Last known position (LKP) — the last known location for the missing subject as determined by physical evidence or clue such as a parked car, discarded object such as a wallet, or a footprint that places the missing subject

Note: LKP can be revised during search.

Likely spot — features or areas that might offer attraction to the lost person. Lost-person behaviour is often used along with interview information to determine likely spots a lost person might go.

Lost person — a person who is disoriented, potentially in distress, and wishes to be found or return to a known location. Often referred to as “the subject of the search.”

Lost-person behaviour — the travel and self-help behaviour generally exhibited by persons in various age groups, mental conditions, or demographic type when lost.

Memorandum of understanding (MOU) — an agreement drawn up to clarify roles, responsibilities, functions, and procedures between two or more organizations. Not binding as a contract, but important to establish understanding, expectations, and arrangements prior to the occurrence of an emergency situation.

Missing person, voluntary — someone who has control over his or her actions and has decided to leave his or her home or society. A police investigation is generally initiated.

Missing person, involuntary — someone who has gone missing against his or her will, e.g., abduction or murder victim. A police investigation is initiated.

Operational period — the period of time scheduled for the achievement of operational objectives as specified in the incident action plan. Operational periods can be of various lengths (typically 12 h, although not usually over 24 h).

Personal locator beacon (PLB) — a portable distress alerting beacon that is designed to be carried by individual persons that is manually activated and operates exclusively on 406 and 121.5 Mhz. PLBs signals can be received by the COSPAS SARSAT satellite system.

Personal flotation device (PFD)/lifejacket — a wearable flotation device.

Note: *These terms are used interchangeably in this Standard.*

Point last seen (PLS) — the physical point a lost or missing person was actually last seen at. The information comes from a reliable source that might describe the direction of travel, the time that the lost or missing person was seen, and the state of the person (e.g., distraught, tired, frisky, etc.).

Pre-plan — a document that provides incident managers with information, instructions, resource lists, checklists, standard operating procedures, and technical data that will be used during a search incident.

Probability of area (POA) — the likelihood or probability that the subject is located in a specific area; expressed as a percentage (e.g., 50%) or decimal number (e.g., .50).

Probability of detection (POD) — the likelihood or probability of finding clues (assuming that clues are available to be found), given the nature of the search and the type of resources employed; expressed as a percentage (e.g., 50%) or decimal number (e.g., .50).

Provincial/territorial authority — the agency with the overall responsibility for the organization and management of ground search and rescue policies within the boundaries of the province/territory, and the authority to put in place regulatory measures to govern the conduct of GSAR activities within the province or territory.

Record — includes all of the expense forms, all of the sign-in/out sheets, as well as the communications log and the equipment sign-in/out log and any records or documents related to the search that could pertain to evidence and clues found and the outcome of the search.

Recovery — the retrieval of human remains following a fatal incident, also known as “body recovery.”

Reporting person — the person who initially reported someone lost or missing.

Rescue — an operation to retrieve persons in distress, provide for their initial medical or other needs, and deliver them to a place of safety.

Resource list — a list of search or logistical resources that can be employed during an incident; part of the pre-plan.

Risk management — the process of decision making for managing risk and the implementation, enforcement, and re-evaluation of its effectiveness from time to time, with input from the results of risk assessment. A structured, common-sense approach to reducing the frequency and severity of loss events.

SAR volunteers — an organized group of trained and equipped individuals who are capable of conducting search and rescue operations.

Search — a search involves assembling, coordinating, and using the necessary resources to find lost, stranded, trapped, missing, or injured people, to save lives or avoid further injury to them. Search is its own discipline with its own theories, strategies, and tactics.

Searching data — that information that searchers require in order to search for the lost subject, such as the subject's name, description, clothing, footwear, and items carried.

Search and rescue (SAR) — the combined activities and tasks involved in both searching for and rescuing persons who are feared to be lost, missing, or in distress. Many searches do not involve rescue, and many rescues do not require searches.

SAR manager — a person who manages and coordinates a search and/or rescue incident, leads and directs the SAR resources, is trained and experienced in search and rescue, and might or might not be the incident commander under the ICS system.

Searcher — the person, reporting to the team leader, responding to an incident as a member of a GSAR team.

Search tactics — methods of searching; implementation of strategy.

Search techniques — a body of techniques used in the orderly conduct of a search. These include patterns of coordinated movement, employment of sound or visual signals, self-orientation during movement, and awareness of others and their positions.

Search termination — the official search is called to an end by the AHJ due to the finding of the subject, lack of clues and evidence to continue, safety issues, etc.

Sign, sign cutting — the process of looking for a sign along natural barriers such as creeks, banks, or roads.

Specialized SAR groups — organized groups (military, police, volunteer, etc.) of trained individuals with specialized skills and equipment that are capable of working in technical environments (e.g., water, cave, high angle, avalanche, etc.).

Stress defusing — a short meeting (30 to 60 min) held shortly after an incident, conducted by qualified peer counsellors, directed at those people who are assumed to be experiencing stress from the incident.

Subject — the object of a search.

Tasking — a role delegated to a searcher or to a search team to carry out as part of a search and rescue operation.

Team leader — the person, reporting to the SAR manager, responsible for the conduct of a ground search and rescue team.

Terrain analysis — an attempt by a search planner to determine how the terrain might have affected the lost person's behaviour, such as mazes, confusion factors, boundaries, and travel aides.

Track — an impression left from the passage of a person or an animal.

Tracking — following a chronology of clues and signs, someone, or something by the tracks and other visual clues or signs they leave behind.

Unified command — agencies participating in a multi-jurisdictional incident in the command and control of the incident.

Universal transverse mercator (UTM) — on most maps a grid is superimposed to aid in describing a particular point. This grid is called a UTM grid, and it is rectangular, with the grid running north-south and east-west, with north being the top of the map.

Volunteer — an individual or group donating time and talents to a specific task or project without salary or compensation other than for allowable out-of-pocket expenses associated with the volunteer activity.

Walk-away — a type of missing person with some mental cognitive deficiency, who has wandered away from a constant care environment. Alzheimer's and other forms of dementia are often associated with a walk-away.

4 Searcher core competencies

4.0 General

Searchers, as team members, will be suitably able, prepared, and equipped to conduct search assignments. Searchers will utilize their knowledge, skills, and abilities to contribute to the team effort. Safe and effective searchers are aware of risks and follow established policies, protocols, and procedures, enhancing the overall performance of the team. The ten searcher competency categories are

- a) Clause 4.1, Program;
- b) Clause 4.2, Human factors;
- c) Clause 4.3, Environment;
- d) Clause 4.4, First aid and survival skills;
- e) Clause 4.5, Transportation and equipment safety;
- f) Clause 4.6, Navigation;
- g) Clause 4.7, Communication;
- h) Clause 4.8, Lost-person behaviour;
- i) Clause 4.9, Search competencies; and
- j) Clause 4.10, Specialized resources.

Figure 1
Searcher core competency categories
 (See Clause 0.2.1.)



4.1 Program

4.1.0 Overview

Searchers need to understand how SAR is organized and implemented at the local, provincial, territorial, and national levels and that all applicable legal requirements as well as policies and procedures established by the GSAR organization are followed. Searcher competency elements covered in this competency category are

- Clause 4.1.1, SAR structure in Canada;
- Clause 4.1.2, Incident command system (ICS);
- Clause 4.1.3, Roles and responsibilities;
- Clause 4.1.4, Legal requirements;
- Clause 4.1.5, Liability protections and workers' compensation;
- Clause 4.1.6, Finance and administration; and
- Clause 4.1.7, Media policy.

4.1.1 SAR structure in Canada

Knowledge and understanding of	K1. How SAR is structured in Canada, including a) the definition of SAR; b) the components of the National Search and Rescue Program, including i) response; ii) prevention; and iii) coordination; c) SAR domains, including i) aeronautical; ii) maritime; and iii) ground and inland waters; and d) organizations and agencies involved in SAR, including i) the federal government, including Parks Canada; ii) provincial and territorial governments; iii) police services within the jurisdictions; and iv) SAR associations. K2. How search and rescue is structured in the applicable jurisdiction.
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4.1.2 Incident command system (ICS)

Knowledge and understanding of	K1. The history, features, principles, and organizational structure of the ICS. K2. The position of the GSAR team in the ICS structure and organization chart.
Observable performance (do)	P1. Successful completion of the ICS 100 or IMS 100 examination or equivalent as determined by the AHJ.

4.1.3 Roles and responsibilities

Knowledge and understanding of	K1. The organization(s) responsible for GSAR in the response area. K2. The roles and responsibilities of the organizations involved in GSAR in the response area. K3. The structure of the GSAR organization and the roles and responsibilities of GSAR organizational members. K4. The eligible and ineligible GSAR activities for the GSAR organization. K5. The role and responsibilities of a searcher as part of an incident response. K6. Safety priorities for themselves, the team, and the subject. K7. The importance of professionalism and confidentiality in all aspects of a search. K8. The role of a searcher in dealing with families, the public, and the media (including social media).
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	K9.	Repercussions of unethical behaviour and the consequences of these behaviours.
Observable performance (do)	P1.	Acts in a professional manner during search missions and when dealing with families, the public, and the media

4.1.4 Legal requirements

Knowledge and understanding of	K1. Health and safety legal requirements applicable for GSAR operations, including a) applicable provincial or territorial legislative and policy requirements within the jurisdiction; b) rights and duties of workers and supervisors under applicable occupational health and safety legislation (e.g., right to refuse unsafe work); c) applicable sections of the <i>Criminal Code of Canada</i> (e.g., s. 217.1); d) applicable <i>Canada Labour Code</i> requirements; and e) the legal duties and obligations of a searcher. K2. The GSAR organization's workplace health and safety policies and procedures, including a) reporting unsafe conditions, hazards and accidents; b) emergency response; c) safety priorities (themselves, the team, and the subject); d) use of safety equipment, devices, and clothing; e) activity or behaviour that could create a hazard to themselves or to any other person; and f) ensuring ability to work is not impaired by fatigue, alcohol, drugs, stress, or other causes. K3. Legal and civil rights, including policies for human rights and respectful workplace (e.g., harassment prevention). K4. Concepts of civil action, criminal activity, crime scene, and coroner's courts (e.g., as a subject as well as a witness). K5. Legislation and policies on privacy of personal information and freedom of information requirements. K6. Identification and credentialing requirements (e.g., proof of identification, credentialing, and association with the GSAR Team). K7. Policies for criminal record checks and vulnerable person's checks and re-checks.
Observable performance (do)	P1. Adheres to safe working policies and procedures. P2. Responds to search missions with required proof of identification and/or credentials. P3. Adheres to policies regarding the privacy of personal information.

4.1.5 Liability protections and workers' compensation

Knowledge and understanding of	K1.	Types of liability protections and workers' compensation coverage within the jurisdiction, including a) applicable legislative protections: i) provincial or territorial emergency and SAR legislation; and ii) the <i>Good Samaritan Act</i>; b) applicable workers' compensation coverage; c) applicable municipal government insurance; d) private insurance; and e) limitations of protection and coverage.
	K2.	Documenting and reporting of claims and the use of tasking numbers.
Observable performance (do)	P1.	Adheres to requirements for documenting and reporting of a claim.

4.1.6 Finance and administration

Knowledge and understanding of	K1.	The financial and reporting responsibilities of the GSAR organization, as applicable (e.g., claims procedures).
Observable performance (do)	P1.	Adheres to financial policies and procedures.

4.1.7 Media policy

Knowledge and understanding of	K1.	The applicable media policy within the jurisdiction, including a) the process for referring media enquiries; b) whose role it is to speak to the media; c) whose role it is to speak to the public; d) restrictions about reporting information externally (e.g., social media); and e) repercussions of breaching media policy and confidentiality requirements.
Observable performance (do)	P1.	Adheres to the media policy.
	P2.	Acts in a professional manner during search missions and when dealing with families, the public, and media.

4.2 Human factors

4.2.0 Overview

Searchers need to recognize the physical and psychological demands of a search mission and take appropriate steps to ensure the safety of themselves and others. Searcher competency elements covered in this competency category are

- a) Clause 4.2.1, Personal qualities and/or attributes;
- b) Clause 4.2.2, Physical demands;
- c) Clause 4.2.3, Psychological demands;
- d) Clause 4.2.4, Personal clothing and equipment; and

e) Clause 4.2.5, Body management.

4.2.1 Personal qualities and/or attributes

Knowledge and understanding of	K1. The following qualities and attributes necessary for performing the duties and tasks of a searcher: a) Commitment: Respond to GSAR missions and be in a state of readiness and willing to put in the time to attend training and maintain proficiencies. b) Team player: Take direction and work with others. c) Communication skills: Communicate clearly to search team members and to those in authority. d) Accountability: Communicating your limitations and abilities. e) Professionalism: Act in a professional manner (i.e., appropriate dress, proper language and terminology, etc.) and adhere to the Code of Ethics/Conduct of the GSAR organization. f) Responsibility: For personal safety. (i.e., you are the primary person responsible for your own safety).
Observable performance (do)	P1. Attends required orientation and training and maintains proficiencies. P2. Responds to search missions in a state of readiness. P3. Acts in a professional manner and adheres to the Code of Ethics and/or Conduct. P4. Takes direction and works well with team members.

4.2.2 Physical demands

Knowledge and understanding of	K1. The expected physical demands for task-specific GSAR missions. K2. Potential consequences of attempting to work outside their limits of endurance and physical abilities.
Observable performance (do)	P1. Attests to being physically capable of performing assigned duties and tasks as set by the jurisdiction. P2. Informs supervisor of any physical impairments that could affect their ability to perform assigned duties and tasks.

4.2.3 Psychological demands

Knowledge and understanding of	K1. Psychological demands associated with a SAR incident, including a) types of stress: acute, delayed, cumulative; b) categories of stress: cognitive, emotional, physical, and behavioural; c) stressors for searcher during and following an event; d) stress that a lost or missing person can face; and e) how stress affects a searcher's ability to perform tasks. K2. Critical incident stress (CIS) and CIS management, including a) common signs and symptoms of critical incident stress; b) key aspects of critical incident stress management; c) critical incident stress defusing;
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	d) critical incident stress debriefing; e) how CIS can have an impact on others; and f) the role of mental health professionals.
	K3. Services and resources available for CIS.
Observable performance (do)	- P1. Shows responsibility towards their own psychological health and safety. - P2. Informs supervisor of any situations that can harm or threaten searchers with respect to psychological safety. - P3. Recognizes and reports any signs of CIS.

4.2.4 Personal clothing and equipment

Knowledge and understanding of	- K1. Appropriate personal protective clothing and equipment to be worn by searchers during any exercise, training, or operational task, including a) clothing to protect from the weather and environment; b) limb and body protection worn while using equipment such as chainsaws; c) head, face/eye protection, footwear; d) high-visibility apparel; e) respiratory protection; f) personal floatation devices (PFDs); and g) safety equipment for specialty assigned tasks. - K2. The basics of clothing decisions for assigned GSAR operations in various weather conditions. - K3. Information on layering systems, pros and cons of available materials, and care of clothing. - K4. Selection of appropriate footwear for GSAR missions. - K5. Personal protective equipment that should form part of every searcher's SAR ready pack carried in the field. - K6. What a SAR ready pack is and why it is critical to a mission. - K7. The essential contents of a SAR ready pack and how the season and the location of a search mission can influence the contents of the ready pack.
Observable performance (do)	- P1. Wears appropriate footwear and clothing for GSAR missions. - P2. Prepares a SAR ready pack for inspection. - P3. Demonstrates knowledge and use of the pack contents.

4.2.5 Body management

Knowledge and understanding of	- K1. The signs and symptoms of hypothermia and hyperthermia. - K2. How hypothermia and hyperthermia can be prevented and treated. - K3. How the body gains and loses heat.
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	K4. Proper hygiene care during a mission and how personal cleanliness can be maintained. K5. Correct procedures for personal waste disposal. K6. The benefits of rest and sleep for both the mind and body. K7. How fatigue can affect performance in GSAR missions. K8. How alcohol and drugs can affect performance on GASR missions. K9. Foot care. K10. Hydration and nutrition requirements for GSAR operations.
Observable performance (do)	P1. Takes appropriate precautions to prevent hypothermia, hyperthermia, and dehydration. P2. Demonstrates proper hygiene care and personal cleanliness during a mission. P3. Practices correct procedures for personal waste disposal.

4.3 Environment

4.3.0 Overview

Searchers need to understand the potential hazards associated with environmental factors in the search area, take appropriate steps to ensure the search is effective, and ensure the safety of themselves and others. Searcher competency elements covered in this competency category are

- a) Clause 4.3.1, Weather;
- b) Clause 4.3.2, Natural hazards;
- c) Clause 4.3.3, Animals;
- d) Clause 4.3.4, Insects and arachnids;
- e) Clause 4.3.5, Plants; and
- f) Clause 4.3.6, Terrain.

4.3.1 Weather

Knowledge and understanding of	K1. Weather conditions that have occurred or are likely to prevail. K2. Search hazards that can result from extreme weather, including freezing rain, major snowfall, strong winds, extreme cold and/or wind chill, lightning, and extreme heat and/or humidity. K3. Weather information sources that can be utilized to prepare for a search mission. K4. Precautions to take for the variety of weather conditions and the limitations to respond.
Observable performance (do)	P1. Uses weather information sources to prepare for a search mission. P2. Takes appropriate precautions to account for the variety of weather conditions.

4.3.2 Natural hazards

Knowledge and understanding of	K1.	Natural hazards such as flooding, landslides, avalanches, fires, earthquakes, tsunamis, diseases, and terrain.
Observable performance (do)	P1.	Recognizes and prepares for search missions equipped to deal with natural hazards.

4.3.3 Animals

Knowledge and understanding of	K1.	Animal species that can cause harm, including a) bears; b) wolves, cougars; c) deer, moose, bison, elk, and other ungulates; d) skunks, porcupines; e) dogs and other domestic animals and/or livestock; and f) snakes.
	K2.	Actions that can be taken to reduce the risk of negative animal encounters and know what to do when confronted by an animal or attacked.
	K3.	Symptoms of disease that animals can cause if bitten (e.g., rabies).
	K4.	First aid treatment for animal attacks and/or bites.
	K5.	The process for reporting animal encounters or attacks.
Observable performance (do)	P1.	Identifies animal species that can cause harm.
	P2.	Recognizes symptoms of disease from animal bites and provides first aid treatment.
	P3.	Reports an animal encounter or attack.

4.3.4 Insects and arachnids

Knowledge and understanding of	K1.	Insects and arachnids that can cause harm, including a) ticks; b) bees; c) wasps; d) mosquitoes; e) black flies; and f) spiders.
	K2.	Actions that can be taken to reduce the risk of contact with insects and arachnids that could cause harm.
	K3.	Symptoms of disease that insects and arachnids can cause.
Observable performance (do)	P1.	Identifies insect and arachnids that can cause harm.
	P2.	Recognizes symptoms of disease from insect and arachnid bites and provides first aid treatment.

4.3.5 Plants

Knowledge and understanding of	K1.	Plant species in the area that are poisonous or can cause harm.
	K2.	Actions to take to reduce the risk of contact with poisonous or harmful plants.
	K3.	Actions to take upon discovery of a person suspected of poisoning by a plant.
Observable performance (do)	P1.	Identifies plant species that can cause harm.
	P2.	Recognizes symptoms of a person suspected of poisoning by a plant and provides first aid treatment.

4.3.6 Terrain

Knowledge and understanding of	K1.	How the terrain can have an impact, including a) selection and use of clothing and footwear, search gear, equipment, and vehicles; b) type of search techniques utilized; c) methods of travel; and d) need for additional or specialized resources.
	K2.	Terrain types and hazards within the search area, including a) forests and wetlands; b) lakes, rivers, creeks, canals, and moving water; c) mountains (avalanche hazard), hills, and cliffs; d) mine shafts, caves, crevices, and wells; e) urban environment; f) snow or ice travel; g) farmland, pastures; h) gas lines, power lines; i) construction sites, industrial sites; j) roads, highways, and railroads; and k) sunlight and/or darkness.
Observable performance (do)	P1.	Wears appropriate clothing and footwear for the terrain.
	P2.	Is equipped with the appropriate search gear and equipment for the terrain.

4.4 First aid and survival skills

4.4.0 Overview

Searchers apply their training and knowledge to demonstrate the ability to administer first aid and to survive in emergency situations. Searcher competency elements covered in this competency category are

- a) Clause 4.4.1, First aid; and
- b) Clause 4.4.2, Survival skills.

Note: This Clause does not replace the requirement for first aid and certification.

4.4.1 First aid

Knowledge and understanding of	K1.	First aid procedures.
	K2.	Essential first aid supplies to be included in the SAR ready pack.
Observable performance (do)	P1.	Completes and provides proof of first aid training, as recognized by the authority having jurisdiction.
	P2.	Demonstrates ability to provide first aid treatment.

4.4.2 Survival skills

Knowledge and understanding of	K1.	Psychological demands associated with being in a survival situation (e.g., importance of a positive mental attitude).
	K2.	Risks associated with fear and how to control them.
	K3.	Systemic survival planning and how it can be applied.
	K4.	Contents of a personal survival kit.
	K5.	Actions to take when mission personnel become lost or injured.
	K6.	Actions to take when a victim is located and requires assistance.
	K7.	Necessities of life elements and how they are relevant in GSAR.
	K8.	Steps involved in building and using fire and the materials required.
	K9.	Types of emergency shelters and how they are constructed.
	K10.	Selection of locations for emergency shelters.
	K11.	Methods of water purification.
	K12.	Potential sources of water in survival situations.
	K13.	Selection of food and food preparation.
	K14.	Sources of food in survival situations.
	K15.	Emergency signalling in survival situations.
	K16.	Basic knot tying.
Observable performance (do)	P1.	Prepares a survival kit.
	P2.	Uses the contents of survival kit appropriately.
	P3.	Builds a fire using materials found in the field and carried in a SAR ready pack that will provide personal warmth, team warmth, or warmth for a found subject.
	P4.	Demonstrates various signalling methods, including ground to air.
	P5.	Erects a shelter that is well-marked and visible to searchers and durable, using materials contained in the survival pack or found in the field.
	P6.	Locates or identifies alternate shelter.

P7.	Demonstrates ability to tie basic knots.
P8.	Identifies potential water sources.

4.5 Transportation and equipment safety

4.5.0 Overview

Searchers need to understand and adhere to the rules for the operation of vehicles and equipment they are authorized to use to safely transport goods and/or people before, during, and after a search mission. Searcher competency elements covered in this competency category are

- a) Clause 4.5.1, Personal vehicle;
- b) Clause 4.5.2, SAR response vehicles;
- c) Clause 4.5.3, Vehicle and trailer combinations;
- d) Clause 4.5.4, Marine emergency vessels;
- e) Clause 4.5.5, Snowmobiles;
- f) Clause 4.5.6, All-terrain vehicles; and
- g) Clause 4.5.7, Aircraft.

4.5.1 Personal vehicle

Knowledge and understanding of	K1.	Applicable legislation and regulations, including insurance and licensing requirements.
	K2.	Transportation and safety equipment policies and procedures within the specific jurisdiction.
	K3.	Safe operating condition of vehicle.
	K4.	Weather and road conditions and potential animal hazards on route to scene.
	K5.	Limits of personal vehicle to avoid damage.
	K6.	Parking procedures at the scene so as to not obstruct entry or exit to the rally point or prevent public access to the property.
	K7.	Hazards associated with the drive home (e.g., fatigue, animal hazards) and potential need for co-driver.
Observable performance (do)	P1.	Shows proof of required driver's licence and insurance.
	P2.	Drives personal vehicle safely and effectively to arrive at, move around and depart the scene, and return home.
	P3.	Follows applicable laws (e.g., traffic acts).

4.5.2 SAR response vehicles

Knowledge and understanding of	K1.	Applicable laws and jurisdictional requirements for the operation of SAR response vehicles, including user authorization and licence requirements.
	K2.	Transportation policies and procedures with the specific jurisdiction.
	K3.	Risk factors associated with safe use of SAR response vehicles.

	K4. Special precautions when operating SAR response vehicles. K5. Safety procedures associated with returning SAR response vehicles to home base, including a) fatigue hazard after prolonged search and the potential need for a co-driver; b) replenish fuel and fluid levels; c) reporting service issues and/or malfunctioning equipment; and d) reporting consumables used.
Observable performance (do)	P1. Conducts a vehicle inspection prior to operation of vehicle. P2. Operates an emergency response vehicle safely in accordance with policies and procedures. P3. Parks and positions vehicle at the scene, including a) parks for easy exit; b) does not obstruct entry/exit; c) uses spotter when reversing; and d) establishes pre-determined signals with spotter.

4.5.3 Vehicle and trailer combinations

Knowledge and understanding of	K1. Proper loading and securement procedures for vehicle and trailer combination. K2. Items to check prior to moving trailer, including a) lights; b) braking systems (difference between hydraulic and electric); c) tire pressure; and d) trailer components.
Observable performance (do)	P1. Follows procedure for proper loading and securing of loads. P2. Conducts a pre-trip inspection of the vehicle and trailer before leaving. P3. Operates vehicle and trailer combination safely.

4.5.4 Marine emergency vessels

Knowledge and understanding of	K1. Required personal protective equipment (PPE), including personal flotation devices (PFDs). K2. Legislation and regulations concerning watercraft licensing for commercial watercraft. Note: A boat used by a SAR team is considered a commercial vessel, rather than a pleasure craft. K3. Safety equipment required for type and length of vessel and information contained on vessel capacity plate. K4. Location of the emergency kit and items in the kit. K5. Safety protocols for the vessel, the role of the water authority, and special considerations for different types of weather.
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	K6.	Safety equipment to have on hand in the boat, such as a knife, ropes, a map, a flashlight, food, water, clothing, spare clothing, a whistle, and a helmet, etc.
Observable performance (do)	P1.	Completed small vessel operators proficiency (SVOP) course and provides proof of licensing/certificate as required by law in the jurisdiction.
	P2.	Properly uses items in emergency kit.

4.5.5 Snowmobiles

Knowledge and understanding of	K1.	Types of safety equipment for use with snowmobile, including a) approved safety helmet; b) appropriate clothing; and c) emergency kit.
	K2.	Laws and regulations for the use and operation of snowmobiles.
	K3.	Precautions and preparations to be taken to ensure safe travel in a snowmobile, including a) carrying passengers only on approved models; b) importance of carrying a tool kit with spare belt and spark plugs; and c) loading and unloading.
Observable performance (do)	P1.	Operates snowmobile safely according to conditions.
	P2.	Wears approved helmet.

4.5.6 All-terrain vehicles

Knowledge and understanding of	K1.	General operation and limitations of all-terrain vehicles (ATVs).
	K2.	Safety equipment required in use of ATVs, including a) approved safety helmet; b) protective footwear; and c) emergency kit.
	K3.	Local laws and regulations for ATV use and operation.
	K4.	Precautions and preparations to be taken in the use of ATVs, including a) carrying passengers only on approved models; b) importance of having a tool kit to make minor repairs; and c) loading and unloading.
Observable performance (do)	P1.	Drives ATV safely according to conditions.
	P2.	Wears an approved helmet.

4.5.7 Aircraft

Knowledge and understanding of	K1. Hazards and safety procedures when working with, around, or in aircraft (i.e., fixed and rotational wing) including a) basic functions of a helicopter; b) flying debris during take-off and landing; c) use of personal protective equipment; d) importance of following instructions of pilot for movement in the helicopter; e) an approaching helicopter; f) communication procedures during take-off and landing; and g) location of safety equipment and first aid kit on the aircraft.
Observable performance (do)	P1. Follows procedures for safe behaviour of search team in and around aircraft.

4.6 Navigation

4.6.0 Overview

Searchers need to demonstrate their knowledge and skills in the use of equipment and tools to navigate safely through the search area, to another location, or out of the search area when instructed, and demonstrate confidence in their navigation skills in the search for a lost person. Searcher competency elements covered in this competency category are

- a) Clause 4.6.1, Maps;
- b) Clause 4.6.2, Compass;
- c) Clause 4.6.3, Global positioning system (GPS);
- d) Clause 4.6.4, Map and compass; and
- e) Clause 4.6.5, GPS and map.

4.6.1 Maps

Knowledge and understanding of	K1. Different types of maps used for GSAR (e.g., topographical maps or marine charts). K2. How to select the appropriate area map according to the National Topographic System (NTS). K3. The significance of map data. K4. Map scales, in order to identify map distance and actual distance. K5. How to read and interpret map legends. K6. The main feature categories on a map, including cultural, main roads, water, relief, vegetation features, and topography. K7. How contour lines are used to determine actual terrain and elevations. K8. Latitude and longitude coordinates (lat/long). K9. How to determine Universal Transverse Mercator (UTM) co-ordinates or equivalent positioning format.
Observable performance (do)	P1. Selects appropriate map for search mission.

	P2.	Navigates and travels utilizing maps as required for search location, based on jurisdiction.
	P3.	Uses map scale to identify map distance and actual distance.
	P4.	Reads and interpret a map legend.
	P5.	Utilizes contour lines to determine actual terrain and elevations.
	P6.	Determines lat/long co-ordinates of a location by map.
	P7.	Identifies a location on a map using lat/long co-ordinates.
	P8.	Reports/communicates lat/long co-ordinates.
	P9.	Determines UTM co-ordinates of a location by map.
	P10.	Identifies a location on a map using UTM co-ordinates.
	P11.	Reports/communicates UTM co-ordinates.

4.6.2 Compass

Knowledge and understanding of	K1.	The 360° system and the compass rose.
	K2.	Bearing and back bearing, and why it is used.
	K3.	The parts of a compass, including a) base plate; b) magnetic needle; c) orientation arrow; d) sight line; e) graduated dial; and f) meridian lines.
	K4.	Interference factors and compass limitations.
	K5.	True north, grid north, and magnetic north.
	K6.	Declination, and how to set declination on a compass.
	K7.	Sighting ahead to follow a straight line.
	K8.	Circumnavigation around an obstacle.
	K9.	Basic maintenance and care of compass.
	K10.	Night navigation capabilities of compass.
Observable performance (do)	P1.	Adjusts compass given a declination value.
	P2.	Determines the bearing and back bearing of a given object.
	P3.	Navigates a five-point bearing course over a one-kilometre distance.
	P4.	Navigates a triangle.
	P5.	Demonstrates sighting ahead to follow a straight line.
	P6.	Demonstrates circumnavigation around an obstacle.

4.6.3 Global positioning system (GPS)

Knowledge and understanding of	K1.	Basic GPS use, including on/off, battery, and unit care.
	K2.	Interference factors and GPS limitations.
	K3.	How to clear track log.
	K4.	Appropriate coordinate format (know your device).
	K5.	How to program appropriate data.
	K6.	How to mark, edit, and delete a waypoint in a GPS receiver.
	K7.	How to read UTM coordinates.
	K8.	How to read lat/long coordinates.
	K9.	How to switch from UTM to lat/long, and vice versa.
Observable performance (do)	P1.	Selects appropriate data.
	P2.	Marks, edits, and deletes a waypoint in a GPS receiver.
	P3.	Programs specified coordinate format.
	P4.	Reports/communicates UTM and or lat/long coordinates.

4.6.4 Map and compass

Knowledge and understanding of	K1.	Pacing and its use in SAR.
	K2.	How to orient a map to terrain using a compass.
	K3.	How to determine a bearing to travel between points using a map and compass.
	K4.	How to use a bearing to plot a direction on a map.
	K5.	How to fix your position on a map.
	K6.	Triangulation.
Observable performance (do)	P1.	Orients a map to terrain using a compass.
	P2.	Uses a bearing to plot a direction on a map.
	P3.	Fixes a position on a map.
	P4.	Demonstrates triangulation.
	P5.	Accurately paces a prescribed distance based on the determination of personal pacing factor a) on flat terrain; b) on rolling terrain; c) on heavily treed terrain; and d) in thick brush.

4.6.5 GPS and map

Knowledge and understanding of	K1.	Use of map and GPS for route selection or navigation (i.e., orienteering).
	K2.	How to enter a map co-ordinate into a GPS.
	K3.	How to fix a position on a map using a GPS waypoint.
	K4.	How GPS and maps are used in combination with a compass.
Observable performance (do)	P1.	Shows that the map data recorded on a map matches with the map data setting in the GPS.
	P2.	Shows the position format being used to determine co-ordinates on a map matches with the position format setting in the GPS.
	P3.	Demonstrates how to determine a co-ordinate on a map and enter that co-ordinate as a waypoint in the GPS.
	P4.	Demonstrates how to locate a co-ordinate on a map using a waypoint recorded by the GPS.

4.7 Communication

4.7.0 Overview

Searchers use their knowledge of communications equipment and systems to ensure that communications utilized by the search team during a search are effective and follow established protocols. Searcher competency elements covered in this competency category are

- Clause 4.7.1, Awareness of role of communications during an incident;
- Clause 4.7.2, Radio operations;
- Clause 4.7.3, Satellite and cell phones;
- Clause 4.7.4, Alerting technologies; and
- Clause 4.7.5, Emerging communication technologies.

4.7.1 Awareness of role of communications during an incident

Knowledge and understanding of	K1.	The importance of communication during a search event.
	K2.	Responsibility for communications during a search event.
	K3.	Importance of following all established communications protocols.
	K4.	Provincial or territorial regulations regarding the use of communication devices while travelling on public, private, and industrial roads.
Observable performance (do)	P1.	Maintains confidentiality of communications.
	P2.	Follows established communication protocols.
	P3.	Directs media requests to the appropriate authority (e.g., command post).

4.7.2 Radio operations

Knowledge and understanding of	K1.	Components and limitations of the equipment.
	K2.	Different communication systems used in GSAR.
	K3.	The phonetic alphabet (i.e., phrasing and/or pronunciation).
	K4.	The 24-hour clock.
	K5.	Protocols and procedures for communications, including a) general messages; b) distress, urgency, and safety signals and messages; and c) confidentiality of communications (codes).
Observable performance (do)	P1.	Uses phonetic alphabet with correct phrasing and/or pronunciation.
	P2.	Uses the 24-hour clock.
	P3.	Follows protocols and procedures for general operations and messages, distress, urgency, and safety signals and messages

4.7.3 Satellite and cell phones

Knowledge and understanding of	K1.	Standard operations for satellite and cell phones.
	K2.	Limitations based on coverage, range, etc.
	K3.	Electronic messaging and device-specific messaging (e.g., text, PIN, etc.).
	K4.	Protocols surrounding the use of messaging, personal cell phones, and electronic devices.
Observable performance (do)	P1.	Operates satellite and cell phones in accordance with procedures and policies.
	P2.	Uses device-specific messaging (e.g., text, PIN, etc.).
	P3.	Follows protocols for messaging, personal cell phones, and electronic devices.

4.7.4 Alerting technologies

Knowledge and understanding of	K1.	Alerting devices on 406 frequencies, where available.
	K2.	Alerting devices, including beacon devices, when available, for air, marine, and ground searches.
	K3.	Device limitations.
Observable performance (do)	P1.	Demonstrates knowledge of alerting devices for emergency locator transmitters.

4.7.5 Emerging communication technologies

Knowledge and understanding of	K1.	Technologies, when adopted and incorporated by the team during a search that can assist in the search for subjects, including a) alternate alerting beacons; b) internet digital devices; or c) tablets.
	K2.	Operation of electronic devices, including pairing of devices, memory storage functions, and messaging.
	K3.	Device limitations.
Observable performance (do)	P1.	Makes use of technologies, when implemented, to search for subjects.
	P2.	Proficiently operates electronic devices, when implemented, including pairing devices, use of memory storage functions, and messaging.

4.8 Lost-person behaviour

4.8.0 Overview

Searchers are able to apply their knowledge and understanding of lost-person behaviour theory to support the search efforts of the team. Searcher competency elements covered in this competency category are

- a) Clause 4.8.1, Lost-person behaviour.

4.8.1 Lost-person behaviour

Knowledge and understanding of	K1.	The difference between the concepts of a lost person and a missing person.
	K2.	General concepts associated with lost-person behaviour analysis.
	K3.	Relevance of lost-person behaviour as it applies to GSAR tactics.
	K4.	How lost-person behaviours should be considered in searching.
	K5.	The connection between the lost-person profile, search tactics, and the probability of detection (POD).
	K6.	How to use lost-person behaviour to aid in passive and active searching.

4.9 Search competencies

4.9.0 Overview

Searchers use knowledge of search theory and search types, patterns, and techniques to conduct a search that will lead to the location of a lost person. Searchers follow established protocols in dealing with clues and evidence and understand the challenges associated with searches at night, from shorelines, and in urban environments, and can demonstrate the ability to conduct and effective searches under these specific environments. Searcher competency elements covered in this competency category are

- a) Clause 4.9.1, Search theory;

- b) Clause 4.9.2, Notification;
- c) Clause 4.9.3, Activation (call-out), checking in, and initial briefing;
- d) Clause 4.9.4, Assignments;
- e) Clause 4.9.5, Search types, patterns, and techniques;
- f) Clause 4.9.6, Confinement/containment;
- g) Clause 4.9.7, Attraction methods;
- h) Clause 4.9.8, Clue awareness and detection;
- i) Clause 4.9.9, Demobilization process;
- j) Clause 4.9.10, Night searches;
- k) Clause 4.9.11, Land-water interface searches;
- l) Clause 4.9.12, Evidence handling;
- m) Clause 4.9.13, Dealing with deceased persons; and
- n) Clause 4.9.14, Urban searches.

4.9.1 Search theory

<i>Knowledge and understanding of</i>		
	K1.	Factors that make SAR incidents emergencies.
	K2.	Evaluation of search urgency.
	K3.	Components of a search, including a) pre-planning; b) notification; c) response; d) tactics and/or operations; e) suspension; and f) evaluation/review.
	K4.	Key concepts of search theory, including a) probability of detection (POD); b) probability of area (POA); c) point last seen (PLS); d) last known position (LKP); and e) initial planning point (IPP).

4.9.2 Notification

<i>Knowledge and understanding of</i>		
	K1.	Definition of notification and the notification process.
	K2.	The importance of collecting and documenting information at the initial stage and potentially during the search and the level of detail required (e.g., full name of reporting person, contact information, precise details of reporting person conversation). Note: <i>These data will be used by the SAR manager to determine the initial search response and assist in defining the initial search area.</i>
	K3.	The importance of maintaining contact with the reporting person should additional information and clarification be required.
	K4.	The communication process for transferring information to the search manager.
	K5.	Processes and procedures to request additional resources.

Observable performance (do)	P1.	Follows the communication process for transferring information to the search manager.
	P2.	Collects and documents information for use by the team leader and SAR manager.

4.9.3 Activation (call-out), checking in, and initial briefing

Knowledge and understanding of	K1.	Call-out procedures and information provided in a call-out.
	K2.	Assembly process and location (e.g., tasking and mission number, communication protocols).
	K3.	Where to check in and/or reporting locations.
	K4.	Whom to contact for updated information.
	K5.	The process for accessing or providing updated situational information.
	K6.	Accountability processes and procedures, including a) sign in/check in procedures; b) tag system and/or member identification; c) change of command; d) team identifiers; and e) sign-out/checkout procedures.
	K7.	Procedure to notify, if subject is located.
	K8.	Types of information covered in the briefing by the team leader, depending on size of operation.
Observable performance (do)	P1.	Follows process and procedures for checking in and/or signing out.
	P2.	Finds out reporting details (e.g., who, where, how to report).
	P3.	Participates in briefings.
	P4.	Takes notes during briefings.
	P5.	Ensures physical and mental readiness to do the task.
	P6.	Acquires tracking and mission numbers.
	P7.	Uses required tag system and/or member identification and team identifiers.
	P8.	Follows procedure for accessing and providing updated situation information.

4.9.4 Assignments

Knowledge and understanding of	K1.	Types of tasks for searchers.
	K2.	Team identifiers and identification of other teams in the area.
	K3.	Decision making process for assigned tasks, including a) concept of area of search; b) search tactics to be deployed;

	c) search pattern to be utilized; d) method of marking search areas; e) probability of detection expected; and f) potential lost-person behaviour.
	K4. Record and reporting requirements (e.g., periodic call-in, subject located).
	K5. Starting and end points.
Observable performance (do)	P1. Carries out assigned tasks as per plan. P2. Follows protocol when subject located. P3. Completes recording and reporting procedures for assignments. P4. Marks search areas.

4.9.5 Search types, patterns, and techniques

Knowledge and understanding of	K1. Search types, patterns, and techniques, including a) passive; and b) active.
	K2. Search area segmentation.
	K3. Clue detection techniques.
	K4. Types of searches: a) hasty (quick search); b) efficient search (open grid); c) thorough search (closed grid); and d) evidence search.
	K5. Types of search patterns: a) trail or route search; b) lookout search; c) contour search; d) wandering search; e) line search; f) grid searches; g) perimeter search; h) purposeful wandering search; i) binary search and/or sign cutting; and j) sound sweeps.
	K6. How to match search types to patterns.
	K7. Number of team members required for each search pattern.
	K8. Importance of using all senses during search types and patterns.
	K9. Critical distance techniques and calculations.
	K10. Factors affecting search pace.
Observable performance (do)	P1. Provides continual communication as search progresses to team leader. P2. Performs different types of searches.

	P3. Matches search types to patterns.
	P4. Applies various types of search patterns.
	P5. Follows critical distance techniques (e.g., critical separation, critical spacing, average maximum detection range).

4.9.6 Confinement/containment

Knowledge and understanding of	K1. The role of confinement and containment in search and associated challenges, including a) time; b) topography; c) resources; d) weather; and e) cover. K2. Types of methods of containment: a) road blocks; b) trail blocks; c) camps at strategic locations; d) lookouts; e) listening posts; f) string line and/or hip chain; g) track traps; h) messages at strategic locations; i) perimeter sign cuts; j) vehicle patrols; and k) use of media. K3. Timing of confinement/containment (i.e., early in the operation). K4. Combining methods of confinement and containment with search tactics, such as attraction and tracking. K5. Reasons why a confinement area might be expanded.
Observable performance (do)	P1. Identifies the challenges relating to confinement and containment. P2. Uses methods of containment and combines with search tactics.

4.9.7 Attraction methods

Knowledge and understanding of	K1. Reasons for incorporating attraction methods into a search. K2. Urgency of using attraction methods (e.g., reduce search area). K3. Various attraction methods, including a) visual; b) night time tools; and c) sound. K4. Challenges associated with attraction, including a) responsiveness of subject; b) stopping to listen at appropriate intervals; c) weather conditions; d) natural sounds;
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	e) topography; f) impairment of senses; and g) hearing protection for searchers.
	K5. Importance of communication when using attraction methods.
	K6. Notice to others of attraction methods being used and intervals established.
	K7. Protocol for notifying when contact with subject is established.
Observable performance (do)	P1. Uses various attraction methods. P2. Notifies team leader of attempts, methods used, and timing intervals. P3. Follows protocols for communication in case of response from subject. P4. Coordinates the use of attraction methods with others in the immediate search area.

4.9.8 Clue awareness and detection

Knowledge and understanding of	K1. Reasons for incorporating clue awareness and detection in searches. K2. Components and tools for clue awareness and detection, including a) cognitive vision; b) seeing the unseen; c) signs; d) sign cutting; e) clues; f) shine (i.e., flattening); g) trampling, bruising; h) track; i) tracking techniques; and j) use of other senses. K3. How to control the immediate areas of clues to help identify additional clues. K4. Clue identification process (e.g., labelling, clue description, footwear description). K5. Clue-handling process. K6. Impact of time of day on clue awareness and detection. K7. Other challenges associated with clue awareness and detection (e.g., weather, light, lack of knowledge of other team members).
Observable performance (do)	P1. Identifies and reports clues. P2. Provides team leader with initial interpretation of clues. P3. Handles and/or follows clues. P4. Completes required documentation for clues.

4.9.9 Demobilization process

Knowledge and understanding of	K1.	The importance of debriefing and providing post-search information.
	K2.	Types of information to be covered in incident debriefing.
	K3.	The purpose of notes and reports (e.g., damage report, expense claims, log book).
	K4.	Procedures for handling of returned equipment, including a) sign-in process and where to store equipment; b) inspection and marking for repair; and c) types of consumables to be replenished.
	K5.	The process for dismantling and packing physical infrastructure.
	K6.	The command base and station restoration process.
	K7.	Accountability systems (e.g., tags).
	K8.	The impact of fatigue on personal safety (e.g., drive home).
Observable performance (do)	P1.	Completes equipment and infrastructure inspection and clean-up.
	P2.	Returns equipment and signs it in.
	P3.	Replenishes consumables.
	P4.	Dismantles and packs physical infrastructure.
	P5.	Cleans up and/or restores command base and station.
	P6.	Follows personnel and accountability system (e.g., returns accountability tag).
	P7.	Contributes to debriefings and after action reviews.
	P8.	Performs administrative requirements (e.g., copies of notes from notebook, damage reports, expense claims, log book).

4.9.10 Night searches

Knowledge and understanding of	K1.	Reasons for implementing a night search.
	K2.	Advantages associated with implementing a night search, including a) expanded search time; and b) less noise and sound travels better.
	K3.	Challenges associated with implementing a night search, including a) maintaining personal night vision; b) unresponsive subject; c) destruction of clues; d) poor visibility; e) topography; f) harder to coordinate team; and g) reliability of light sources.
	K4.	Risk considerations of night searches to searchers and subject (e.g., fear of dark, night vision, fatigue, need for experienced searchers).

	K5. Critical separation/critical spacing considerations.
	K6. Types of night vision equipment.
	K7. Types of lighting devices.
Observable performance (do)	P1. Follows procedures for preserving personal night vision and specialized equipment used during night searches.
	P2. Follows procedures for using light devices during night searches.
	P3. Employs critical separation and/or critical spacing considerations during night searches.
	P4. Operates specialized night search equipment.

4.9.11 Land-water interface searches

Knowledge and understanding of	K1. Reasons for implementing a shoreline search (e.g., urgency, subject profile, weather).
	K2. Types of shorelines (e.g., ocean, lakes, rivers, streams, glacial streams, ponds, sloughs, and wetlands).
	K3. Types of hazards and risk considerations and limitations of GSAR personnel.
	K4. Expanded confinement and critical spacing considerations with shoreline searches.
	K5. Environmental considerations associated with shoreline searches.
	K6. Types of water-crossing techniques.
	K7. Types of equipment used in shoreline rescues.
	K8. Types of assistance that can be provided by specialized teams, including a) dive team; b) boat rescue; c) rope rescue; d) swift water rescue; e) ice rescue; and f) aircraft.
Observable performance (do)	P1. Employs safety actions and follows procedures for crossing techniques.
	P2. Takes into account environmental considerations associated with shoreline searches.

4.9.12 Evidence handling

Knowledge and understanding of	K1. Chain of evidence concept.
	K2. Types of evidence damage caused by the elements.
	K3. Types of contamination or cross-contamination.
	K4. Authorities to contact to handle the evidence.

	K5. Evidence-protecting techniques and procedures. K6. Note-taking techniques and procedures. K7. Confidentiality requirements. K8. Process and procedures for presenting evidence (e.g., in court or inquest).
Observable performance (do)	P1. Ensures potential evidence is left undisturbed. P2. Protects evidence from the elements. P3. Prevents contamination or cross-contamination of evidence (e.g., use of appropriate PPE). P4. Establishes a secure perimeter around the evidence. P5. Alerts SAR manager about the site and potential evidence. P6. Uses proper note-taking techniques to properly document evidence and ensure chain of evidence (e.g., unit logs, team and crew logs).

4.9.13 Dealing with deceased persons

Knowledge and understanding of	K1. Legal aspects of the jurisdiction where death of person occurred (e.g., coroner or medical examiner). K2. Appropriate PPE and procedures for transporting human remains. K3. Types of psychological demands arising from handling human remains (see Competency element, Clause 4.2.3). K4. Protection of personal information requirements for deceased and family members.
Observable performance (do)	P1. Takes precautions to not disturb or move human remains unless authorized by the appropriate authority. P2. Uses appropriate PPE when handling or transporting human remains.

4.9.14 Urban searches

Knowledge and understanding of	K1. Potential causes of disappearances in an urban environment and information sources: a) unintentional; b) criminal act; and c) intentional. K2. Types of behaviour profiles linked to urban disappearances, including a) schizophrenia; b) dementia; c) children; d) despondent; e) runaways; and f) autistic.
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	K3. Specific tactics used in urban searches, including a) door-to-door; b) urban confinement; c) building searches; and d) evidence searches. K4. Legal implications and limitations of urban searches, including a) trespass rules; b) private buildings; and c) privacy of personal information. K5. Hazards specific to urban search, including a) traffic; b) abandoned or damaged buildings; c) industrial or chemical storage areas or contaminated areas; d) rapid destruction of clues; e) clue-rich environment; f) scale of search areas (easy access to transportation for disappeared); g) convergent volunteers; h) interference from media; i) animals at large (e.g., dogs); j) criminal elements (e.g., gang members, grow ops); k) precautions for searching refuse (e.g., needle sticks); and l) hazardous materials. K6. Three levels of door-to-door canvassing.
Observable performance (do)	P1. Demonstrates ability to navigate in urban environment using a city map and/or GPS. P2. Demonstrates proper search techniques in urban environments (e.g., alleys, buildings, streets, yards, etc.).

4.10 Specialized resources

4.10.0 Overview

Searchers need to understand and apply knowledge of the features and limitations of specialized resources in the use of these resources during a search. Searcher competency elements covered in this competency category are

- a) Clause 4.10.1, Specialized resources.

4.10.1 Specialized resources

Knowledge and understanding of	K1. Specialized resources that exist, including a) infrared and optical devices, including forward-looking infrared radar (FLIR), handheld or aerial, night vision goggles, thermal imagery; b) sensory and acoustic devices, including remote listening devices, side scanning sonar, reflective fabrics or fabrics having sensing and/or detection capabilities, ELT homing (121.5 and 406 MHz); c) electronic search devices such as satellite-enabled notification devices and cellular phone/satellite phone tracking; d) radio frequency-based transmitters and/or receivers; e) use of remote operating vehicles (ROVs) and unmanned aerial vehicles (UAVs);
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	f) use of satellite imagery or active signalling technology, such as automatic identification system (AIS) and automatic dependent surveillance broadcast (AD-SB); g) air assets, including fixed and rotary wing assets, aerial spotters, and helicopter long-line rescue teams (HETS); h) marine assets, including boats, personal watercraft, hovercraft, submersibles and ice rescue, underwater recovery teams, and swift water rescue; i) ground assets such as avalanche and crevasse rescue, confined space, cave rescue, high angle rescue, swift water rescue, rope teams, canine teams, equine teams; j) military; and k) convergent volunteers. K2. How to operate concurrently should any of these specialized resources be deployed. K3. Limitations with regards to areas under the control of specialized resources (to avoid track contamination by canine teams, for example), or restrictions on the type of activity (e.g., use of flares during night vision goggle deployment) while specialized resources are mobilized.
Observable performance (do)	P1. Operates concurrently with specialized resources in collaborative and coordinated manner. P2. Adheres to limitations and restrictions on types of activities deployed when specialized resources are mobilized, including a) search area limitations to avoid track contamination when canine units are used; b) use of flares during night vision goggle deployment; and c) activity limits during night operations when infrared/optical search devices are in use.

5 Team leader competencies

5.0 General

The team leader plays a critical role in a GSAR response. While the SAR manager oversees operations, the team leader is in the field with a team of searchers ensuring that the mission is carried out appropriately. The team leader has the authority to direct, coordinate, and supervise the search team and has accountability for the actions and conduct of the team. The team leader generates a safe, co-operative, and cohesive team environment to maximize the effectiveness of the response. A key responsibility of the team leader is to ensure that all policies, procedures, and protocols are followed during the mission.

The team leader brings the knowledge, skills, and abilities of the searcher to this role. This is achieved through successful completion of searcher training and evaluation and sufficient experience through operations and exercises. The team leader will possess strong GSAR skills, particularly in navigation, search techniques, and transport. In addition, the team leader needs to have the ability to plan, organize, lead, supervise, execute, debrief, and report on a GSAR mission. The ten team leader competency categories are

- a) Clause 5.1, Program;
- b) Clause 5.2, Human factors;
- c) Clause 5.3, Environment;

- d) Clause 5.4, First aid and survival skills;
- e) Clause 5.5, Transportation and equipment safety;
- f) Clause 5.6, Navigation;
- g) Clause 5.7, Communication;
- h) Clause 5.8, Lost-person behaviour;
- i) Clause 5.9, Search competencies; and
- j) Clause 5.10, Specialized resources.

Figure 2
Team leader core competency categories
(See Clause 0.2.1.)



5.1 Program

5.1.0 Overview

A team leader needs to understand how SAR is organized and implemented at the local, provincial, territorial, and national levels. The team leader will be able to communicate information to the team members on adherence to applicable legal requirements and on GSAR policies and procedures, and ensure that the searchers are aware of eligible and ineligible GSAR activities. Team leader competency elements covered in this competency category are

- a) Clause 5.1.1, SAR structure in Canada;
- b) Clause 5.1.2, Incident command system (ICS);
- c) Clause 5.1.3, Roles and responsibilities;

- d) Clause 5.1.4, Legal requirements;
- e) Clause 5.1.5, Liability protections and workers' compensation;
- f) Clause 5.1.6, Finance and administration;
- g) Clause 5.1.7, Documentation; and
- h) Clause 5.1.8, Media policy.

5.1.1 SAR structure in Canada

Knowledge and understanding of	K1. How SAR is structured in Canada, including a) the definition of SAR; b) the components of the National Search and Rescue Program, including i) response; ii) prevention; and iii) coordination; c) SAR domains, including i) aeronautical; ii) maritime; and iii) ground and inland waters; and d) organizations and agencies involved in SAR, including i) the federal government, including Parks Canada; ii) provincial and territorial governments; iii) police services within the jurisdictions; and iv) SAR associations. K2. How search and rescue is structured in the applicable jurisdiction.
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5.1.2 Incident command system (ICS)

Knowledge and understanding of	K1. The position and role of the GSAR team in the ICS structure and organization chart. K2. The role of the team leader within the ICS structure.
Observable performance (do)	P1. Successful completion of the ICS 100 or IMS 100 or equivalent as determined by the AHJ. Note: Successful completion of the level 200 is recommended.

5.1.3 Roles and responsibilities

Knowledge and understanding of	K1. The roles and responsibilities of the team leader, including reporting relationships within the GSAR organization and relevant jurisdictional issues. K2. The process for determining GSAR team assignments.
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Observable performance (do)	P1.	Advises and delegates team member (i.e., searcher) roles and responsibilities within the GSAR organizational structure, including reporting relationships.
	P2.	Informs team members of safety priorities for themselves, the team, and the subject.
	P3.	Communicates to team members the eligible and ineligible GSAR activities for the GSAR organization.

5.1.4 Legal requirements

Knowledge and understanding of	K1.	Health and safety legal requirements applicable for GSAR operations, including a) applicable provincial or territorial legislative and policy requirements within the jurisdiction; b) rights and duties of workers and supervisors under applicable occupational health and safety legislation (e.g., right to refuse unsafe work); c) applicable sections of the <i>Criminal Code of Canada</i> (e.g., s. 217.1); d) applicable <i>Canada Labour Code</i> requirements; and e) legal duties and obligations of a team leader.
	K2.	The GSAR organization's workplace health and safety policies and procedures, including a) reporting unsafe conditions, hazards and accidents; b) emergency response; c) safety priorities (themselves, the team, and the subject); d) use of safety equipment, devices, and clothing; e) activity or behaviour that can create a hazard to themselves or to any other person; and f) ensuring ability to work is not impaired by fatigue, alcohol, drugs, stress, or other causes.
	K3.	Legal and civil rights, including policies for human rights and respectful workplace (e.g., harassment prevention).
	K4.	Concepts of civil action, criminal action, crime scene, and coroner's courts (e.g., as a subject as well as a witness).
	K5.	Legislation and policies on privacy of personal information and freedom of information requirements.
	K6.	Identification and credentialing requirements (e.g., proof of identification, credentialing and association with the GSAR Team).
	K7.	Policies for criminal record checks and vulnerable person's checks and rechecks.
	P1.	Supervises team members to ensure compliance with the applicable health and safety legislative requirements for a search mission, including legal duties and obligations, and policies regarding a respectful workplace.

	P2. Supervises to ensure compliance with the GSAR organization's safe working policies and procedures, including a) reporting unsafe conditions, hazards, and accidents; b) emergency response; c) safety priorities (themselves, the team, and the subject); d) use of safety equipment, devices, and clothing; e) activity or behaviour that can create a hazard to themselves or to any other person; and f) ensuring their ability to work is not impaired by fatigue, alcohol, drugs, stress, or other causes. P3. Informs team members of the personal risks and how to mitigate those risks.
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5.1.5 Liability protections and workers' compensation

Knowledge and understanding of	K1. Types of liability protections and workers' compensation coverage within the jurisdiction, including a) applicable legislative protections: i) provincial or territorial emergency and SAR legislation; and ii) the <i>Good Samaritan Act</i>; b) applicable workers' compensation coverage; c) applicable municipal government insurance; d) private insurance; and e) limitations of protections and coverage. K2. Documenting and reporting of claims and the use of tasking numbers. K3. The legal liability of the GSAR organization and its members, including a) potential legal liability issues and types of coverage for search members; b) prevention activities; c) training activities; d) GSAR meetings; and e) operational deployments.
Observable performance (do)	P1. Provides guidance to team members on requirements for documenting and reporting of claims.

5.1.6 Finance and administration

Knowledge and understanding of	K1. The financial and administrative requirements within the GSAR organization, including reporting responsibilities.
Observable performance (do)	P1. Ensures that team members sign in and complete reporting requirements.

5.1.7 Documentation

Knowledge and understanding of	K1. The importance and requirements for documentation, including a) health and safety; b) training and orientation; c) searches;
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	d) signing in and out/checking in and out; e) briefing and/or debriefing; f) on-scene searches; g) legal requirements; and h) confidentiality and protection of personal information.
	K2. The security requirements for a) notes and notebooks; b) acquisition of information from team members; c) storage of records; and d) transmitting the recorded information as required.
Observable performance (do)	P1. Ensures team members follow documentation procedures.

5.1.8 Media policy

Knowledge and understanding of	K1. Applicable media policy within the jurisdiction, including a) the role of the team leader regarding media policy; b) the process for referring media enquiries; c) whose role it is to speak to the media; d) whose role it is to speak to the public; e) restrictions about reporting information externally (i.e., social media); and f) repercussions of breaching media policy and confidentiality requirements.
Observable performance (do)	P1. Communicates media policy to team members. P2. Monitors team members to ensure compliance with the media policy. P3. Adheres to media policy and acts in a professional manner when dealing with media.

5.2 Human factors

5.2.0 Overview

A team leader is able to demonstrate leadership and supervisory skills necessary to direct the operations of a search team in a safe and efficient manner. A team leader is able to recognize potential hazards as well as the physical and psychological demands of a search mission and assign tasks accordingly to ensure the safety of the team and others. Team leader competency elements covered in this competency category are

- a) Clause 5.2.1, Leadership and supervision;
- b) Clause 5.2.2, Risk management;
- c) Clause 5.2.3, Team safety;
- d) Clause 5.2.4, Psychological health and safety; and
- e) Clause 5.2.5, Transport.

5.2.1 Leadership and supervision

Knowledge and understanding of	K1. Leadership and supervisory skills required for a team leader.
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	K2. Key characteristics of an effective team. K3. Concepts of situational leadership and how it is used in a GSAR context (i.e., key principles of assessing roles and responsibilities). K4. Key principles of conflict management. K5. How to effectively communicate information including a) body language; b) appropriate language (i.e., verbal or written); c) active listening; and d) giving and receiving feedback. K6. How to coach and address inappropriate actions by a team member.
Observable performance (do)	P1. Demonstrates effective leadership attributes and skills, including a) shows compassion; b) analyzes and prioritizes tasks; c) delegates task assignments based on individual or team capabilities; d) recognizes opportunities when an assistant with team leader skills could be appropriate or necessary (mentoring or operations); e) plans quickly and effectively; f) shows good decision making and judgement, including taking control of a scene and directing others to accomplish tasks; g) remains calm under pressure and handles stress effectively; and h) delivers effective written and verbal reports. P2. Manages conflict to ensure that tasks are performed efficiently and demonstrates process to deal with a member who is acting inappropriately. P3. Allocates appropriate team members and equipment for the assigned search mission. P4. Briefs team members and leads by example on protocols for interacting with others (e.g., media, witnesses, family, and SAR manager). P5. Communicates the importance of professionalism and confidentiality in all aspects of a search. P6. Leads and supervises a team of searchers during a search mission.

5.2.2 Risk management

Knowledge and understanding of	K1. Potential hazards to the search team, including a) weather; b) natural hazards; c) wildlife; and d) humans (unstable and/or harmful). K2. How to anticipate and assess risks. K3. Strategies to manage and mitigate risks.
Observable performance (do)	P1. Identifies and communicates hazards to team members and the SAR manager. P2. Assesses risks. P3. Manages or mitigates the risks.

5.2.3 Team safety

Knowledge and understanding of	K1. Injury prevention strategies for the search team, including a) ensuring adequate rest and/or sleep; b) avoiding overexertion; c) taking appropriate breaks; d) stretching and warm-up; e) proper lifting techniques; f) travelling safely (e.g., travel only as fast as the slowest person); and g) strategies to prevent hyperthermia, hypothermia, and other environmental injuries. K2. Factors that can affect readiness to respond to a call-out (e.g., fatigue, medical conditions, medications, alcohol, physical demands, stress). K3. How to navigate the team safely to and from the search site. K4. Safe handling, storage, and disposal of dangerous goods. K5. How to assess the skills and competencies of an assigned search team and how to assign responsibilities accordingly. K6. How to evaluate the physical and psychological demands of a search mission to ensure the team members have the required capabilities.
Observable performance (do)	P1. Considers the skills and competencies of an assigned search team and assigns responsibilities accordingly. P2. Recognizes the physical and psychological demands during a search mission and ensures the team members have the required capabilities. P3. Confirms team members have the required clothing and personal protective equipment to use for the assigned search mission. P4. Confirms the contents of the team members' SAR ready packs to ensure that essential items are included. P5. Ensures team members follow safe practices. P6. Ensures the search team has necessary first aid supplies and equipment. P7. Monitors the performance of the search team as the search progresses. P8. Ensures appropriate communications protocols are followed. P9. Counsels team members about factors that could affect readiness to respond to a call-out (e.g., fatigue, medical conditions, medications, physical demands, stress). P10. Ensures that vehicles and equipment are operated by authorized personnel only.

5.2.4 Psychological health and safety

Knowledge and understanding of	K1. The role of the team leader, including a) personal considerations that can affect a searcher's ability to respond; b) steps to assist team members who appear to be affected by an incident and might be suffering from stress; and
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	c) steps to help prepare the team psychologically for the outcome of a search. K2. The team leader's role in critical incident stress identification and management. K3. How to recognize signs of critical incident stress in team members and what resources are available for assistance to team members.
Observable performance (do)	P1. Recognizes signs of critical incident stress in team members and provides direction on accessing resources. P2. Follows policies and procedures for reporting any work-related mental health issues affecting team members.

5.2.5 Transport

Knowledge and understanding of	K1. Procedures or protocols covering transport of the team to and from the search base or search area to ensure an organized response considering the various modes of transportation and the types of vehicles, machines, and equipment that might be used. K2. The required driver's licence(s), training, and insurance for the vehicles and equipment that team members are authorized to use.
Observable performance (do)	P1. Communicates information and procedures to the team members regarding transportation to and from the search base or search area. P2. Informs the team members about the types of vehicles, machines, and equipment that will be used for the assigned search mission. P3. Validates that team members have the required driver's licence(s), training, abilities, and insurance for the vehicles and equipment that they are authorized to use.

5.3 Environment

5.3.0 Overview

A team leader will take appropriate precautions for protecting the safety of the team and others and will be able to identify potential hazards associated with environmental factors in the search area and communicate that information to the search team. Team leader competency elements covered in this competency category are

- a) Clause 5.3.1, Weather;
- b) Clause 5.3.2, Natural hazards;
- c) Clause 5.3.3, Animals;
- d) Clause 5.3.4, Insects and arachnids;
- e) Clause 5.3.5, Plants; and
- f) Clause 5.3.6, Terrain.

5.3.1 Weather

Knowledge and understanding of	K1. Weather conditions that have occurred or are likely to prevail.
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	K2. Search hazards that can result from extreme weather, including freezing rain, major snowfall, strong winds, extreme cold and/or wind chill, lightning, extreme heat and/or humidity. K3. Weather information sources that can be utilized to prepare for a search mission. K4. Precautions to take for the variety of weather conditions and the limitations to respond.
Observable performance (do)	P1. Communicates information to team members about weather conditions that have occurred or are likely to prevail. P2. Communicates information about potential search hazards that can result from extreme weather. P3. Informs team members about weather information sources to utilize to help prepare for a search mission.

5.3.2 Natural hazards

Knowledge and understanding of	K1. Natural hazards, including flooding, landslides, avalanches, fires, wildland fires, lightning, earthquakes, hurricanes, high winds, tsunamis, diseases, and terrain.
Observable performance (do)	P1. Communicates information to team members regarding potential natural hazards.

5.3.3 Animals

Knowledge and understanding of	K1. Animal species that can cause harm, including a) bears; b) wolves, cougars; c) deer, moose, bison, elk, and other ungulates; d) skunks, porcupines; e) dogs and other domestic animals/livestock; and f) snakes. K2. Actions that can be taken to reduce the risk of negative animal encounters, and what to do when confronted with an animal or attacked. K3. Symptoms of disease that animals can cause if bitten (e.g., rabies). K4. First aid treatment for animal attacks and/or bites. K5. The process for reporting animal encounters or attacks.
Observable performance (do)	P1. Communicates information to team members about animal species in the area that can cause harm. P2. Informs team members about recommended actions to take to reduce the risk of animal encounters, including what to do when confronted with an animal or attacked by a predator.

	P3.	Ensures that first aid supplies are available for treatment of animal attacks and/or bites.
	P4.	Informs team members about the procedures for reporting animal encounters or attacks.

5.3.4 Insects and arachnids

Knowledge and understanding of	K1.	Insects and arachnids that can cause harm, including a) ticks; b) bees; c) wasps; d) mosquitoes; e) black flies; and f) spiders.
	K2.	Actions that can be taken to reduce the risk of contact with insects and arachnids that could cause harm.
	K3.	Symptoms of disease that insects and arachnids can cause if bitten.
Observable performance (do)	P1.	Communicates information to team members about insects and arachnids in the area that can cause harm.
	P2.	Communicates information about actions to take to reduce the risk of contact with insects and arachnids that could cause harm.
	P3.	Informs team members about recognizing the symptoms of disease from insect and arachnid bites.
	P4.	Ensures that team members have the necessary first aid supplies for the treatment of insect bites and seek medical treatment for insect-borne diseases.
	P5.	Communicates to team members the reporting procedures for insect bites.

5.3.5 Plants

Knowledge and understanding of	K1.	Plant species in the area that are poisonous or can cause harm.
	K2.	Actions to take to reduce the risk of contact with poisonous or harmful plants.
	K3.	Actions to take upon discovery of a person suspected of poisoning by a plant.
Observable performance (do)	P1.	Communicates information to team members about plant species in the area that are poisonous or can cause harm.
	P2.	Communicates information to team members about actions to take to reduce the risk of contact with poisonous or harmful plants.
	P3.	Informs team members about the steps to take upon discovery of a person suspected of suffering from poisoning by a plant.
	P4.	Confirms that team members have the necessary first aid supplies for the treatment of poisoning by plants.

5.3.6 Terrain awareness

Knowledge and understanding of	K1. How the terrain can have an impact, including a) selection and use of clothing and footwear, search gear, equipment and vehicles; b) type of search techniques utilized; c) methods of travel; d) rescue techniques; and e) the need for additional or specialized resources. K2. The terrain types and hazards for the search area, including a) forests and wetlands; b) lakes, rivers, creeks, canals, moving water; c) mountains (avalanche hazard), hills, cliffs; d) mine shafts, caves, crevices, wells; e) urban environment; f) snow or ice travel; g) farmland, pastures; h) gas lines, power lines; i) construction sites, industrial sites; j) roads, highways, railroads; and k) sunlight and/or darkness.
Observable performance (do)	P1. Communicates information to team members about terrain types and hazards for the area. P2. Checks that team members are wearing the appropriate clothing and footwear for the terrain. P3. Makes informed decisions based on terrain, including a) appropriate search gear; b) use of equipment and vehicles; c) type of search techniques to employ; d) methods of travel; and e) rescue techniques.

5.4 First aid and survival skills

5.4.0 Overview

A team leader ensures that team members have the required first aid credentials and survival skills for a search mission, and that the team is equipped with essential first aid and/or survival supplies and equipment. Team leader competency elements covered in this competency category are

- a) Clause 5.4.1, First aid; and
- b) Clause 5.4.2, Survival skills.

5.4.1 First aid

Knowledge and understanding of	K1. Standard first aid for search operations. K2. Essential first aid supplies to be included in SAR ready pack.
Observable performance (do)	P1. Completes and provides proof of standard first aid training as required by the AHJ.

	P2.	Checks to ensure team members have required first aid training and credentials.
	P3.	Informs team members about the first aid supplies to be included in the SAR ready pack.

5.4.2 Survival skills

Knowledge and understanding of	K1.	Psychological demands associated with being in a survival situation (e.g., importance of a positive mental attitude).
	K2.	Risks associated with fear and how to control.
	K3.	Systemic survival planning and how it can be applied.
	K4.	Contents of a personal survival kit.
	K5.	Actions to take when mission personnel become lost or injured.
	K6.	Actions to take when a victim is located and requires assistance.
	K7.	Necessities of life elements and how they are relevant in GSAR.
	K8.	Steps involved in building and using fire and the materials required.
	K9.	Types of emergency shelters and how they are constructed.
	K10.	Selection of locations for emergency shelters.
	K11.	Methods of water purification.
	K12.	Potential sources of water in survival situations.
	K13.	Selection of food and food preparation.
	K14.	Sources of food in survival situations.
	K15.	Emergency signalling in survival situations.
	K16.	Basic knot tying.
Observable performance (do)	P1.	Coaches team members about the physical and psychological demands associated with a survival situation, including how fear can be controlled and how systematic survival situation planning is used.
	P2.	Checks to ensure that team members have complete personal survival kits in their SAR ready packs.
	P3.	Coaches team members about necessities of life requirements in a survival situation.

	P4. Informs team members about how necessities of life elements factor into search operations, including a) food: i) nutritional requirements for GSAR missions; ii) food selection; and iii) sources of food in survival situations; b) water: i) hydration requirements for GSAR missions; ii) hazards of dehydration; iii) methods of water purification; and iv) sources of water in survival situations; c) shelter: i) types of emergency shelters and how they are constructed; and ii) appropriate locations for emergency shelters; and d) heat: i) how to build a fire and what materials are used; and ii) what fire is used for. P5. Demonstrates various emergency signals methods to team members.
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5.5 Transportation and equipment safety

5.5.0 Overview

A team leader has knowledge of applicable legislation and regulations regarding the vehicles and equipment used for search missions. They ensure that team members authorized to operate vehicles and equipment have the required training and licence requirements and that all safety procedures are followed. Team leader competency elements covered in this competency category are

- a) Clause 5.5.1, Personal vehicle;
- b) Clause 5.5.2, SAR response vehicles;
- c) Clause 5.5.3, Vehicle and trailer combinations;
- d) Clause 5.5.4, Marine emergency vessels;
- e) Clause 5.5.5, Snowmobiles;
- f) Clause 5.5.6, All terrain vehicles; and
- g) Clause 5.5.7, Aircraft.

5.5.1 Personal vehicle

Knowledge and understanding of	K1. Safe use of personal vehicles including a) travelling to the scene; b) at the scene; and c) returning home. K2. Applicable legislation and regulations, including insurance and licensing requirements.

Observable performance (do)	P1.	Provides proof of required driver's licence and insurance requirements for self and team members.
	P2.	Informs team members about safe use of personal vehicles travelling to the scene, at the scene, and returning home.
	P3.	Informs team members of the parking procedures at scene so as to not obstruct entry or exit to the rally point or prevent public access to the property.

5.5.2 SAR response vehicles

Knowledge and understanding of	K1.	Safe operating procedures of SAR response vehicles.
	K2.	Applicable laws and jurisdictional requirements for the operation of SAR response vehicles, including user authorization and licence requirements.
	K3.	Transportation policies and procedures with the specific jurisdiction.
	K4.	Items to include in the inspection of vehicles for replacement and serviceability.
Observable performance (do)	P1.	Assesses skills of team members in the assignment of driving duties.
	P2.	Checks that operators have all required training and licences for the operation of SAR response vehicles.
	P3.	Checks vehicles pre- and post-trip to ensure that they are running safely, are serviceable, and equipped properly.
	P4.	Assigns tasks for operating SAR response vehicles to team members.

5.5.3 Vehicle and trailer combinations

Knowledge and understanding of	K1.	Proper loading and securement procedures for vehicle and trailer combination.
	K2.	How to safely operate vehicle and trailer combinations in all weather conditions.
Observable performance (do)	P1.	Communicates tasks and assignments to team members for the loading and operation of vehicles and trailer combinations.
	P2.	Conducts inspections of tow vehicle and trailer.
	P3.	Assesses team members' ability to drive tow vehicle and provides appropriate feedback.

5.5.4 Marine emergency vessels

Knowledge and understanding of	K1.	Legislation and regulations concerning watercraft operation and licensing.
		Note: A boat used by a SAR team is considered a commercial vessel, rather than a pleasure craft.

	K2.	Information to be covered in pre-departure briefing to team members.
Observable performance (do)	P1.	Checks to ensure that team members are wearing appropriate protective equipment (e.g., PFDs) and SAR PPE.
	P2.	Communicates pre-departure briefing to team members.

5.5.5 Snowmobiles

Knowledge and understanding of	K1.	Laws and regulations for the use and operation of snowmobiles.
	K2.	The safe operating procedures of snowmobiles that will be used for search missions.
	K3.	The required safety equipment to be available and used.
	K4.	Importance of having a minimum of two snowmobiles travel together.
Observable performance (do)	P1.	Checks to ensure team members are trained and familiar with the operation of a snowmobile and required safety equipment (e.g., helmets).
	P2.	Assigns snowmobile operations to qualified team members.
	P3.	Checks snowmobiles prior to departure to ensure their reliability and safety.

5.5.6 All-terrain vehicles

Knowledge and understanding of	K1.	Laws and regulations for the use and operation of all-terrain vehicles (ATVs).
	K2.	The safe operating procedures for ATVs that will be used for search missions.
	K3.	The required safety equipment to be available and used.
	K4.	The importance of having a minimum of two ATVs travel together.
Observable performance (do)	P1.	Checks to ensure team members are trained and familiar with the operation of an ATV and the safety equipment required.
	P2.	Assigns ATV operations to qualified team members.
	P3.	Checks ATVs prior to departure to ensure their reliability and safety.

5.5.7 Aircraft

Knowledge and understanding of	K1.	Hazards and safety procedures when working with, around, or in aircraft (i.e., fixed and rotational wing).
Observable performance (do)	P1.	Checks to ensure that team members are familiar with safety procedures regarding helicopters and other aircraft.

	P2.	Communicates safety procedures to team members.
	P3.	Follows communication protocols in reporting routing to SAR manager.

5.6 Navigation

5.6.0 Overview

Team leaders have the knowledge and ability to utilize maps, compasses, and GPS units during operations while leading a search team and understand which device would apply in their jurisdiction and for a specific search mission. Team leader competency elements covered in this competency category are

- a) Clause 5.6.1, Maps;
- b) Clause 5.6.2, Compass;
- c) Clause 5.6.3, Global positioning system (GPS);
- d) Clause 5.6.4, Map and compass; and
- e) Clause 5.6.5, GPS and map.

5.6.1 Maps

Knowledge and understanding of	K1.	How to differentiate between types of maps that would be used in the search areas, and the limitations of the various types, including a) topographical maps; b) relief maps; c) political maps (e.g., municipal or regional); d) orthophoto maps; e) marine charts; and f) specialized maps for specific jurisdictions or regions (e.g., a terrain resource information management (TRIM) map).
	K2.	Technical versus non-technical terrain and the need for specialized resources.
	K3.	How to complete a hazard assessment based on map information.
	K4.	How to identify potential hazards not identified on a map due to scale (e.g., lack of details).
Observable performance (do)	P1.	Identifies limitations of the range of maps used in search mission.
	P2.	Completes a hazard assessment based on map information.
	P3.	Identifies potential hazards not identified on a map due to scale.

5.6.2 Compass

Knowledge and understanding of	K1.	How to set or allow for the declination when using a compass.
	K2.	How to assess the serviceability of a compass.
Observable performance (do)	P1.	Provides instructions to team members on compass use, including interference factors, limitations, and basic maintenance and care.
	P2.	Sets the declination on a compass.

	P3. Uses a bearing that allows for declination.
	P4. Assesses the serviceability of a compass.

5.6.3 Global positioning system (GPS)

Knowledge and understanding of	K1. How to confirm a safe and/or appropriate travel route between two points. K2. Features of a GPS that are beneficial during a search mission. K3. How to program different pages in the GPS to customize views.
Observable performance (do)	P1. Demonstrates GPS features commonly used in a search mission. P2. Enters a coordinate into a GPS and navigates to that location. P3. Selects a safe and/or appropriate travel route between two points using a GPS. P4. Programs GPS unit to customize view.

5.6.4 Map and compass

Knowledge and understanding of	K1. How to determine a safe and appropriate travel route between two points.
Observable performance (do)	P1. Demonstrates the safe and/or appropriate travel route between two points using a map and compass.

5.6.5 GPS and map

Knowledge and understanding of	K1. How to integrate GPS use with maps being utilized, including a) paper maps; b) digital maps; and c) pre-loaded maps in GPS unit.
Observable performance (do)	P1. Demonstrates how GPS can be used interactively with maps.

5.7 Communication

5.7.0 Overview

A team leader is able to demonstrate the use of communications equipment and systems that will be used for search missions and communicate information to team members on established communication protocols that will be employed to ensure an effective search. Team leader competency elements covered in this competency category are

- a) Clause 5.7.1, Awareness of role of communications during an incident;
- b) Clause 5.7.2, Radio operations;
- c) Clause 5.7.3, Satellite and cell phones;

- d) Clause 5.7.4, Alerting technologies; and
- e) Clause 5.7.5, Emerging communication technologies.

5.7.1 Awareness of role of communications during an incident

Knowledge and understanding of	K1.	Best practices for the care of communications equipment before, during, and after a search.
	K2.	Communication protocols within team, between individual teams, and relaying to command, including the role of the team leader in directing communications.
	K3.	How to establish intra-team communications, such as message relay and line search team communications.
	K4.	Team leader's responsibility for field notes.
Observable performance (do)	P1.	Directs all communications following established protocols.

5.7.2 Radio operations

Knowledge and understanding of	K1.	Use of radios for different search techniques (e.g., swift-water, sound sweep, high-angle, road search, etc.).
	K2.	How to keep field notes.
Observable performance (do)	P1.	Troubleshoots problems with telecommunication systems and equipment.
	P2.	Sets up and operates repeaters, base stations, and mobile radios specific to the team or organization.
	P3.	Communicates effectively through air-to-ground radios (e.g., land mobile VHF-FM or air VHF-AM), specific to the team or organization.
	P4.	Maintains field notes.

5.7.3 Satellite and cell phones

Knowledge and understanding of	K1.	When to control use of personal devices, including device applications such as cameras.
Observable performance (do)	P1.	Uses satellite and cell phones as alternate sources of communication.
	P2.	Instructs team members on specific types of messaging.
	P3.	Sends data using satellite communication, specific to the team or organization.

5.7.4 Alerting technologies

Knowledge and understanding of	K1.	When and how to best use alerting technologies.
	K2.	Search devices on 406 frequencies, where available. Note: 406 MHz is a new frequency utilized for emergency locator transmitters and beacons.
	K3.	Beacon devices, where available, for air, marine and ground searches.
	K4.	Device limitations.
Observable performance (do)	P1.	Leads team in use of appropriate alerting technologies.

5.7.5 Emerging communication technologies

Knowledge and understanding of	K1.	Best practices for the care of new technology equipment before, during, and after a search.
	K2.	Importance of maintaining back-up conventional communications.
Observable performance (do)	P1.	Assesses team member competencies with new communications equipment.
	P2.	Follows appropriate use guidelines for new technologies.
	P3.	Recognizes limitations of existing equipment and identifies and/or requests new resources needed (and the urgency of the need) to SAR manager.

5.8 Lost-person behaviour

5.8.0 Overview

A team leader is able to demonstrate their knowledge and understanding of lost-person behaviour analysis in support of search efforts. Team leader competency elements covered in this competency category are

a) Clause 5.8.1, Lost-person behavior

5.8.1 Lost-person behaviour

Knowledge and understanding of	K1.	Lost-person behaviour analysis as it applies to GSAR tactics.
	K2.	The relationship between lost-person behaviour analysis and search theory.
	K3.	The different styles of searching (i.e., active and/or passive) and their relationship to lost-person behaviour.
Observable performance (do)	P1.	Undertakes terrain analysis to provide SAR manager with planning data.

	P2.	Identifies decision points in the field and communicates these to SAR manager to aid in search planning.
	P3.	Directs and coaches team members to search effectively considering lost-person behaviour information.

5.9 Search competencies

5.9.0 Overview

A team leader is able to integrate search theory and search types, patterns, and techniques into search operations. A team leader is responsible for directing the operations of a search team and assigning tasks in order to complete a mission in a safe manner, ensuring that policies and procedures are followed. Team leaders will monitor the performance and dynamics of their team throughout search operations to ensure an effective and efficient response. Team leader competency elements covered in this competency category are

- a) Clause 5.9.1, Search theory;
- b) Clause 5.9.2, Notification;
- c) Clause 5.9.3, Activation (call-out), checking in, and initial briefing;
- d) Clause 5.9.4, Assignments;
- e) Clause 5.9.5, Search techniques;
- f) Clause 5.9.6, Confinement/containment;
- g) Clause 5.9.7, Attraction methods;
- h) Clause 5.9.8, Clue awareness and detection;
- i) Clause 5.9.9, Demobilization process;
- j) Clause 5.9.10, Night searches;
- k) Clause 5.9.11, Land-water interface searches;
- l) Clause 5.9.12, Evidence handling;
- m) Clause 5.9.13, Dealing with deceased persons; and
- n) Clause 5.9.14, Urban searches.

5.9.1 Search theory

Knowledge and understanding of	K1.	Factors that make SAR incidents emergencies.
	K2.	Evaluation of search urgency,
	K3.	Components of a search, including
		a) pre-planning; b) notification; c) response; d) tactics and/or operations; e) suspension; and f) evaluation.

	K4. Key concepts of search management, including a) probability of detection (POD); b) probability of area (POA); c) point last seen (PLS); d) last known position (LKP); and e) initial planning point (IPP).
Observable performance (do)	P1. Integrates search theory into search operations.

5.9.2 Notification

Knowledge and understanding of	K1. Procedures to receive and respond to notification. K2. Integration of notification into the initiation of search operations.
Observable performance (do)	P1. Receives and responds to notification. P2. Integrates notification into the initiation of search operations. P3. Ensures that team members record and report new information received from persons encountered in the search area. P4. Reports new information received during the course of the search to the SAR manager.

5.9.3 Activation (call-out), checking in, and initial briefing

Knowledge and understanding of	K1. Procedures for assembling and/or checking in. K2. Contingency plans and implementation. K3. Characteristics of facilities and their requirements (e.g., safety, capacity, security). K4. Impacts of human dynamics when working with a team and assigning tasks. K5. Equipment requirements.
Observable performance (do)	P1. Maintains team records, including equipment checklist. P2. Assembles assigned team members. P3. Ensures team members are checked in. P4. Identifies and obtains resources (e.g., equipment). P5. Writes briefings, when appropriate, to the team. P6. Delivers briefings to the team. P7. Considers human dynamics of the team when assigning tasks. P8. Communicates initial tasks and assignments to team members.

5.9.4 Assignments

Knowledge and understanding of	K1. Assignment requirements (i.e., what needs to be done). K2. The team's capabilities and skills for the search mission. K3. How to determine and obtain needed resources (e.g., equipment and supplies). K4. Recording and reporting requirements.
Observable performance (do)	P1. Identifies and obtains resources for search missions. P2. Communicates assignments to team members through the briefing including a) description of situation (e.g., incident, subject, map orientation, other search efforts); b) mission (i.e., who, what, where, when, how); c) execution (i.e., phases, tasks by phase, coordinating details); d) administration (i.e., logistics, safety requirements); e) communications (i.e., command structure, frequency, call signs, code words, radio checks); and f) tools available (i.e., maps, assignment sheet, subject profile, track report). P3. Delegates tasks and/or responsibilities of team members. P4. Checks to ensure that team members are prepared for the assigned search mission (e.g., equipped the appropriate clothing, equipment and supplies). P5. Achieves assignment objectives. P6. Maintains team records and/or data (assignment sheets, checklists). P7. Prepares contingency plans. P8. Implements contingency plans.

5.9.5 Search types, patterns, and techniques

Knowledge and understanding of	K1. Search types, patterns, and techniques, including a) passive; and b) active. K2. Search area segmentation. K3. Clue-detection techniques. K4. Types of searches: a) hasty (quick search); b) efficient search (open grid); c) thorough search (closed grid); and d) evidence search. K5. Types of search patterns: a) trail or route search; b) lookout search; c) contour search;
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	d) wandering search; e) line search; f) grid searches; g) perimeter search; h) purposeful wandering search; i) binary search and/or sign cutting; and j) sound sweeps. K6. How to match search types to patterns. K7. Number of team members required for each search pattern. K8. Importance of using all senses during search types and patterns. K9. Critical distance techniques and calculations. K10. Factors affecting search pace.
Observable performance (do)	P1. Identifies search types, patterns, and techniques best suited to the search mission and provides recommendations to the SAR manager. P2. Communicates with team members and with the SAR manager about search types, patterns, and techniques to be deployed. P3. Demonstrates various search types, patterns, and techniques to team members in order to enhance searcher's knowledge and skills.

5.9.6 Confinement/containment

Knowledge and understanding of	K1. The role of confinement and containment in search and associated challenges, including a) time; b) topography; c) resources; d) weather; and e) cover. K2. Types of methods of containment: a) road blocks; b) trail blocks; c) camps at strategic locations; d) lookouts; e) listening posts; f) string line and/or hip chain; g) track traps; h) messages at strategic locations; i) perimeter sign cuts; j) vehicle patrols; and k) use of media. K3. Timing of confinement/containment (e.g., early in the operation). K4. Combining methods of confinement and containment with search tactics, such as attraction and tracking. K5. Reasons why a confinement area might be expanded. K6. Data and recording requirements.
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Observable performance (do)	P1.	Implements confinement/containment methods appropriate to the mission.
	P2.	Outlines the equipment that can aid in confinement/containment and safe work practices.
	P3.	Communicates with team and with SAR manager on confinement/containment methods used.

5.9.7 Attraction methods

Knowledge and understanding of	K1.	Various attraction methods and challenges associated with attraction.
	K2.	Reasons for incorporating attraction methods into a search.
	K3.	Urgency of using attraction methods (e.g., reduce search area).
	K4.	Various attraction methods, including a) visual; b) night time tools; and c) sound.
	K5.	Challenges associated with attraction, including a) responsiveness of subject; b) stopping to listen at appropriate intervals; c) weather conditions; d) natural sounds; e) topography; f) impairment of senses; and g) hearing protection for searchers.
	K6.	Importance of communication when using attraction methods.
	K7.	Notice to others of attraction methods being used and intervals established.
	K8.	Protocol for notifying when contact with subject is established.
	K9.	Equipment that aids in attraction.
Observable performance (do)	P1.	Implements attraction methods in a search operation, including coordination with others in the immediate search area.
	P2.	Communicates with team and with SAR manager in accordance with established protocols and timing intervals.
	P3.	Provides feedback to team members on attraction method used.
	P4.	Manages records and data collected.
	P5.	Uses equipment that aids in attraction.

5.9.8 Clue awareness and detection

Knowledge and understanding of	K1.	Equipment that can aid in clue awareness and detection.
	K2.	Clue awareness and detection and interpretation techniques.
	K3.	When to use various clue awareness and detection techniques.

	K4.	When to suspend certain clue awareness and detection techniques.
	K5.	Clue-recording procedures.
Observable performance (do)	P1.	Integrates clue awareness and detection techniques into GSAR search operations.
	P2.	Implements various clue awareness and detection techniques in search operations.
	P3.	Provides initial interpretation of clues to SAR manager (e.g., age, condition, indication of direction of travel).
	P4.	Suspends certain clue awareness and detection techniques in search operations.
	P5.	Identifies, handles, and records clues.

5.9.9 Demobilization process

Knowledge and understanding of	K1.	Team leader's responsibilities for tracking their people and equipment until final demobilization or reassignment.
	K2.	Demobilization process.
	K3.	Demobilization tasks (i.e., what needs to be done).
	K4.	Equipment requirements (restock, replenish, checklist).
	K5.	Team logistics.
	K6.	Elements of demobilization, including a) preparation; b) returning to base, travel route; c) post-mission tasks; d) CISM recognition; and e) ability to drive home.
Observable performance (do)	P1.	Reviews team skills and resources.
	P2.	Identifies and obtains needed resources.
	P3.	Communicates tasks to team members.
	P4.	Delegates tasks to team members.
	P5.	Integrates demobilization procedures into the search operations.
	P6.	Demobilizes the camp.
	P7.	Completes and submits team records and data (assignments, forms, and reports).
	P8.	Reviews and revises contingency plans as required.
	P9.	Supervises demobilization of the unit/team, including all supplies.
	P10.	Reviews team development.
	P11.	Leads the debriefing with team members.

	P12.	Participates in SAR management team debriefing.
	P13.	Prepares documentation of team's debriefing.

5.9.10 Night searches

Knowledge and understanding of	K1.	Reasons for implementing a night search.
	K2.	Advantages associated with implementing a night search, including a) stationary object; b) expanded search time; and c) less noise and sound travels better.
	K3.	Challenges associated with implementing a night search, including a) maintaining personal night vision; b) unresponsive subject; c) destruction of clues; d) poor visibility; e) topography; f) harder to coordinate team; and g) reliability of light sources.
	K4.	Risk considerations of night searches to searchers and subject (e.g., fear of dark, night vision, fatigue, need for experienced searchers).
	K5.	Critical separation and/or critical spacing considerations.
	K6.	Types of night vision equipment.
	K7.	Types of lighting devices.
	K8.	Specialized equipment that can aid in night searches, such as night vision and infrared goggles.
	K9.	Benefits and limitations of specialized equipment utilized in night searches.
	K10.	Human dynamics relative to night search operations and their impacts.
	K11.	Procedures for use of night vision equipment and preserving of personal night vision.
Observable performance (do)	P1.	Conducts night searches following established procedures.
	P2.	Uses specialized equipment that can aid in night searches.

5.9.11 Land-water interface searches

Knowledge and understanding of	K1.	Specialized equipment and resources that can aid in shoreline searches.
	K2.	How to integrate equipment and resources with GSAR operations.
	K3.	Safety issues and mitigation strategies for shoreline searches.
Observable performance (do)	P1.	Conducts shoreline searches.

	P2. Uses specialized equipment and resources that can aid in shoreline searches.
	P3. Integrates specialized equipment and resources that aid in shoreline searches with GSAR operations.

5.9.12 Evidence handling

Knowledge and understanding of	K1. Chain of evidence concept.
	K2. The steps to be taken to control the site and secure potential evidence.
	K3. Path of contamination.
	K4. Crime scene characteristics.
	K5. How to recognize and secure a potential crime scene.
Observable performance (do)	P1. Recognizes a potential crime scene.
	P2. Avoids contamination or cross-contamination.
	P3. Secures potential crime scene, including logging personnel on scene.
	P4. Controls access to a potential crime scene.
	P5. Directs team members in protecting and preserving evidence.
	P6. Advises and requests assistance to deal with potential crime scene evidence.

5.9.13 Dealing with deceased persons

Knowledge and understanding of	K1. Procedures and protocols for transporting human remains.
	K2. Psychological demands on team members arising from dealing with human remains.
	K3. Process to access assistance for team members, if required.
	K4. Legal issues in dealing with deceased persons (e.g., accountability requirements, protection of personal information).
Observable performance (do)	P1. Recognizes the legal and psychological issues in dealing with deceased persons and provides guidance to team members.
	P2. Ensures that personal protective equipment (PPE) is used and that proper procedures for transport are followed.
	P3. Accesses critical incident stress assistance for team members appropriately.

5.9.14 Urban searches

Knowledge and understanding of	K1. Causes linked to disappearance in the context of urban search.
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	K2. Potential profiles, including a) accidental (secluded areas); b) criminals; c) mental illness and/or despondent; d) autism; e) dementia; f) children; and g) runaways. K3. Dangers and difficulties of each profile in relation to an urban environment. K4. Tactics for urban searches (e.g., door-to-door, urban confinement, building search, evidence search). K5. Legal boundaries of urban searches (e.g., trespassing issues, privacy issues). K6. Potential hazards associated with urban searches, including a) traffic; b) abandoned or damaged buildings; c) industrial and/or chemical storage areas/contaminated areas; d) rapid destruction of clues; e) clue-rich environment; f) scale of search areas (easy access to transportation for disappeared); g) convergent volunteers; h) interference from media; i) animals at large (e.g., dogs); j) criminal elements (e.g., gang members, grow ops); and k) requirements to search refuse (e.g., needle sticks).
Observable performance (do)	P1. Adapts causes of disappearance to the unique characteristics of the urban search. P2. Communicates legal boundaries to the team. P3. Leads team through each tactic (door to door, confinement, building, evidence) and identifies potential hazards. P4. Leads team through three levels of door to door canvassing (thorough, informing residents, flyers).

5.10 Specialized resources

5.10.0 Overview

A team leader is able to determine specialized resource needs for a search mission and know how to access and utilize the resources for a search mission in a collaborative and coordinated manner with other agencies and/or jurisdictions. Team leader competency elements covered in this competency category are

- a) Clause [5.10.1](#), Specialized resources.

5.10.1 Specialized resources

Knowledge and understanding of	K1. How to conduct hazard and/or risk assessments and determine the capabilities required that might initiate the need for specialized resources. K2. Interdependencies created with specialized resources in SAR team area of operations. K3. When specialized resources have been or are operating within a search area.
Observable performance (do)	P1. Incorporates specialized resources into team search area. P2. Communicates with multi-jurisdictional and/or multi-functional resources. P3. Conducts hazard and/or risk assessments and makes recommendations on the capabilities required that might initiate the need for specialized resources. P4. Utilizes specialized resource information in planning search tactics.

6 SAR manager competencies

6.0 General

The SAR manager has direct authority and control over the GSAR search teams being tasked for a SAR mission. Whether working as part of a unified command system or directing various teams as part of ground operations, the SAR manager will coordinate and assign tasking to meet the current objectives. The SAR manager has the expertise and capacity to manage a search and has the history and understanding of how a search is planned, organized, and progresses. The SAR manager utilizes the resources that are immediately available and recognizes those additional resources that will be needed. The eight SAR manager competency categories are

- a) Clause 6.1, Program;
- b) Clause 6.2, Roles and responsibilities;
- c) Clause 6.3, Planning;
- d) Clause 6.4, Implementation;
- e) Clause 6.5, Search operations;
- f) Clause 6.6, Post mission;
- g) Clause 6.7, Technology and specialized resources; and
- h) Clause 6.8, Urban searches.

Figure 3
SAR manager core competency categories
(See Clause 0.2.1.)



6.1 Program

6.1.0 Overview

The SAR manager understands how SAR is organized and implemented at the local, provincial, territorial, and national levels. The SAR manager ensures that there is adherence to all applicable legal requirements and GSAR policies and procedures, and that the search teams are aware of the eligible and ineligible GSAR activities. SAR manager competency elements covered in this competency category are

- a) Clause 6.1.1, SAR structure in Canada;
- b) Clause 6.1.2, Incident command system (ICS);
- c) Clause 6.1.3, Essentials of effective search management;
- d) Clause 6.1.4, Legal and policy requirements; and
- e) Clause 6.1.5, Media policy.

6.1.1 SAR structure in Canada

Knowledge and understanding of	K1.	History and evolution of search management in Canada.
	K2.	Roles and responsibility regarding administration, operation, and finance in SAR.
	K3.	How search and rescue is structured in Canada and the roles of the SAR organizations and agencies involved, including a) federal government (including Parks Canada); b) provincial and territorial governments; c) police services in the jurisdictions; and d) SAR associations.
	K4.	The definition of SAR.
	K5.	The components of the National Search and Rescue Program, including a) response; b) prevention; and c) coordination.
	K6.	SAR domains, including a) aeronautical; b) maritime; and c) ground and inland waters.

6.1.2 Incident command system (ICS)

Knowledge and understanding of	K1.	The history, features, principles, and organizational structure of ICS for SAR planning and management.
	K2.	The GSAR teams' position in the ICS structure and organization chart.
Observable performance (do)	P1.	Successful completion of the ICS 200 or IMS 200 examination or equivalent as determined by the AHJ. Note: <i>Successful completion of level 300 is recommended.</i>
	P2.	Carries out responsibilities in accordance with ICS 200 or IMS 200.

6.1.3 Essentials of effective search management

Knowledge and understanding of	K1.	Reasons for searches, including a) legal; b) moral; and c) humanitarian.
	K2.	Crucial factors in SAR, including a) SAR is an emergency; b) investigation; c) confinement; d) trained resources in an appropriate order; and e) safety (i.e., for themselves, the team, and the subject).
	K3.	SAR information management.

Observable performance (do)	P1.	Responds appropriately in an emergency.
	P2.	Manages searches for clues and the subject with concentration on aspects important to the search.
	P3.	Assigns appropriate resources for confinement of search area and gathers information.
	P4.	Allocates trained resources in an appropriate order.
	P5.	Recognizes and manages risks and hazards.

6.1.4 Legal and policy requirements

Knowledge and understanding of	K1.	Legal requirements, including a) the <i>Criminal Code of Canada</i> (e.g., s. 217.1); b) applicable <i>Canada Labour Code</i> requirements; c) relevant workplace health and safety legislation; and d) the <i>Good Samaritan Act</i>.
	K2.	Privacy of personal information and confidentiality requirements.
	K3.	Civil liability, including a) negligent appointment, retention, assignment, or entrustment; b) failure to train, supervise, or direct; and c) vicarious liability.
	K4.	Standard of care and duty of care. Note: <i>Searchers should not exceed their qualifications.</i>
	K5.	Policy considerations, including a) organizational policies; b) collective agreements; c) standard operating procedures; and d) safe work practices.
Observable performance (do)	P1.	Demonstrate the ability to implement or integrate legal and/or policy requirements for GSAR operations.

6.1.5 Media policy

Knowledge and understanding of	K1.	Setting guidelines for media interaction during a given search, including a) acting as or appointing an information officer; and b) referring media to an approved media liaison contact of the AHJ.
	K2.	The role of the media in search operations.
	K3.	information management.
Observable performance (do)	P1.	Conveys the media policy during GSAR briefings.
	P2.	Provides updates to the media that are necessary and are of benefit to the search effort.

6.2 Roles and responsibilities

6.2.0 Overview

The SAR manager is able to demonstrate effective leadership and supervisory skills necessary to direct the operations of the GSAR organization and ensure that search missions are organized and conducted in a safe and efficient manner. The SAR manager is able to effectively coordinate and collaborate with other organizations and/or authorities and has the knowledge and experience to ensure that search missions are carried out by trained and well-informed search teams. SAR manager competency elements covered in this competency category are

- a) Clause 6.2.1, Role of the SAR manager;
- b) Clause 6.2.2, Specific responsibilities of SAR manager;
- c) Clause 6.2.3, Management and leadership; and
- d) Clause 6.2.4, Critical incident stress management.

6.2.1 Role of the SAR manager

Knowledge and understanding of	K1. Role of the SAR manager, including a) overseeing and organizing operations for mission and/or incident; b) selecting team leaders and assigning searchers in order to create effective teams for a given task or mission; c) locating, rescuing, and recovering subject; d) providing for safety of responders; e) ensuring compliance with policy and safety standards; f) responding in a planned, organized, managed, and documented way; g) identifying the need for, use of, and access to specialized resources (e.g., Coast Guard, canine and equine teams); and h) recognizing the roles in the interoperability of SAR.
Observable performance (do)	P1. Ensures that response is planned, organized, managed, and properly documented. P2. Ensures that a search is conducted in a coordinated and efficient manner so that the subject is located as quickly as possible in the best possible condition. P3. Ensures that activities are carried out in accordance with established policies and safety standards.

6.2.2 Specific responsibilities of the SAR manager

Knowledge and understanding of	K1. Objective setting for the current operational period, including demobilization. K2. Positions for command, operations, planning, logistics, and finance and administration within the ICS system. K3. Searching and planning, data gathering, and documentation. K4. Evaluation of searching and planning data. K5. Requirements of a status map. K6. Strategies, tactics, and resources, including those for technical rescue.
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	K7. Operational periods. K8. How to establish the incident command post and other facilities as required. K9. Briefing and monitoring of SAR management team and debriefings. K10. Need for family liaison officer. K11. Revisions to the overall objectives when needed. K12. Objective setting for the next operational period. K13. Briefings for replacement SAR management team. K14. Search suspension/termination criteria (in consultation with the incident commander and search management team). K15. How to implement a search suspension and/or termination. K16. Management of demobilization. K17. Debriefings and interviews to determine the subject's behaviour.
Observable performance (do)	P1. Develops overall objectives for the current operational period. P2. Ensures that positions are created for command, operations, planning, logistics, and administration and finance. P3. Implements searching and planning data gathering and documentation and communication. P4. Shows understanding of the application of lost-person behaviour statistics in search planning. P5. Ensures status map is created and maintained. P6. Determines strategies, tactics, and resources. P7. Determines operational periods for the search mission. P8. Ensures establishment of incident command post and other facilities as required. P9. Briefs and monitors SAR management team, as applicable under the ICS/IMS. P10. Assigns family liaison officers. P11. Monitors and assesses debriefings and revises objectives if required. P12. Develops overall objectives for next operational period. P13. Briefs replacement GSAR management team on all aspects of the response with specific reference to strategy and tactics being employed and objectives. P14. Determines, in consultation with GSAR IC and GSAR management team, the search suspension criteria. Note: The incident commander for the AHJ normally carries the ultimate responsibility and has the final say on the commencement, duration, and suspension and/or termination of the search and/or rescue operations.

	P15. Implements the suspension and/or termination.
	P16. Debriefs and interviews the subject, if possible, to document lost-person behaviour.

6.2.3 Management and leadership

Knowledge and understanding of	K1. Management functions of the SAR manager, including organization, planning, staffing, directing, controlling, leading, collaborating, providing purpose, and motivation. K2. Necessary leadership attributes for GSAR operations. K3. Performance management functions. K4. Types of effective communication (e.g., verbal, non-verbal, active listening, reflective and clarification, empathy, recognition of cultural differences).
Observable performance (do)	P1. Develops strategies. P2. Manages and mentors team leaders and team members. P3. Liaises with internal and external authorities and agencies and organizations. P4. Manages communications systems. P5. Communicates ideas and information effectively so that communications are understood and acted upon. P6. Manages GSAR information and documentation. P7. Collects, organizes, and analyzes information. P8. Plans and organizes activities (see Clause 6.3). P9. Works with others and in teams. P10. Solves problems. P11. Uses technologies effectively. P12. Ensures practices are safe. P13. Ensures objectives are met.

6.2.4 Critical incident stress management

Knowledge and understanding of	K1.	Concept of critical incident stress.
	K2.	Common signs and symptoms of stress and sources of CIS in SAR activities.
	K3.	Methods of preventing critical incident stress.
	K4.	Demobilization and stress defusing strategies.
Observable performance (do)	P1.	Requests critical incident stress management services, as appropriate.

6.3 Planning

6.3.0 Overview

The SAR manager is able to demonstrate leadership abilities and skills to effectively organize and plan a search mission, ensuring the required resources are available and that policies and procedures are in place and adhered to. SAR manager competency elements covered in this competency category are

- Clause 6.3.1, SAR preplanning;
- Clause 6.3.2, Resource management;
- Clause 6.3.3, Search team criteria; and
- Clause 6.3.4, Information management and documentation.

6.3.1 SAR preplanning

Knowledge and understanding of	K1.	Importance of preplanning.
	K2.	Process for preplanning.
	K3.	Components of a preplan.
	K4.	SAR vulnerability assessment.
Observable performance (do)	P1.	Prepares preplan for SAR.
	P2.	Uses checklists.
	P3.	Completes resource list.
	P4.	Carries out standard operating procedures (SOPs).
	P5.	Uses memoranda of understanding (MOU) and memoranda of agreement (MOA) as required.

6.3.2 Resource management

Knowledge and understanding of	K1.	Resources appropriate to the SAR mission.
	K2.	Types of SAR resources and their functions and limitations.
	K3.	Ordering (i.e., requesting) resources.

	K4. Check in process and resource tracking.
	K5. Use and evaluation of resources.
	K6. Demobilization of resources.
Observable performance (do)	P1. Identifies resources and requests appropriate resources.
	P2. Orders resources.
	P3. Manages “check-in” process and resource tracking.
	P4. Demonstrates effective use and evaluation of resources.
	P5. Manages the demobilization of resources.

6.3.3 Search team criteria

Knowledge and understanding of	K1. How to set the criteria for a search team's makeup.
	K2. The types of teams required for a mission, including a) search team (e.g., near — short missions, far — prepared for longer treks); b) containment team; c) advanced team (e.g., reconnaissance, check LKP, vehicle check); d) rescue team; and e) recovery team.
	K3. How to create a well-balanced search team, considering a) search techniques; b) navigation; c) communications; d) first aid; e) knowledge of search area; f) fitness; and g) knowledge of equipment and vehicles being utilized.
	K4. How to select a team leader for a mission, considering a) leadership experience necessary for the mission; b) option of having others with leadership skills assigned to single team (divide team during search, modify task, mentoring, backup); and c) span of control (three to seven searchers).
Observable performance (do)	P1. Verbalizes the criteria expectations for a search team.
	P2. Determines type of team required for the mission.
	P3. Establishes a well-balanced and efficient search team.
	P4. Selects an appropriate team leader for a given search mission.

6.3.4 Information management and documentation

Knowledge and understanding of	K1. Reasons for documenting search effort.
	K2. What needs to be documented.

	K3. Methods for documenting search and policies and procedures for records retention. K4. Clue (i.e., evidence) management. K5. File management systems. K6. Protection of privacy and confidentiality.
Observable performance (do)	P1. Uses information in the ongoing planning effort. P2. Verifies that information is disseminated without loss of continuity — effective and efficient transfer of information. P3. Allows accurate dissemination of information to personnel. P4. Uses information to evaluate mission and applies information from evaluations. P5. Ensures continuity and retention of evidence/records for legal purposes. P6. Manages records of tasks, deployments, and resources in a logical order to ensure quality and attention to detail in accordance with policies and procedures and following file management systems. P7. Respects and protects privacy of personal information in documentation.

6.4 Implementation

6.4.0 Overview

The SAR manager has the knowledge and skills to initiate a search mission and communicate information regarding the notification process, to identify the required information and data to be obtained, and the search strategy and tactics to be employed. SAR manager competency elements covered in this competency category are

- a) Clause 6.4.1, First notice procedures and determining urgency;
- b) Clause 6.4.2, Types and use of information;
- c) Clause 6.4.3, Initiating response activities;
- d) Clause 6.4.4, Establishing search area;
- e) Clause 6.4.5, Segmenting search area;
- f) Clause 6.4.6, Search theory;
- g) Clause 6.4.7, Incident action plan;
- h) Clause 6.4.8, On-scene risk assessment and management; and
- i) Clause 6.4.9, Search tactics.

6.4.1 First notice procedures and determining urgency

Knowledge and understanding of	K1. Methods of notification, K2. How to gather and evaluate initial information. K3. How to determine urgency. K4. Risk assessment and mitigation strategies. K5. Response options: a) urgent; and
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	b) measured response.
	K6. How to evaluate and investigate risks.
Observable performance (do)	P1. Gathers and evaluates initial information to determine urgency and decides on appropriate level of response.
	P2. Conducts initial risk assessment.

6.4.2 Types and use of information

Knowledge and understanding of	K1. Importance of investigation and the fundamental elements of an interview. K2. Types of data to be obtained, including a) searching data, including i) clothing; ii) name; and iii) equipment; and b) planning data, including i) IPP, LKP, or PLS; ii) category of subject; iii) circumstances of loss; and iv) trip plans. K3. Lost-person questionnaire. K4. Possible sources of information. K5. Types of information, including a) physical; b) documentary; c) analytical; and d) testimonial. K6. Types of evidence or clues relevant to lost-person incidents. K7. How to interpret the evidence and/or clue to advance the search, including a) belonging to the subject; b) elapsed time; c) direction of travel; and d) condition of the subject.
Observable performance (do)	P1. Demonstrates the importance of investigation during the lost-person incident. P2. Completes lost-person questionnaire. P3. Conducts interview to collect data. P4. Captures the following data: a) IPP/LKP/PLS; b) category of subject/LPB; c) circumstances of loss; and d) trip plans. P5. Identifies sources of data.

	P6. Uses different types of information or clues relevant to the lost-person incident, including a) physical; b) documentary; c) analytical; and d) testimonial. P7. Interprets the evidence and/or clues and suggests search options.
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6.4.3 Initiating response activities

Knowledge and understanding of	K1. Activation and call-out procedures. K2. Procedures for locating and protecting the initial planning point (IPP). K3. Initial action as determined by lost-person behaviour (LPB), investigation, risk assessment, urgency analysis, and search theory.
Observable performance (do)	P1. Develops a SAR action plan.

6.4.4 Establishing search area

Knowledge and understanding of	K1. How to establish the initial planning point (i.e., the point last seen or last known position). K2. Four methods to establish search area, including a) theoretical; b) statistical; c) subjective; and d) deductive reasoning or logic.
Observable performance (do)	P1. Establishes the initial planning point. P2. Establishes the search area using all four methods.

6.4.5 Segmenting search area

Knowledge and understanding of	K1. Reasons for area segmentation. K2. Choice of segment boundaries. K3. Size of search segment. K4. Importance of coverage. K5. How the size of search segment is determined.
Observable performance (do)	P1. Segments the search area and defines boundaries. P2. Demonstrates complete coverage. P3. Verifies size of search segment. P4. Maximizes searchers' efficiency in the field.

6.4.6 Search theory

Knowledge and understanding of	K1.	Probability values.
	K2.	The concept of probability of area (POA).
	K3.	The concept of probability of detection (POD).
	K4.	The concept of “rest of world” (ROW).
	K5.	Measuring coverage (i.e., determining the percentage of total search area that has been searched).
	K6.	How to determine probability of area (POA).
	K7.	Consensus methods.
Observable performance (do)	P1.	Demonstrates ability to conceptualize the process of applying search theory to a given search mission.
	P2.	Assigns probability theories to search segmentation.

6.4.7 Incident action plan (IAP)

Knowledge and understanding of	K1.	Purpose of an incident action plan.
	K2.	Initial informal planning.
	K3.	Formal staff planning.
	K4.	Criteria for a written or a verbal plan.
	K5.	Planning cycle.
	K6.	Content of an IAP.
Observable performance (do)	P1.	Prepares and executes an incident action plan.

6.4.8 On-scene risk assessment and management

Knowledge and understanding of	K1.	Types of risks associated with SAR.
	K2.	The hazard identification and risk assessment process and/or methodology.
	K3.	Human factors impacting on risk management.
	K4.	Strategies for risk management.
Observable performance (do)	P1.	Demonstrates on-scene hazard identification, risk assessment, and mitigation strategies.

6.4.9 Search tactics

Knowledge and understanding of	K1. Methods used to confine, attract, or search for a subject, including a) confinement methods (to ensure the subject does not leave the search area); b) passive: attraction methods (subject comes closer to you); and c) active (searching for the subject).
Observable performance (do)	P1. Applies appropriate search tactics in priority.

6.5 Search operations

6.5.0 Overview

The SAR manager has the knowledge, experience, and skills to determine, allocate, and communicate search assignments and conduct effective briefings and debriefings. The SAR manager will also be able to suspend or terminate a search, implement the demobilization plan, and effectively manage other influences (e.g., family, friends, and media). SAR manager competency elements covered in this competency category are

- a) Clause 6.5.1, Assignments;
- b) Clause 6.5.2, Briefings and debriefings;
- c) Clause 6.5.3, Management of handling human remains;
- d) Clause 6.5.4, Management of other influences;
- e) Clause 6.5.5, Search suspensions and termination; and
- f) Clause 6.5.6, Demobilization.

6.5.1 Assignments

Knowledge and understanding of	K1. How to identify the components to develop an assignment. K2. Preparation of an assignment. K3. Task assignment. K4. Accountabilities for assignment (responsibility of the SAR manager for safety). K5. Procedure for reporting and documenting location of clues or subject. K6. Management of documentation and/or records.
Observable performance (do)	P1. Prepares and assigns tasks. P2. Reviews and analyzes assignment data.

6.5.2 Briefings and debriefings

Knowledge and understanding of	K1. Purpose of a briefing. K2. Types of briefings, including a) team briefing; b) transfer of command;
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	c) staff briefing (non-operation); and d) section.
	K3. Briefing protocols.
	K4. Briefing techniques.
	K5. Components of a briefing, including a) situation, mission, execution, administration, command, and control (SMEAC); and b) communication.
	K6. Purpose of a debriefing.
	K7. Debriefing protocol.
	K8. Types of debriefing, including a) team debriefing; and b) section debriefing.
	K9. Components of a debriefing.
	K10. Debriefing interview.
	K11. Debriefing environment.
	K12. Planning tools.
Observable performance (do)	P1. Prepares and conducts briefings and debriefings.

6.5.3 Management of handling deceased persons

Knowledge and understanding of	- K1. Procedure for SAR team to report and document discovery of human remains. - K2. Protocols of AHJ for SAR team to secure scene. - K3. Protocols of AHJ for handling human remains. - K4. Management of critical incident stress relating to an incident involving human remains.
Observable performance (do)	- P1. Activates protocols of the AHJ for discovery, management, and recovery. - P2. Briefs the team in case of discovery of human remains. - P3. Completes required documentation.

6.5.4 Management of relations with other influences

Knowledge and understanding of	K1.	Relations with family and friends.
	K2.	Relations with media.
	K3.	Relations with political influences.
	K4.	Relations with traditional and non- traditional spiritual advisors.
Observable performance (do)	P1.	Manages other influences that can have a direct impact on the conduct of a search.

6.5.5 Search suspensions and terminations

Knowledge and understanding of	K1.	Responsibility of the AHJ in the suspension and termination of a search.
	K2.	Factors used to determine the suspension and termination of a search, including a) searcher's safety; b) status of subject; c) assessment of search thoroughness; d) other pressures (family, political, concurrent searches); e) depletion of resources; and f) economic considerations.
	K3.	Suspension alternatives, including a) scaling down operation; b) limited continuing search; and c) change of strategy.
	K4.	Documentation.
	K5.	Notification and consultation, including a) group consensus (include outside expertise); b) inform search leaders and teams; c) provide information to administrators; and d) consult with and/or inform family.
Observable performance (do)	P1.	Notifies and consults with key individuals on the decision to suspend or terminate a search.
	P2.	Implements decision to suspend or terminate search, considering the factors.

6.5.6 Demobilization

Knowledge and understanding of	K1.	Elements of a demobilization plan, including a) orderly release of resources; and b) demobilization checklist (e.g., equipment accountability).
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	K2. Principles of demobilization, including a) timing; b) control; c) communications; d) resource and/or personnel tracking; e) safety considerations; and f) cost effectiveness considerations.
Observable performance (do)	P1. Reviews and executes demobilization plan.

6.6 Post mission

6.6.0 Overview

SAR managers are able to demonstrate their knowledge and abilities to ensure that necessary post-mission actions are carried out to ensure lessons learned are documented, communicated, and used to enhance performance for future searches. SAR manager competency elements covered in this competency category are

- a) Clause 6.6.1, Post mission

6.6.1 Post mission

Knowledge and understanding of	K1. After-action report (AAR), including a) the purpose of an AAR; b) elements of an AAR; and c) how to conduct an AAR (formal and informal). K2. Follow-up and the importance of reports and recommendations from post-mission AARs. K3. How AARs are used for the future. K4. Process for review and continuous improvement.
Observable performance (do)	P1. Facilitates and documents AAR. P2. Reviews reports and recommendations from post-mission AARs for continuous improvement. P3. Considers AAR recommendations and follows up to ensure that appropriate lessons learned have been acted upon.

6.7 Technology and specialized resources

6.7.0 Overview

The SAR manager has the knowledge and experience to make decisions on acquiring the appropriate technologies and systems and in accessing special resources when needed. The SAR manager ensures that search teams have the training to effectively make use of the technology and resources available. SAR manager competency elements covered in this competency category are

- a) Clause 6.7.1, Management of technology; and
- b) Clause 6.7.2, Management of specialized resources.

6.7.1 Management of technology

Knowledge and understanding of	K1. Relevant technologies and systems, including a) radio procedure in SAR; b) radio antenna placement; c) relay system; d) contingency planning; e) technology benefits; f) GPS; g) locating device; h) geographic information system; i) spectral imagery; j) unmanned aerial vehicles; k) night vision equipment; and l) emerging technology.
Observable performance (do)	P1. Applies appropriate technology within its capabilities and limitations.

6.7.2 Management of specialized resources

Knowledge and understanding of	K1. Specialized resources that could be available, including a) infrared and optical devices, including forward-looking infrared radar (FLIR), handheld or aerial, night vision goggles, and thermal imagery; b) sensory and acoustic devices, including remote listening devices, side scanning sonar, reflective fabrics or fabrics having sensing and/or detection capabilities, and ELT homing (121.5 and 406 MHz); c) electronic search devices such as satellite-enabled notification devices and cellular phone/satellite phone tracking; d) radio frequency-based transmitters and/or receivers; e) use of remote operating vehicles (ROVs) and unmanned aerial vehicles (UAVs); f) use of satellite imagery or active signalling technology, such as automatic identification system (AIS) and automatic dependent surveillance broadcast (AD-SB); g) air assets, including fixed and rotary wing assets, aerial spotters, and helicopter long-line rescue teams (HETS); h) marine assets, including boats, personal watercraft, hovercraft, submersibles and ice rescue, underwater recovery teams, and swift water rescue; i) ground assets such as avalanche and crevasse rescue, confined space, cave rescue, high angle rescue, swift water rescue, rope teams, canine teams, equine teams; j) military; and k) convergent volunteers. K2. Procedures for requesting and accessing specialized resources. K3. The need to include specialized resources in preplanning.
Observable performance (do)	P1. Applies appropriate specialized resources for maximum utilization. P2. Preplans to ensure that specialized resources can be available, if required.

6.8 Urban searches

6.8.0 Overview

The SAR manager will have knowledge, skills, and abilities to manage an urban search scenario and collaborate with the authorities having jurisdiction. SAR manager competency elements covered in this competency category are

- a) Clause 6.8.1, Managing an urban search.

6.8.1 Managing an urban search

<i>Knowledge and understanding of</i>	K1.	The differences and the similarities between urban and rural searches.
	K2.	Unique challenges of managing searches in an urban environment.
	K3.	Tactics in an urban search.
	K4.	Special considerations, including risks, in conducting and managing an urban search.
<i>Observable performance (do)</i>	P1.	Demonstrated ability of managing the urban search scenario.

Annex A (normative)

Core competency cross-walk table

A.1 Cross-walk table

Table A.1 is a summary of the competency categories and the competency elements for the core roles of searcher, team leader, and SAR manager.

Table A.1
Competency categories and the competency elements for the core roles of searcher, team leader, and SAR manager
(See Clause A.1.)

Competency category	Searcher	Team leader	SAR manager
4.1 Program 5.1 Program 6.1 Program	4.1.1 SAR structure in Canada	5.1.1 SAR structure in Canada	6.1.1 SAR structure in Canada
	4.1.2 Incident command system (ICS)	5.1.2 Incident command system (ICS)	6.1.2 Incident command system (ICS)
	4.1.3 Roles and responsibilities	5.1.3 Roles and responsibilities	6.1.3 Essentials of effective search management
	4.1.4 Legal requirements	5.1.4 Legal requirements	6.1.4 Legal and policy requirements
	4.1.5 Liability protections and workers' compensation	5.1.5 Liability protections and workers' compensation	
	4.1.6 Finance and administration	5.1.6 Finance and administration	
	4.1.7 Media policy	5.1.7 Documentation	
		5.1.8 Media policy	
4.2 Human factors 5.2 Human factors	4.2.1 Personal qualities and/or attributes	5.2.1 Leadership and supervision	
	4.2.2 Physical demands	5.2.2 Risk management	
	4.2.3 Psychological demands	5.2.3 Team safety	
	4.2.4 Personal clothing and equipment	5.2.4 Psychological health and safety	
	4.2.5 Body management	5.2.5 Transport	
4.3 Environment	4.3.1 Weather	5.3.1 Weather	

(Continued)

Table A.1 (Continued)

Competency category	Searcher	Team leader	SAR manager
5.3 Environment	4.3.2 Natural hazards	5.3.2 Natural hazards	
	4.3.3 Animals	5.3.3 Animals	
	4.3.4 Insects and arachnids	5.3.4 Insects and arachnids	
	4.3.5 Plants	5.3.5 Plants	
	4.3.6 Terrain	5.3.6 Terrain awareness	
4.4 First aid and survival skills 5.4 First aid and survival skills	4.4.1 First aid	5.4.1 First aid	
	4.4.2 Survival skills	5.4.2 Survival skills	
4.5 Transportation and equipment safety 5.5 Transportation and equipment safety	4.5.1 Personal vehicle	5.5.1 Personal vehicle	
	4.5.2 SAR response vehicles	5.5.2 SAR response vehicles	
	4.5.3 Vehicle and trailer combinations	5.5.3 Vehicle and trailer combinations	
	4.5.4 Marine emergency vessels	5.5.4 Marine emergency vessels	
	4.5.5 Snowmobiles	5.5.5 Snowmobiles	
	4.5.6 All-terrain vehicles	5.5.6 All-terrain vehicles	
	4.5.7 Aircraft	5.5.7 Aircraft	
4.6 Navigation 5.6 Navigation	4.6.1 Maps	5.6.1 Maps	
	4.6.2 Compass	5.6.2 Compass	
	4.6.3 Global positioning system (GPS)	5.6.3 Global positioning system (GPS)	
	4.6.4 Map and compass	5.6.4 Map and compass	
	4.6.5 GPS and map	5.6.5 GPS and map	
4.7 Communication 5.7 Communication	4.7.1 Awareness of role of communications during an incident	5.7.1 Awareness of role of communications during an incident	
	4.7.2 Radio operations	5.7.2 Radio operations	
	4.7.3 Satellite and cell phones	5.7.3 Satellite and cell phones	
	4.7.4 Alerting technologies	5.7.4 Alerting technologies	

(Continued)

Table A.1 (Continued)

Competency category	Searcher	Team leader	SAR manager
	4.7.5 Emerging communication technologies	5.7.5 Emerging communication technologies	
4.8 Lost-person behaviour 5.8 Lost-person behaviour	4.8.1 Lost-person behaviour	5.8.1 Lost-person behaviour	
4.9 Search competencies 5.9 Search competencies	4.9.1 Search theory	5.9.1 Search theory	
	4.9.2 Notification	5.9.2 Notification	
	4.9.3 Activation (call-out), checking in, and initial briefing	5.9.3 Activation (call-out), checking in, and initial briefing	
	4.9.4 Assignments	5.9.4 Assignments	
	4.9.5 Search types, patterns, and techniques	5.9.5 Search types, patterns, and techniques	
	4.9.6 Confinement/containment	5.9.6 Confinement/containment	
	4.9.7 Attraction methods	5.9.7 Attraction methods	
	4.9.8 Clue awareness and detection	5.9.8 Clue awareness and detection	
	4.9.9 Demobilization process	5.9.9 Demobilization process	
	4.9.10 Night searches	5.9.10 Night searches	
	4.9.11 Land-water interface searches	5.9.11 Land-water interface searches	
	4.9.12 Evidence handling	5.9.12 Evidence handling	
	4.9.13 Dealing with deceased persons	5.9.13 Dealing with deceased persons	
	4.9.14 Urban searches	5.9.14 Urban searches	
4.10 Specialized resources 5.10 Specialized resources	4.10.1 Specialized resources	5.10.1 Specialized resources	

(Continued)

Table A.1 (Continued)

Competency category	Searcher	Team leader	SAR manager
6.2 Roles and responsibilities			6.2.1 Role of the SAR manager
			6.2.2 Specific Responsibilities of the SAR manager
			6.2.3 Management and leadership
			6.2.4 Critical incident stress management
6.3 Planning			6.3.1 SAR preplanning
			6.3.2 Resource management
			6.3.3 Search team criteria
			6.3.4 Information management and documentation
6.4 Implementation			6.4.1 First notice procedures and determining urgency
			6.4.2 Types and use of information
			6.4.3 Initiating response activities
			6.4.4 Establishing search area
			6.4.5 Segmenting search area
			6.4.6 Search theory
			6.4.7 Incident action plan (IAP)
			6.4.8 On-scene risk assessment and management

(Continued)

Table A.1 (Concluded)

Competency category	Searcher	Team leader	SAR manager
			6.4.9 Search tactics
6.5 Search operations			6.5.1 Assignments
			6.5.2 Briefings and debriefings
			6.5.3 Management of handling deceased persons
			6.5.4 Management of relations with other influences
			6.5.5 Search suspensions and terminations
			6.5.6 Demobilization
6.6 Post mission			6.6.1 Post mission
6.7 Technology and specialized resources			6.7.1 Management of technology
			6.7.2 Management of specialized resources
6.8 Urban searches			6.8.1 Managing an urban search

