



2.13 Night Vision Imaging Systems: Pilot Project

2.13.1. GENERAL

This policy provides direction for a pilot project trialing the use of Night Vision Imaging Systems (NVIS) to support and assist search and rescue operations. The pilot project duration is the sooner of 100 Operational Taskings using NVIS or the termination of this policy by Emergency Management BC (EMBC).

Please note: This policy is subject to review and amendment at any time by EMBC prior to the point of termination or transition to formal EMBC policy.

2.13.2. DEFINITIONS

Night Vision Imaging Systems (NVIS): an imaging system worn or mounted to the aircraft allowing the pilot(s) to maintain control of the aircraft and assisting GSAR personnel locating search and rescue subjects during darkness. This policy includes systems that may be referenced by other names such as Night Vision Goggles (NVG) and Enhanced Vision Systems (EVS) which includes Forward Looking Infrared (FLIR). All NVIS addressed by this policy must be approved by, and are subject to, the regulations of Transport Canada.

2.13.3. POLICY STATEMENT

- (1) A GSAR group or groups who wish to develop a NVIS capability and are not already approved by EMBC to conduct NVIS operations must complete the EMBC Capability Application Form available from the SAR Specialist. The Provincial Training Committee will review the application using the EMBC Capacity Assessment Guide (available from the SAR Specialist). EMBC will notify the applicant of the committee's decision within 30 days after EMBC confirms to the applicant that the committee is reviewing the application.
- (2) For the duration of the pilot project, EMBC recognizes Transport Canada approved NVIS, and will permit GSAR volunteers to utilize these systems when the following conditions are met:
 - a. GSAR volunteers participating in NVIS operations are trained in accordance with the standards identified in the Canadian Aviation Regulations (CARs), Transport Canada Advisory Circular AC 603-001, and have completed the relevant sections of the EMBC approved Helicopter Operations Training Program;
 - b. Equipment used in NVIS operations meets Transport Canada CARs regulations;
 - c. Operations are conducted in accordance with Transport Canada CARs regulations and standards. Groups who are found to have contravened this policy or any Transport Canada



- regulations and/or standards will have their authorization to conduct NVIS operations revoked immediately;
- d. A risk analysis is conducted using the SAR response assessment and decision-making support (RADeMS) tool, prior to each Night Vision Imaging Systems operation and submitted with Task paperwork to EMBC; and
 - e. Individual records of training and responses are maintained and provided to EMBC upon request.
- (3) Only helicopter companies (Air Carriers), helicopters, and pilots meeting the minimum requirements as set out in 2.11 Annex: Mandatory Approvals and Certification Requirements shall be utilized in support of EMBC operations, including NVIS operations.

2.13.4. CONDITIONS/RESPONSIBILITIES

(1) Emergency Management BC:

- a. Will provide authorization for operational tasking to a volunteer GSAR Group approved by EMBC for NVIS operations by issuance of Task and Air Services Emergency (ASE) numbers when the conditions outlined in this policy are met. NVIS task authorization will be considered for approval by the EMBC Regional Duty Manager (RDM) or Provincial Duty Manager (PDM) if:
 - o Information from the requesting agency indicates imminent threat to the lives of GSAR Volunteer(s) and/or subject(s), or searching and/or transportation to and from an aerodrome as per CAR 602.4 during darkness is required due to the subject's medical condition or impending environmental conditions; or
 - o Reconnaissance of the terrain is required to aid in the safety of searchers on the ground during nighttime operations; or
 - o Searching for a lost or missing person during nighttime operations where the light from a cellphone, flashlight, fire, or any other light source would be visible to an NVIS; and
 - o The requesting agency or delegate agrees that it is a required component of the current task Incident Action Plan RCMP aircraft are not available; and
 - o The SAR Manager confirms verbally to the ECC or the RDM that an NVIS-specific risk analysis has been completed by the GSAR group and documented (to be supplied to EMBC with Task paperwork).
- b. Will provide response support and coordination when required.
- c. NVIS task authorization will not be granted if:
 - o Nighttime operations involves transportation of Human External Cargo; or
 - o No requesting agency is identified; or
 - o Sufficiently trained personnel are not available to conduct the operation; or



- Any of the requirements listed in this policy are not met.

(2) Air Carriers:

- a. Will follow the current Transport Canada regulations;
- b. Will establish a formal written agreement (e.g. Memorandum of Understanding) with the respective volunteer search and rescue organizations proposing to conduct NVIS operations setting out the roles, responsibilities and obligations of each party, including guidelines for training, operations, and maintenance of proficiency as set out in the EMBC approved Helicopter Operations Training Program regarding the provision of NVIS;
- c. Will not permit any GSAR personnel to undertake flight crew roles during NVIS search and rescue operations unless the Air Carrier has first provided to the GSAR group and to EMBC a current certificate of insurance evidencing the extension of the Air Carrier's liability insurance to any GSAR personnel performing flight crew duties, and EMBC has authorized flight crew duties for the specific operational or training task; and
- d. Will maintain flight following, resource tracking, and communications at all times during aerial operations.

(3) GSAR Groups and/or Regional teams conducting NVIS operations:

- a. Must be approved by EMBC as having NVIS capability;
- b. Must be in full compliance with Transport Canada regulations regarding Night Vision Imaging Systems equipment, training, and operations;
- c. Must have a current, EMBC-approved, formal written agreement (e.g. Memorandum of Understanding) with the Air Carrier setting out the roles, responsibilities and obligations of each party, including guidelines for training, operations, and maintenance of proficiency as set out in EMBC approved Helicopter Operations Training Program regarding the provision of NVIS.
- d. Must comply with any directions, requirements, rules, protocols, etc. of the Air Carrier when carrying out approved flight crew roles; and
- e. Must provide copies of training and equipment records to EMBC at the conclusion of each training session to the EMBC SAR Specialist.

(4) SAR Managers:

- a. Must request authorization through the Emergency Coordination Centre (ECC) as soon as a NVIS operation is being considered;
- b. Must ensure that all personnel are in conformance with standards set out in the EMBC approved Helicopter Operations Training Program.
- c. Must perform a risk analysis using the SAR RADeMS tool of all activities prior to and during NVIS operations and provide the analysis to EMBC with Task paperwork, and;
- d. Must notify the ECC at the start of NVIS operations, provide updates every 30 minutes during NVIS operations, and at the conclusion of NVIS operations.

(5) GSAR Volunteers:

- a. Must achieve and maintain the required standard of training and experience in NVIS operations;
- b. Will be responsible for the maintenance of personal training records and provide proof of training upon completion;
- c. Must only ever be a passenger or NVIS operator, not flight crew, when conducting NVIS operations unless conditions as per Policy Pilot 2.13.3. (2) (c) are met.

(6) Exception from Policy

For the purposes of this pilot project, approved GSAR groups with an EMBC-approved written agreement with their Air Carrier are exempt from condition [2.11.4\(2\)](#) which restricts rotary flights to daytime Visual Flight Rules only.

Exceptions (i.e. date, timeframe, location, GSAR group, Air Carrier, or individual GSAR volunteer) to this or any other related policy require authorization from the EMBC Regional Duty Manager and/or Provincial Duty Manager in consultation with the EMBC Search and Rescue Specialist.

2.13.5. AUTHORITIES

[Emergency Program Act](#)

[Canadian Aviation Regulations \(CARs\)](#)

Original Signed by:

Madeline Maley
Assistant Deputy Minister,
Emergency Management B.C.

2.13.6. RELATED DOCUMENTS

- 2.10 Class 'D' Helicopter Rescue
- 2.11 Search and Rescue Helicopter Usage Procedures
- 2.11 Search and Rescue Helicopter Usage Annex: Mandatory Approvals and Certification Requirements
- 5.07 Workers' Compensation Coverage
- EMBC Provincial Search and Rescue Operating Guidelines
- EMBC approved Helicopter Operations Training Program