

Safety in SAR



- A Field Team Leader's safety responsibility does not only apply to him/herself, but to his or her team as well



- A good Field Team Leader will insure that the entire team is able to complete the assignment safely
- Proper equipment for the assignment
 - Search team
 - Evacuation team
 - Communication team
 - Technical
 - Technical
 - ATV
- Capability of team
 - Experience level
 - Proper training

Safety in SAR

- Physical limitation of team to complete assignment
 - Terrain to cover during the assignment
 - Task to be performed during the assignment
- Safety mitigation is the ability to reduce or eliminate the severity of a dangerous situation.
 - Identify the hazards
 - Evaluate the risk
 - Manage the risk



Safety in SAR

- A good Field Team Leader will be aware of any health concerns of the team's members
- Don't be wary of asking pertinent questions
 - Recent illness
 - Allergies
 - Medications and the side effects
 - Fatigue (before, during and after the assignment)
- Be observant
 - Of your team
 - Of other team members

Safety in SAR

- As SAR responders, you and your team will be placed in unusual locations and situations.

- You must be able to recognize the signs and symptoms of possible medical conditions that can be brought on during the mission

Safety in SAR

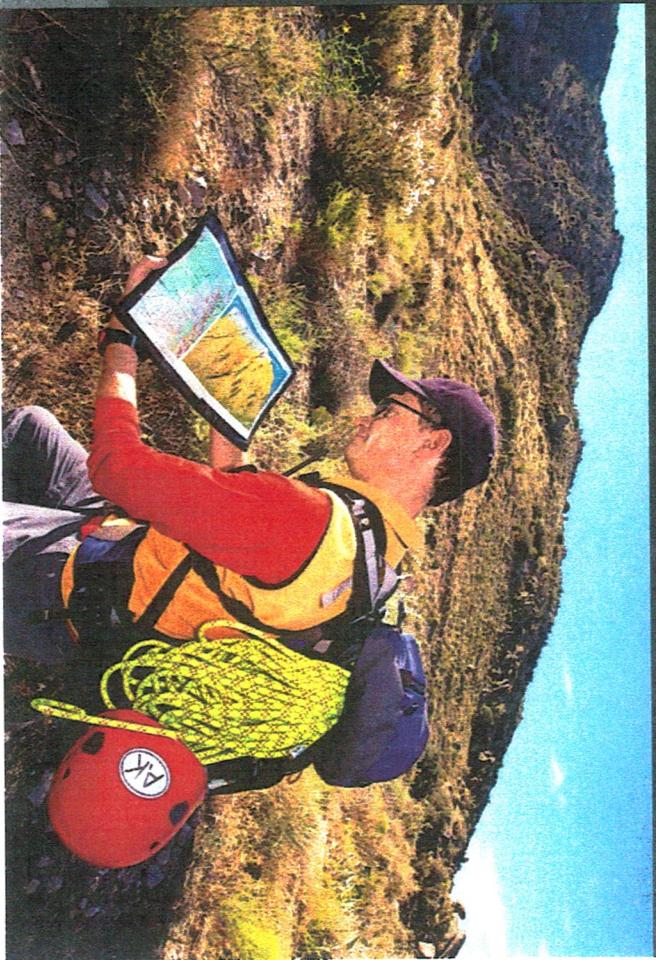
- While on assignment, you and your team may be faced with many hazards
- As a Field Team Leader, one of your duties is to evaluate and mitigate risks that you and your team may face

Safety in SAR

- Natural and Man-made hazards
 - Natural
 - Cactus and other spiny plants, dead snags, thick growths of trees and brush;
 - Loose rocks and rock slides, steep drop-offs, sink holes, high altitude, avalanches, caves;
 - Bears, mountain lions, bobcats, wolves, livestock, snakes, insects, spiders;
 - Streams, rivers, lakes, flash floods;
 - Cold and heat, wind, rain, hail, snow, lightning, bright sun.
 - Man-made
 - Marijuana fields and Methamphetamine labs (which may be booby trapped)
 - Mines, Indian ruins, old cabins and other buildings
 - Barbed wire (which is a tripping hazard and may be strung across arroyos)
 - Individuals wanting privacy (white supremacist and other militia groups)
 - Hunters
 - Wild land fires

Safety in SAR

- Protection against hazards
 - Stay aware of surroundings
 - Ask questions from knowledgeable personnel
 - Personal Protective Equipment (PPE)
- Helmet
- Gloves
- Ropes/webbing
- Communication



Safety in SAR

- During thunderstorms
 - Avoid exposed areas, find/make shelter away from tall items
 - Insulate from ground
 - Do not group
 - Avoid locations where flash flooding or flooding may occur
 - Riverbeds
 - Arroyos
- Depressions
 - Avoid small wet caves
 - Stay away from wire fences, metal gates, towers or antennas

Safety in SAR

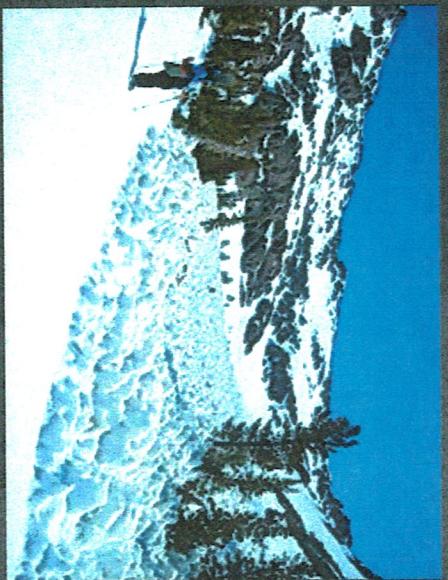
- Avoid wildlife
 - “Domesticated” animals may pose a threat
 - If confronted by a mountain lion
 - Don’t run
 - Stay calm and hold your position or back away slowly,
 - Let the cat know you are not prey and are dangerous
 - Stand tall, raise arms
 - If lion acts aggressively, wave your arms and shout. Grab a stick or throw objects at the lion.
 - If you are attacked, fight back.
 - Bears normally avoid humans but if you see one
 - Make a much noise a possible
 - Don’t corner the bear
 - Appear big, group together
 - Do not get between or even approach a mother and her child
 - Stay away from kill remains, it may still be dinner for something you don’t want to meet.



Safety in SAR

- Be avalanche aware

- Recognize potential slide areas
 - Is the terrain steep enough to avalanche?
 - Typically slopes equal to and greater than 30 degrees
 - Snow
 - Unstable snow pack?
 - Obtain avalanche hazard report
 - <http://www.nrimae.org>
 - Obtain avalanche training (level 1)



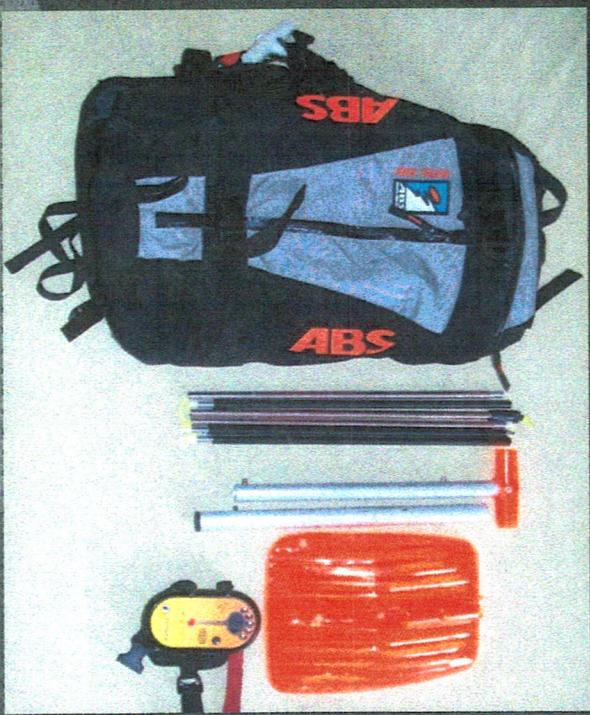
Safety in SAR

- Low Risk Travel
 - Always choose the safest route which means staying on low angle ridges or in stands of trees so dense they are difficult to travel through.
 - If you are ascending through dense trees be sure that there are not openings upslope of the trees where an avalanche could occur and run through the trees.

Safety in SAR

- Never stop in or beneath an avalanche path
- Be prepared to do a rescue
 - Carry a beacon, a shovel, and a probe pole

<http://avtraining.org>



Safety in SAR

- Wildfires are a risk that can occur even when it is not wildfire season
- During assignment, ask why a fire burns and what makes it spread
- Pay attention to fuel, weather and terrain
 - What is the fuel source?
 - Type
 - Spacing
 - Quantity

Safety in SAR

- What is the weather doing now and in the future?
- Wind will spread fires
 - At night, prevailing winds may be downhill or down canyon
 - During the day, prevailing winds may be uphill or up canyon
 - Winds normally proceed thunderstorms
- Temperature
- Humidity

Safety in SAR

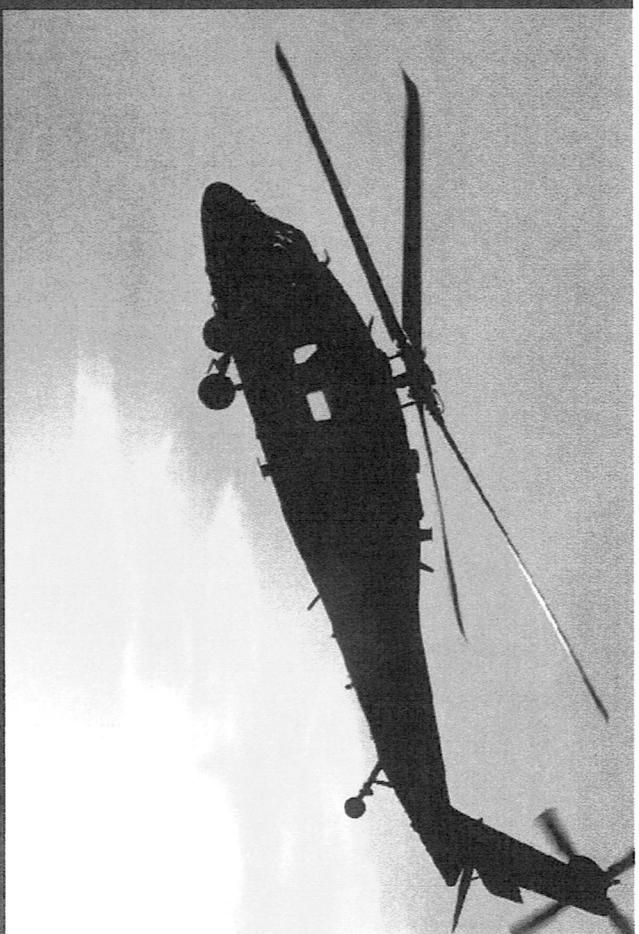
○ Topography

- Slope, the steepness of the land and has the greatest influence on fire behavior.
- Aspect, the direction the land faces - north, south, east or west.
- Terrain may affect wind direction
 - Wind follows that path of least resistance, like water
 - Ridges, trees and rocks affect wind direction and velocity
 - Canyons, chutes increase wind velocity.



Safety in SAR

- Helicopters Safety
 - Use PPE
 - Helmet
 - Suitable eye protection
 - Ear protection
 - Secure any loose items
- Follow directions of air crew
 - Team should only approach when directed to do so
 - Insure team approaches from a safe direction
 - Stay alert for rotors and flying debris
 - Do not operate any component of the a/c unless trained to do so.



Safety in SAR

- ◎ Helicopter Safety cont:
 - When tasked to locate a LZ
 - Location, Location, Location
 - A/C approach and takeoff direction
 - Trees, poles, wires, other obstructions
 - Level terrain free of obstacles
 - Use of helicopters in SAR missions have increased.
- Risk factors do increase in the use of helicopters and team must be aware of the fact.

Safety in SAR

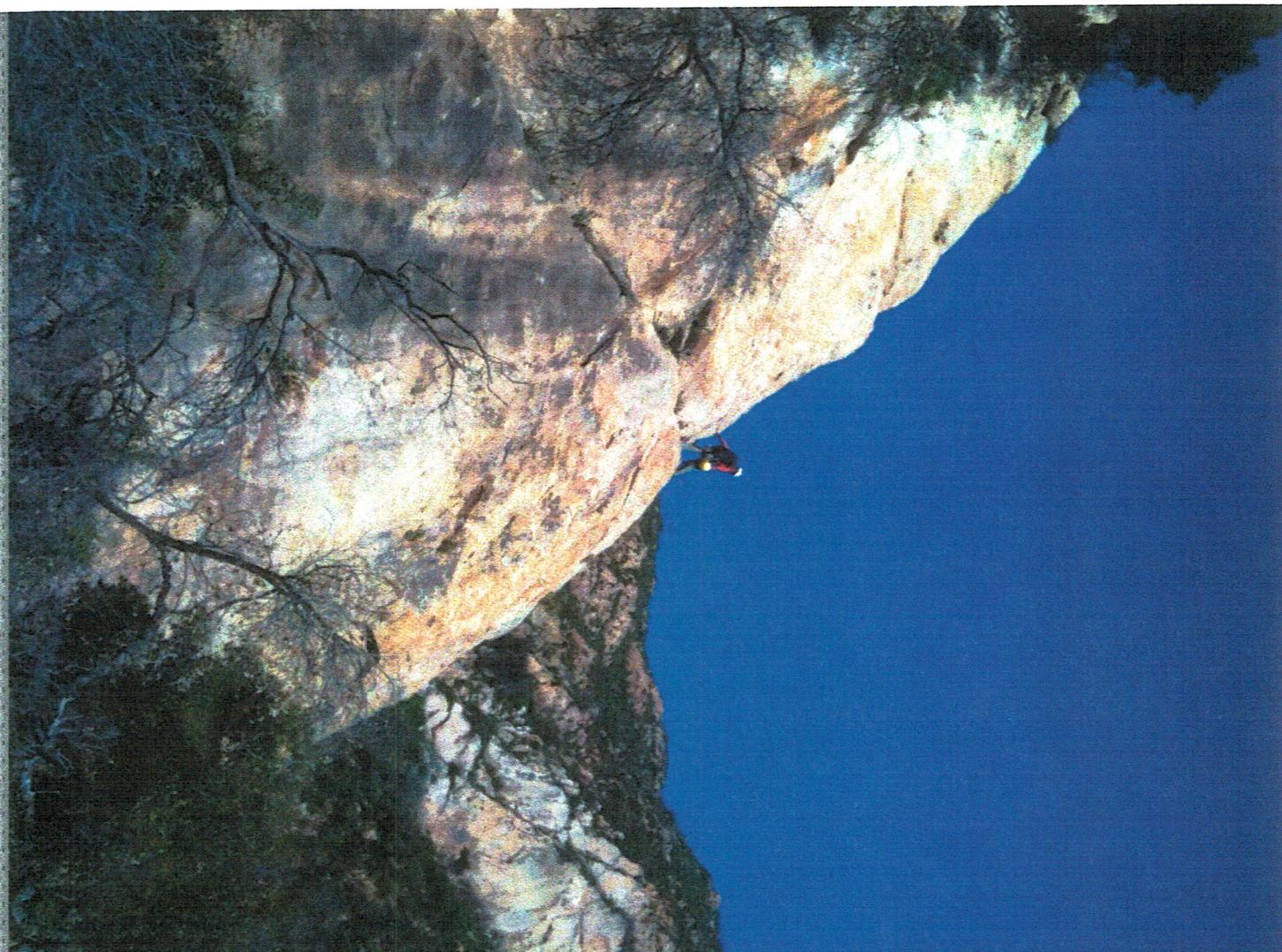
- Be aware that when you and your team enters the field, the risks you will be facing increases.
- By proper mitigation, you can reduce the potential hazards you and your team will face.

Safety in SAR

- A good Field Team Leader should make sure that his or her team:
 - Is properly outfitted,
 - Has knowledge of basic search techniques and navigation,
 - Has good communication,
 - Is aware of the hazards in the search assignment, and
 - Has the appropriate training and skills for the assignment.

Safety in SAR – Exercise

- View the following photos
- Identify possible hazards
- Determine possible risks
- Mitigate risks



Your team assignment is to make contact with Extraction team and assist with extraction of patient. Ahead you see the route to the patient.

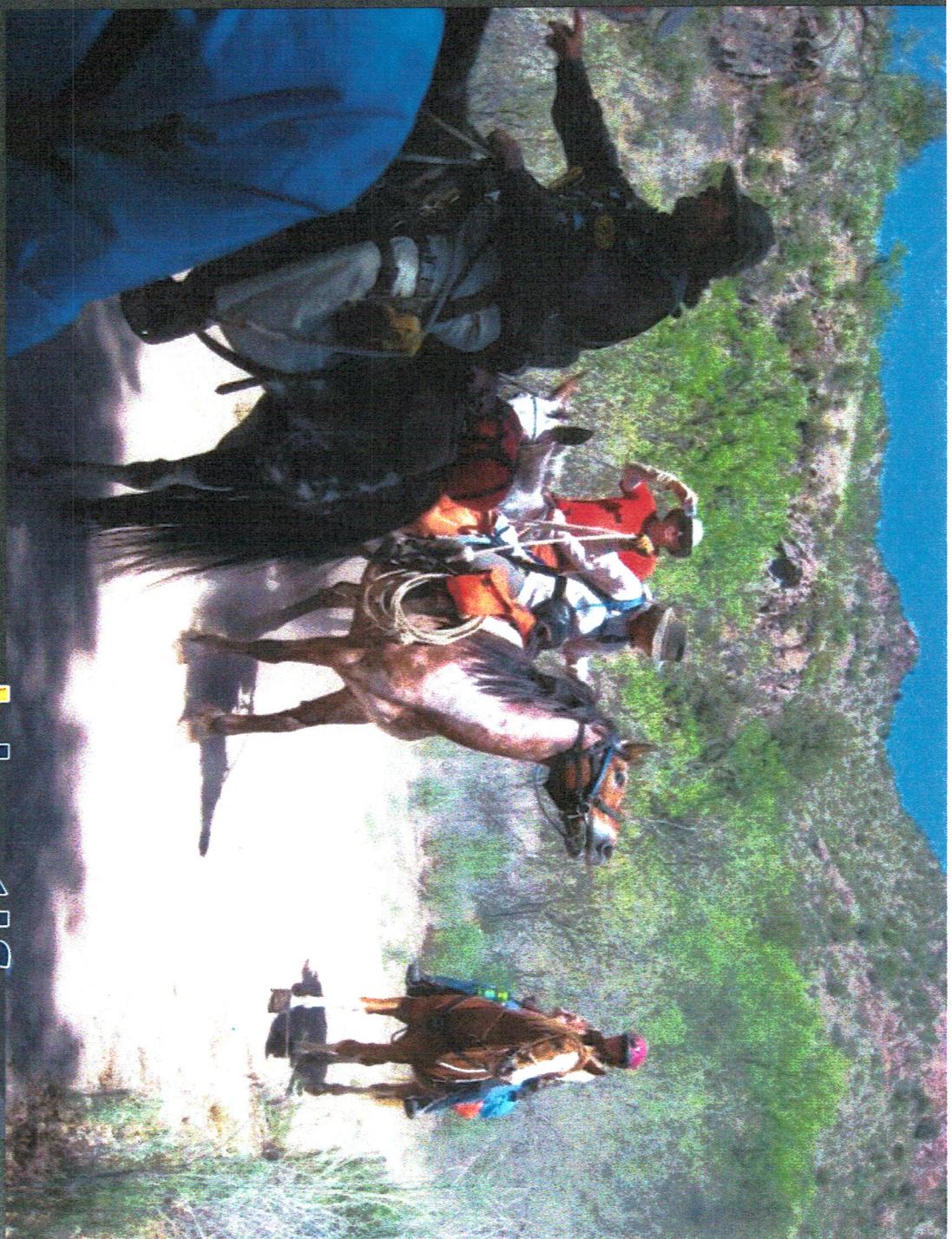
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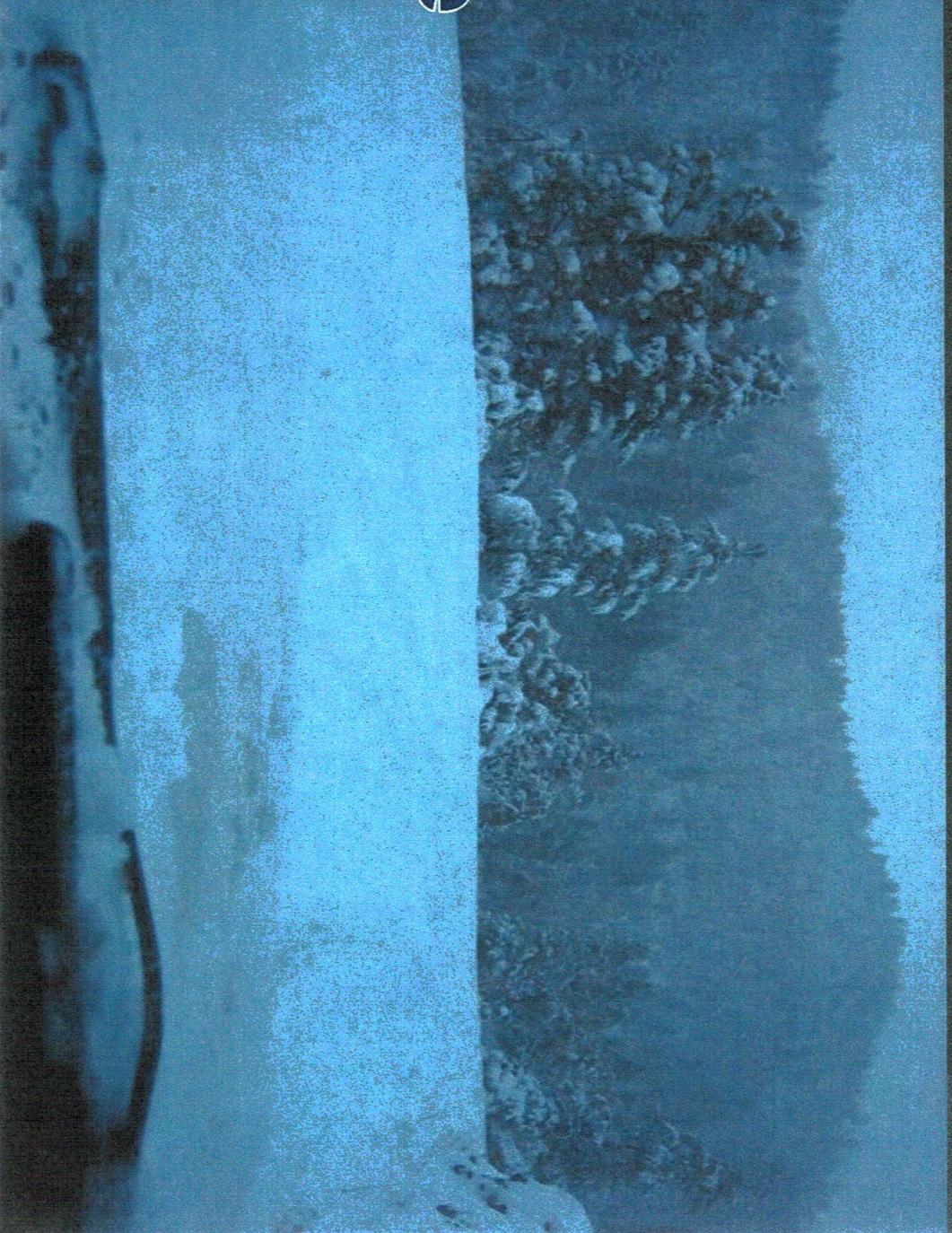
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Identify
Determine
Mitigate

While conducting your assignment, a mounted team approaches your search team





Your search team is in route to
your assignment area.

Identify
Determine
Mitigate



Your team is assisting with a
helicopter hoist Operation

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Part of your search assignment

Identify
Determine
Mitigate



Safety in SAR

- A good Field Team Leader will insure that safety risks are discussed with IB and his/her team
- A good Field Team Leader will insure that any new risks discovered in the field will be communicated to IB and his/her team
- A good Field Team Leader will mitigate any risks and make recommendations for a safe course of action
- A good Field Team Leader will be aware that every team member has the right to refuse an assignment without prejudice

Safety in SAR

Identify the hazards

Determine the risks

Mitigate the risks

Safety in SAR

○ Resources

- Study Guide: Search and Rescue Field Certification, **New Mexico Department of Public Safety Search and Rescue**, October 1, 2007 Standards
- Forest Service National Avalanche Center, Avalanche Awareness Website
- National Snow and Ice Data Center website
- Center for Wildlife Information website
- Wildfire Management Branch, Ministry of Forest and Range, Province of British Columbia website