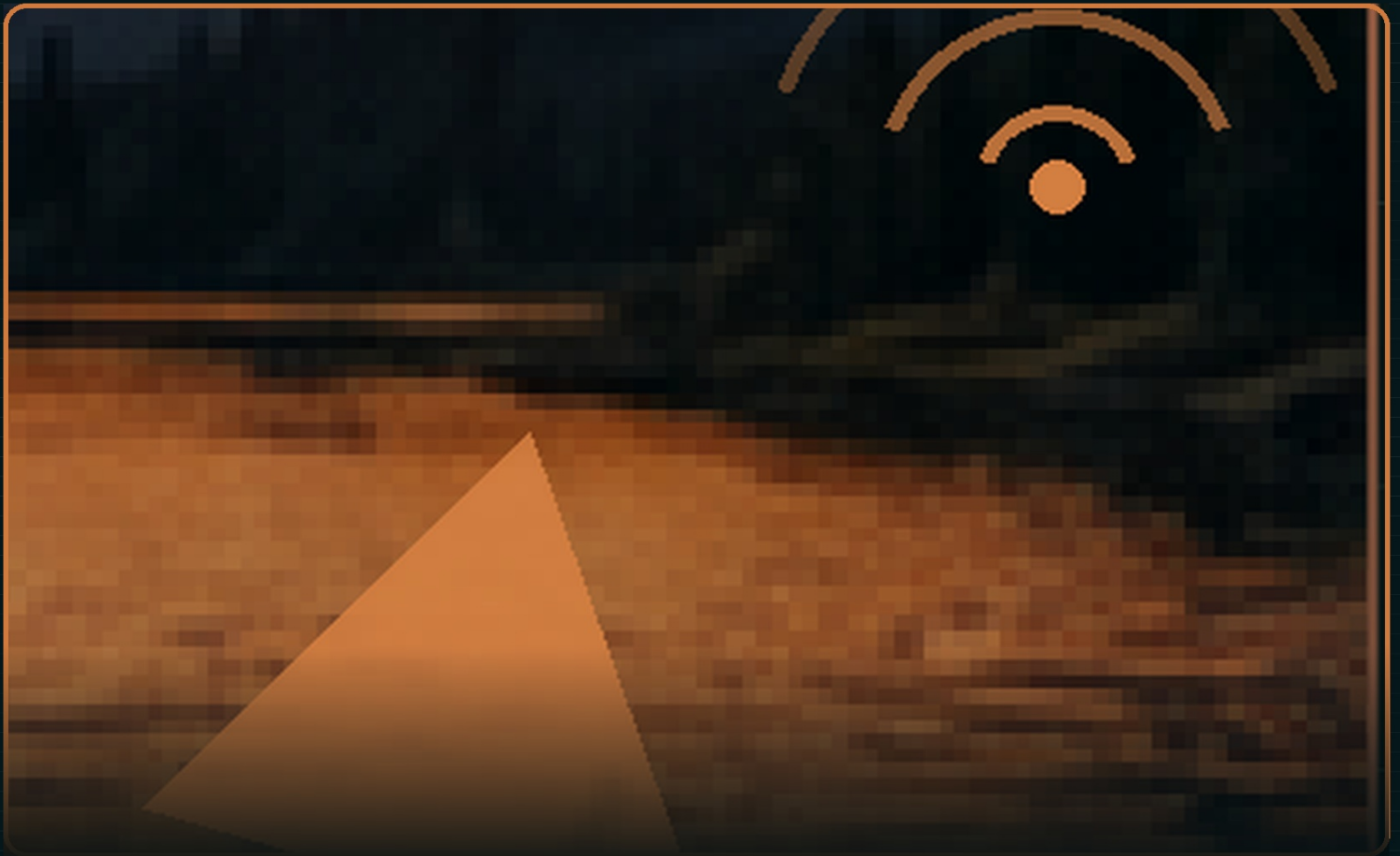


EMERGENCY SIGNALING, EXTRACTION & SELF-RESCUE GUIDE

Be seen. Be heard. Be found.



SIGNAL

COMMS

SHELTER

EXTRACT

EXTRACTION BEGINS BEFORE THE EMERGENCY

Trip plans, communication layers and rescue information reduce delay.

PLAN THE RESCUE PATH

Make the emergency discoverable before it exists.

A good extraction plan tells another person where to look, when to worry, how to contact help and what equipment or medical limitations may shape the response.

1 PRE-TRIP PRIORITIES

- Leave a trip plan with route, camp area, dates, equipment, vehicle information and a firm overdue trigger.
- Research emergency numbers, ranger or land-manager contacts and communication coverage.
- Choose a satellite messenger or 406 MHz personal locator beacon appropriate to the trip; understand the device before departure.
- Register eligible beacons and keep owner, emergency contact and vessel or trip information current.
- Carry critical medical, shelter and signaling gear on the person when separation from the main kit is plausible.

2 COMMUNICATION HIERARCHY

- Primary: two-way satellite messenger or other reliable remote communication with a clear operating procedure.
- Emergency: registered personal locator beacon for grave and imminent distress when appropriate.
- Local: phone or radio where coverage and licensing permit; never assume service.
- Passive: trip plan, vehicle note, route record and expected-return trigger.
- Close-range: whistle, light, mirror, high-contrast panel and repeated visual or audible signals.

FIELD RULE

A rescue device is not a plan. The plan is the trip information, trigger time, device practice, battery discipline, shelter and decisions that keep the signal alive.

BUILD A SIGNAL STACK

Electronic, visual, audible and site signals reinforce one another.

REDUNDANCY WITHOUT CLUTTER

Use the strongest signal for the environment.

Signals fail for different reasons: canopy, terrain, battery, weather, noise, distance or poor visibility. Layer independent methods and preserve them for the moment they matter.

THE SIGNAL STACK



Use multiple independent signals. One failed layer should not erase the rescue plan.

METHOD	BEST CONDITIONS	STRENGTH	LIMIT
406 MHz PLB	Open sky, severe emergency, registered device.	Dedicated global distress system; long-life emergency battery.	Typically one-way; no casual messaging; must be registered and tested as directed.
Satellite messenger	Open sky with charged device and service.	Two-way status, location and emergency communication.	Subscription, battery, terrain and network limitations.
Whistle / voice	Close rescuers, quiet periods, timber or low visibility.	Light, durable and energy-efficient.	Shorter range; wind and terrain mask sound.
Mirror / light / panel	Daylight or darkness with line of sight.	Strong contrast and directionality.	Needs visibility, correct aiming and a searching observer.
Fire / smoke	Legal, safe fuel conditions and no wildfire restriction.	Visible and can provide warmth.	Can create wildfire, smoke or burn risk; never automatic.

BEACON ACTIVATION WORKFLOW

Protect the signal and make the site easier to find.

BUILD A REPEATABLE SEQUENCE

Activate deliberately, then sustain the rescue

Follow the device manufacturer and rescue authority instructions. Do not delay an emergency signal merely to create a perfect campsite or exact diagnosis.

1

CONFIRM THE EMERGENCY

Use the emergency function for grave or imminent danger, or according to the device and local authority guidance.

2

MOVE ONLY TO IMPROVE SAFETY OR SKY VIEW

If it can be done without harmful delay, leave deep cover or a canyon wall and reduce immediate hazards.

3

DEPLOY AND ACTIVATE

Position the antenna and device exactly as instructed. Keep it upright, unobstructed and powered.

4

LEAVE THE DEVICE OPERATING

Do not repeatedly switch it off or relocate without cause. Preserve line of sight to the sky.

5

SHELTER, TREAT AND DOCUMENT

Protect the person, note time and location, conserve energy and prepare information for rescuers.

6

GUIDE THE FINAL APPROACH

Use visible panels, lights, whistle or mirror. Keep people clear of rotor, boat and vehicle hazards.

BEACON DISCIPLINE

- Register the beacon and update contact information.
- Use only the manufacturer-approved test function.
- Know battery expiry and storage requirements.
- Carry the device where it remains reachable after a fall, capsize or pack loss.
- Cancel false alerts immediately through the appropriate authority.

STAY, MOVE OR PREPARE THE SITE

Movement changes both risk and the search problem.

ADAPT BEFORE CONDITIONS FORCE IT

Choose the option with the best rescue outcome

The safest-looking choice in the next five minutes may create a worse outcome over the next five hours. Consider medical condition, weather, terrain, signal quality and what rescuers know.

1 STAY WHEN

- The current site is safe enough to shelter and signal.
- A beacon position or trip plan gives rescuers a reliable search point.
- Injury, darkness, weather or terrain makes travel dangerous.
- Movement would enlarge the search area or reduce sky visibility.

2 MOVE WHEN

- Remaining exposes the person to flood, fire, avalanche, surf, falling trees or another immediate hazard.
- A short, certain route reaches clearly safer shelter or a much better signal site.
- The trip plan requires self-evacuation and the route, patient and conditions support it.
- The move can be communicated or reliably documented.

3 PREPARE THE EXTRACTION SITE

- Create the largest safe, visible approach area available without damaging protected resources.
- Secure loose objects; mark wires, branches, smoke and hazards.
- Place high-contrast signals clear of rotor wash, flame and moving water.
- Designate one person to communicate and one to control gear when in a group.

4 PREPARE INFORMATION

- Number of people, injuries, symptoms and changes.
- Location description, elevation, terrain, weather and access hazards.
- Treatments, medications, allergies and relevant medical history.
- Time of incident, signal activation, movement and water or food status.

MOVEMENT RULE

Do not move merely because waiting feels passive. Move because the new location is clearly safer, the route is controlled, and the change improves rather than confuses the rescue.

SELF-RESCUE & EXTRACTION FAILURE MODES

Do not let urgency erase control.

DIAGNOSE THE SYSTEM

Protect the patient, signal and search picture

Improvised movement can worsen injury and separate the group from the strongest signal. Use trained methods, minimize unnecessary handling and update rescuers when conditions change.

FAILURE SIGNAL	LIKELY CAUSE	BEST CORRECTION
No confirmation or message response	One-way device, obstructed sky, terrain or service limitation.	Leave emergency device operating as instructed; improve sky view only if safe; add visual and audible signals.
Battery is falling quickly	Cold, screen use, repeated messages or poor storage.	Warm spare power, dim screen, use scheduled communication and preserve emergency function.
Rescuers pass without seeing the site	Poor contrast, canopy, noise, smoke direction or unsafe approach.	Increase contrast and repeated signals; move loose hazards and signal from a visible safe point.
Patient worsens while waiting	Exposure, bleeding, dehydration, illness or delayed care.	Prioritize first aid, shelter and reassessment; update rescuers through available communication.
Self-evacuation is slower than planned	Terrain, injury, load or weather exceeded capability.	Stop before exhaustion; shelter, signal and provide updated location if possible.
Group members give conflicting signals	No communication lead or site control.	Assign one signal lead, one patient lead and one approach-safety role.

CASUALTY MOVEMENT

Move an injured person only to escape a greater immediate hazard or when trained evacuation is necessary. Protect the spine and injured limb according to current first-aid training; avoid improvised carries that risk a second casualty.

FIELD CARD, RED FLAGS & SOURCES

A rescue operating standard from trip plan to final approach.

CARRY THE STANDARD

Be seen, heard and found

Leave a trip plan, carry practiced communication, activate early when warranted, and protect the signal site.

FIELD CHECKLIST

- ☐ Leave route, camp, vehicle, dates, contacts and an overdue trigger with a responsible person.
- ☐ Register eligible 406 MHz beacons and keep information current.
- ☐ Practice device testing, activation and message procedures before the trip.
- ☐ Carry the emergency device where it remains accessible after a fall or pack loss.
- ☐ Use multiple independent signals: electronic, visual, audible and site contrast.
- ☐ Activate according to the device and emergency authority guidance.
- ☐ Keep the antenna unobstructed and device operating as instructed.
- ☐ Shelter the person, document condition and prepare rescue information.
- ☐ Move only for a clearly safer site or controlled self-evacuation.
- ☐ Secure loose hazards and guide rescuers from a safe visible point.

STOP / REASSESS

- The person cannot travel safely or is getting worse.
- Weather, darkness or terrain makes self-evacuation uncertain.
- Movement will reduce signal quality or confuse the search area.
- The extraction site has falling-tree, fire, flood, rotor or surf hazards.
- Battery management is threatening the emergency function.
- You are delaying a warranted distress signal to avoid embarrassment.

AUTHORITATIVE STARTING POINTS

NPS Trip Planning Guide

www.nps.gov/subjects/healthandsafety/trip-planning-guide.htm

Trip plans, emergency plans and communication preparation.

NPS Hike Smart

www.nps.gov/articles/hiking-safety.htm

Do not rely on cell service; consider emergency communication.

NOAA SRSAT Beacon Registration

www.sarsat.noaa.gov/register-your-beacon/

U.S. 406 MHz beacon registration and information updates.

NPS Ten Essentials

www.nps.gov/articles/10essentials.htm

Illumination, first aid, repair, shelter and emergency equipment.

VERIFY BEFORE FIELD USE

Rules, access, weather, emergency procedures and land-use practices change. Confirm local requirements, current forecasts, device registration, medical guidance and land-manager instructions before deployment.