

## Chapter 6

### Living in the Cold

#### 6001. Importance of Shelter

*“Losses among the troops because of frost weigh heavier on the commander’s conscience than battle casualties.”*

-Marshal Mannerheim, December 1941

The Finnish commander’s comment is directed towards German generals of World War II who invaded Russia during the summer of 1941. As Operation Barbarosa lingered into the winter months, the German Army experienced an alarming number of losses due to cold weather injuries. The Germans were not prepared for the harsh Russian winter, and did not anticipate the importance of shelter. Their campaign relied largely on fighting from town to town with the intention of occupying Russian buildings at the end of the day’s fight.

Selecting a bivouac and establishing its routine should be almost automatic for well-trained Marines. Under cold weather conditions, units must establish bivouacs during darkness or other periods of reduced visibility and avoid standing around getting cold. Special attention and detailed planning will help train Marines to move promptly. The unit SOPs should specify individual duty assignments and procedures that are discussed throughout this chapter. This chapter covers the selection of a suitable bivouac site, prioritization of bivouac tasks and responsibilities, and tips for living comfortably in the cold.

#### 6002. Bivouac Criteria and Site Selection

The ECW 4-man tent is the Marine Corps’s primary cold weather shelter. Focus on this tent should not detract the small unit leader’s attention from the importance of survival shelters, either natural or manmade. The ability of a unit to live from the land in an emergency cannot be underestimated. Furthermore, proficiency and confidence in survival shelters may allow a unit to move under lighter loads for short periods of time. The survival shelter information in **MCRP 3-02F, “Survival”**, should be used in conjunction with this chapter to build a comprehensive training program for the small unit.

- a. While the construction of a tactical bivouac should generally follow these established principles, a thorough estimate of the situation (METT-T) will guide in its exact design.
  - (1) **Mission:** how does the assigned mission impact the units flexibility to bivouac?
  - (2) **Enemy:** how close is the enemy; what are his capabilities?
  - (3) **Terrain/Weather:** how can the unit best camouflage; what weather must the unit be prepared to protect itself against?
  - (4) **Troops/Fire Support:** what is the physical condition of the unit; how large is the unit; how well trained is the unit in bivouac establishment?
  - (5) **Time:** how long can the unit expect to occupy the bivouac?
- b. After the unit leaders have decided to what extent a bivouac should be established, all shelter must meet the following basic criteria.
  - (1) **Protection from Elements:** limit the effects of rain, snow, wind, sun, etc.
  - (2) **Heat Retention:** insulate to prevent the loss of heat.

(3) **Ventilation:** prevent the accumulation of carbon monoxide from burning fuel, and eliminate the chance of asphyxiation.

(4) **Drying Facility:** ability to dry wet clothes.

(5) **Free from Natural Hazards:** avoid rock fall, standing dead trees, high winds, avalanche.

(6) **Stable:** withstand the force exerted by severe weather.

c. Bivouacs should be sited according to eight criteria.

(1) **Good Defensive Position:** allows unit to accomplish mission from secure area.

(2) **Suspected Avalanche Area:** avalanche start and run-out zones can naturally damage a bivouac, or be used by the enemy to cause casualties.

(3) **Large Enough for Whole Unit:** units must provide for 360-degree security.

(4) **Forested Area:** provide for natural cover/concealment, protection from elements, firewood and construction materials, smoke dispersion.

(5) **Depressions or Knolls:** in the absence of forest, depressions afford similar benefits.

(6) **Water supply:** while snow may be naturally abundant, running water sources are more convenient to use for all purposes and require less fuel than melting snow.

(7) **Leeward Side of Mountains:** protection from wind-chill.

(8) **Off Valley Floor:** cold air settles during windless periods.

### 6003. Establishing the Bivouac

The order in which the bivouac is established is very important in order to save time. If possible, dispatch an advance party to reconnoiter and establish the bivouac.

a. **Advance Party Responsibilities.** Several variations of a basic technique can be employed to site the bivouac. An advance party composed of unit leaders and guides will conduct an initial reconnaissance of a potential bivouac. They will then meet the main body of troops to explain the layout of the bivouac and track plan. Afterward, the guides lead the main body to the position. Once in the position, the commander should take the following actions that usually confirm decisions made by the advance party.

(1) Break or mark the trails to be used in the bivouac area.

(2) Decide the types of field defenses to be constructed, and site them.

(3) Select exact tent and firing positions to maximize cover and concealment.

(4) Designate "specific use areas." (discussed in 6004)

b. **Security.** Extended operations in a CWE will physically exhaust a unit; during these periods, the tendency may be to set up tents, rest and eat with no consideration for security or concealment. Security is essential prior to establishing, during construction and after occupation of the bivouac.

- c. **Track Plan.** A good map study with a visual reconnaissance from afar will aid the leaders in knowing how they can set up their bivouac site to minimize confusion upon arrival. (See Fig. 6-1)
- (1) **Jump-off Point:** The location where the trail to the bivouac site meets the approach trail. It must not be detected by the enemy and should be concealed by such natural obstacles as large trees, rivers, and rocks. The exit from the approach trail should be at a right angle, and must be covered by fire.
- (2) **Dummy Track:** This is a deceptive trail that extends past the jump-off point on the main trail. Care must be used by troops making this trail in order to fool the enemy into thinking that the unit has continued on the main trail. The dummy track is extending past the jump-off point to an area that can simulate a dummy position. When returning on the dummy track, avoid any creating evidence pointing towards the actual bivouac. For example, ski without poles, reverse snowshoes, or loop the dummy track around to meet back into the main trail.
- (3) **Dummy Position:** The end of the dummy track can be made to look lived in, further deceiving the enemy. This position should be sited within the fields of fire of the defensive positions such that it can be engaged should the enemy investigate it.
- (4) **Bivouac Tracks:** Central tracks should interlock and must blend into natural surroundings. Tracks covered by trees are more difficult to detect from the air.
- d. **Defensive Positions.** Should be outside the perimeter just beyond a point where bivouac noises reach a sentry so that he can listen to his front. Communication trenches should connect all positions (tents, fighting holes, and heads). (discussed in 13005)
- e. **Living Area.** After determining the type of shelter to be used, decide how close to the defensive positions shelters should be located. Mark each shelter site and the communication trenches that connect shelters. They must be located in defilade and under trees or in thickets for cover and concealment. Within a shelter, there are specific areas for individuals and their equipment. Everything placed outside the shelter must be properly accounted for. Weapons must be stored and cared for as discussed in Chapter 11. Fuel, skis and snowshoes must be stored outside of tent according to a proscribed SOP for easy location. Also, the fire-team sled should be packed with non-essential equipment and stored upright in order to prevent large snow accumulation.

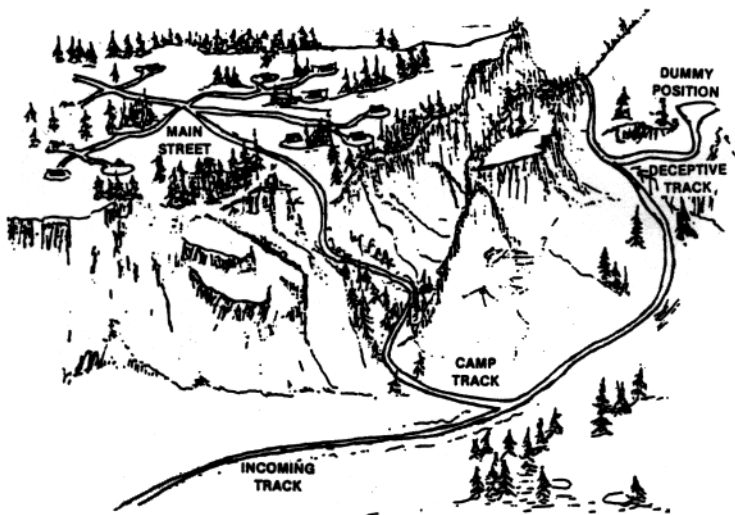


Figure Track Plan.

## 6004. Specific Use Areas

The final step in establishing the bivouac site is to designate and establish specific use areas.

- a. **Heads.** Set up one central head if tents are not far apart within the bivouac; one head usually serves the needs of a unit to platoon size. It must be placed downwind of the site, but not so far from shelters as to encourage individuals to break sanitary discipline. A pit or cross-tree-type head is the usual type, wind-proofed by branches, snow blocks, ponchos, or any other available material, and properly camouflaged. Prefabricated cardboard-box heads with plastic liners may be used to enable the unit to remove its waste. Urinals are cut into the snow walls around tents or shelters or sited around a tree which will hide the discolored snow.
- b. **Water Point.** If using a natural running water source, locate the water point at the furthest point upstream. If not available, locate a large, clean, sheltered snowbank upwind and uphill from the head, and mark it off. If the threat of NBC exists, test the whole snowbank before use.
- c. **Garbage Point.** Should be disposed of in garbage pits designated one per tent group. The general rule is to burn or bury before departure.
- d. **Storage Points.** Gear and equipment should be stored at designated areas within the vicinity of the bivouac (vehicles, rations, fuel, ammunition, and communications equipment). Precautions must be made to protect the equipment and ensure it is safely stored.
- e. **Firewood and Building Materials.** Woodcutting should be spread throughout the bivouac site so as not to reveal your position by denuding one part of the forest. Cut during the daylight to take advantage of the natural noises that will help conceal your activity.

## 6005. Bivouac Routine

The maintenance of proper bivouac discipline and unit efficiency in a CWE is directly related to the quality of routines practiced. SOPs help delegate authority in this respect and ensure that each Marine understands what is expected of him.

- a. **Tent Team Leader.** Responsible for supervising all tasks conducted by his teammates and maintaining overall control of the tent.
  - Sleeping space is properly allocated.
  - Equipment is organized outside the tent in convenient fashion. Areas should be designated immediately outside tent door for skis, snowshoes, weapons, fuel, shovels, and sled.
  - Track and camouflage discipline is maintained.
  - Housekeeping duties are performed according to a roster.
  - Guards and sentries know where their reliefs are sleeping.
  - Blackout is maintained.
  - The tent is de-iced, and drifted snow is moved away from it.
  - Fire precautions are observed.
  - Stoves are filled outside.
  - Stoves, weapons and equipment are regularly maintained.
  - Snow is brushed off clothing and equipment before entering the shelter.
  - Each Marine receives and eats the proper portion of rations.
  - High standards of hygiene and sanitation are maintained.
- b. **Cook.** The cook is responsible for the preparation of food, hot-wets and melting of snow for water. He must ensure the stove is properly maintained.

- c. **Tent Erection Team.** The ECW 4-man tent and fly should be built by two men. While two Marines should occupy security positions, the other two men of a fire-team should be organized to prepare the site, to include stamping down the snow pack and rounding out the residual snow walls. The tent should be positioned such that the door is located down wind.
- d. **Trail and Defensive Position Maintenance.** The tent team must rotate Marines during bivouac establishment in order to maintain and defend the trail. Fighting positions and communications trenches are built and maintained during periods of snowfall or high temperatures.
- e. **Sentries.** In very cold conditions, sentries can remain alert for short periods only. They cannot look into the wind for long, and, despite frequent reliefs, can hear and see little. Leaders must use their judgment on how long an individual can be on duty outside; this time varies with the temperature, wind chill and visibility (but rarely falls outside of a 30-60 minute window.) All members of the tent team share sentry duties once the bivouac has been established. A fire watch and running stove may be necessary such that Marines can sleep comfortably in extreme cold; however, temperatures must be kept as low as possible in order to conserve fuel. These duties are rotated as part of the tent team sentry duties.

### **6006. Breaking Bivouac**

A key to success for cold weather operations is the efficiency of the small unit in breaking bivouac. This routine must be rehearsed by every tent team in all weather conditions. The commander issues the order **PULL POLE**. At this designated time, all tent team preparations with the exception of striking the tent have been accomplished. All garbage and head sites are filled and covered; all personal equipment is packed and the team sled is ready to mount. The security of the bivouac must not be relaxed nor should the track, camouflage, light or noise discipline be forgotten. Pulling pole should be done as late as possible so that men are not required to stand about in the cold unnecessarily. Every leader should know how long those under his command need from the pull pole order until they are ready to move. This allows the commander to back-plan from the time he wishes to move.