# We Need Your Help!

Practically all of our team's operating revenues are raised through donations and fund raising events. More than \$100,000 in team-owned equipment must be maintained and insured. The cost of operating Larimer County Search and Rescue is growing more expensive each year.

Your donation to our team is tax deductible and will SAVE LIVES. We need your financial help to replace old rescue equipment, update communications, improve our medical equipment, and equip and maintain our rescue cache.

Please take the time to fill out the information below and return this portion of the brochure with your donation. Please check out our website at:

#### www.larimercountysar.org

You can view current missions in our quarterly newsletter, LCSTAR, or find mountain safety tips and other info about the team. Many thanks . . . from Larimer County Search and Rescue and those whose lives we touch.

 $\Box$  Enclosed is my tax deductible contribution to LCSAR.

(please print)

Your Name\_\_\_\_\_

Address\_

City, State, Zip\_\_\_\_\_

Please make checks payable to LCSAR. Mail completed form to LCSAR, 1303 N. Shields St., Fort Collins, Co. 80524-1014

Information: (970) 498-5312

Voicemail: (970) 498-5314

# Avoid **Avalanche** and **Survive!**



"Being There When it Counts, so that others may live"



Winter in Larimer County has its own special grandeur. From the mountains of Rocky Mountain National Park to Cameron Pass, a wealth of beauty can be experienced while winter recreating in the back country of this county. But with this grandeur comes a silent danger of avalanche. Larimer County Search and Rescue (LCSAR) hopes that your winter recreation activities are safe and relaxing. The following information is intended to help you recognize the warning signs of avalanche and adequately prepare yourself for winter recreation. To have a safer back country experience, we recommend that all winter back country travelers attend a certified avalanche awareness course. Remember, avoiding an avalanche is easier than getting out of it.

## Winter Recreation Preparation

Never enter the back country alone! Always let someone know of your travel plans and when you are expected to return. Aside from the normal gear you should pack as a prepared back country traveler, some specialized equipment for the season is necessary. Each member of the party should carry the following equipment:

□ Shovel

 $\hfill\square$  Avalanche Transceiver Beacon turned to transmit

□ Probe pole

 $\hfill\square$  Waterproof clothing and plenty of layers

 $\hfill\square$  Water and food

Call the Avalanche Information Center, at 482-0457, for current information on mountain weather, snow and avalanche conditions.

## Weather and Avalanche

Many weather factors, such as wind, storms, and rate of snowfall, affect the chances of a snow avalanche occurring. Rapid changes in weather conditions cause snowpack adjustments which may affect snowpack stability and cause an avalanche. Be alert to these conditions:

Wind: Sustained winds of 15 miles per hour or more rapidly increase avalanche danger even during clear weather. Areas of wind transported snow are very unstable.

Snow plumes: Snow plumes from ridges and peaks indicate that snow is being moved.

Storms: Be extra cautious. Many avalanches occur during and soon after winter storms.

Rate of snowfall: Snow falling at a rate of 1 inch or more per hour rapidly increases avalanche danger.

## Anatomy of an Avalanche

Snow avalanches are natural phenomena so complex that one can never have all the information necessary to predict avalanche conditions with certainty. The following are warning signs that will aid the observant and thinking traveler in judging the presence and degree of avalanche danger.

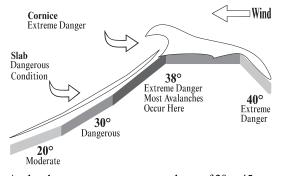
**Old Slide Paths:** Generally, avalanches occur in the same areas. Look for avalanche paths. Look for pushed-over small trees or trees with limbs broken off. Avoid steep, open gullies and slopes.

**Recent avalanche activity:** If you see new avalanches, suspect dangerous conditions. Beware when snowballs or "cartwheels" roll down the slope. Look for recent slide activity on the steep slopes adjacent to road cuts and other steep terrain.

**Snowpack:** Beware, snowpack conditions change depending on the direction the slope is facing. Temperature (high or low) affects snowpack stability.

**Sounds and cracks:** If the snow sounds hollow, particularly on down wind slopes, conditions are probably dangerous. If the snow cracks, and the cracks run, this indicates slab avalanche danger is high.

**Avalanche Terrain** 



Avalanches are more common on slopes of 30 to 45

degrees, but may occur on slopes ranging from 25 to 55 degrees. North facing slopes stabilize more slowly and south slopes are more dangerous in the spring due to heating.

# **Route Selection and Precautions**



The safest routes are on the windward side of ridge tops away from cornices. If you cannot travel ridges, the next safest route is out in the basin or valley, far from the bottom of slopes.

If you must cross dangerous slopes, travel one at a time. All others should watch the person. Remove ski pole straps, ski safety straps, loosen all equipment, put on mitts, cap and fasten clothing before you travel in any areas where there is avalanche danger.

Avoid disturbing cornices from below or above. Access ridge tops by detouring around cornice areas.

Large rocks, trees, and heavy brush help anchor the snow. Smooth, open slopes are more dangerous, but avalanches can start even among trees.

#### Avalanche Survival, the Victim

Play it safe. If in doubt, stay out of avalanche hazard areas. During periods of high or extreme avalanche hazard, back country travel is not recommended and should be confined to avalanche free areas.

The key to avalanche survival lies with the mountain traveler. Most incidents that endanger personal safety are induced by the person involved. Everyone has to be alert, observant and thinking. But if you do get caught, do the following:

- □ Discard all equipment and get away from your snowmobile.
- □ Make swimming motions. Try to stay on top, work your way to the side of the avalanche.
- Before coming to a stop, get your hands in front of your face and try to make an air space in the snow as you are coming to a stop.
- $\Box$  Try to remain calm.

## Avalanche Survival, the Rescuer

If you are the survivor, mark the place where you last saw the victim. Search for the person directly down slope below that last seen point. If the person is not on the surface, scuff or probe the snow with a ski pole or stick.

You are the victim's best hope for survival! Do not desert the person and go for help unless help is only a few minutes away. Remember you must not only consider the time required for you to get help, but the time required for help to return. After 1/2 hour, the buried person has only a 50 percent chance of surviving.

When the person is found and dug out, treat for suffocation, shock, and hypothermia. Assess and treat wounds.

## **Avalanche Hazard Ratings**

Low Avalanche Hazard: Mostly stable snow. Avalanches are unlikely except in isolated pockets on steep snow-covered open slopes and gullies. Back country travel is generally safe.

Moderate Avalanche Hazard: Areas of unstable snow. Avalanches are very possible on steep, snowcovered open slopes and gullies. Back country travelers should use caution.

**High Avalanche Hazard:** Mostly unstable snow. Avalanches are likely on steep, snow-covered open slopes and gullies. Back country travel is not recommended.

**Extreme Avalanche Hazard:** Widespread areas of unstable snow. Avalanches are certain on some steep snow-covered open slopes and gullies. Large destructive avalanches are possible. Back country travel should be avoided.

This publication is intended to give a brief overview of conditions you should be aware of to avoid and survive an avalanche. We recommend you get additional training on avalanche fundamentals through further reading, videotapes, seminars and workshops. If you would like more information on Larimer County Search and Rescue's public presentations or joining the team, there are some numbers at the end of this brochure.

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