

New Mexico Cross Country Ski Club
Back-country Skills

This Document Outlines:

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General Back-country Skills Outline
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What are Back-country Ski Conditions?

- hilly topography & variable snow like deep powder or icy crust
- probably means no trails or tracks
- or tracks from someone who's not going where you're going
- remoteness
- implies being on your own
- navigation skills are very important (learn to use map, compass, gps)

- does not necessarily mean extreme
- but for some it includes skiing to top of a mountain and down

- the ski club does back-country touring
- includes some Class 2 trips especially in Colorado
- includes Class 3 trips as well
- we want people to join us but be competent so it's both safe and fun

In terms of techniques

- it means alternatives to snowplowing or side-stepping
- skilled skier has a full repertoire of turns and skills for hut trips and more difficult back-country terrain
- Just because one can telemark or parallel ski doesn't mean they don't snow plow!
- good judgment for safety & fun
- trail is narrow, icy, treacherous, trees are close, carrying a heavy pack, legs are tired -- snowplow to descend
- traverse instead of going down the fall line

General Back-country Skills:

- You will ski through trees so you need to control
- have control both uphill and downhill
- handle powder snow, icy - crusty or deep snow
- Be alert to unpredictable or buried hazards
- understand the risks (hypothermia, injury, getting lost, avalanche, etc)
- know how to break trail & be fit enough to do it
- learn navigation skills
- avalanche awareness
- be fit and be prepared (clothing, food, water, supplies, etc)
- Choose appropriate tours for your abilities & preparation
- have skills to use sturdier, heavier gear and skins (essential for hut trips)
- Check the weather forecast (winds, temps, precip.) before you go out for your elevation
<http://www.mountain-forecast.com>

Back-country Attitude & Good Judgment

- If back-country is remote, risks increase
- Change your mentality from class 1 tours

- As risk increases, your personal responsibility should increase
- Be responsible for your own safety, not blindly following others
- Group dynamics can mean safety or risk (hypothermia, getting lost, avy terrain e.g.)
- One person can put a whole group at risk
- Fitness matters, get in shape
- time = safety so holding up the group can be a safety factor
- Choose appropriate tours for your abilities & preparation
- Don't charge ahead, out of visual & communication range
- Know appropriate spacing in avalanche terrain
- One person who voices a choice can influence a whole group-for good or ill
- Think for yourself. A person's desire to ski a lovely slope can override their common sense in avalanche terrain. This is how people die in avalanche country.
- Skiing ability does not equate to good judgment or expertise
- Be alert to others' conditions (stop to eat, drink, warm up, etc. as the group needs-not just yourself)
- Know and trust those you're joining
- Navigation skills are very important in the back-country
- Learn basics of avalanche terrain
- Common misconception is that skiers are safe as long as they stay in flats & lowlands. But you might ski along the the bottom of a perfect avalanche run!
- Understand avalanche terrain so you can at least avoid it

Breaking Trail

- requires some skill, knowledge and experience
- Be thoughtful about the route you create - others will follow
- Choose the best degree of slope for traverses uphill and down
- the steepest possible angle your skins can manage will make it shorter
- but, you do not want the steepest path for several reasons
- you'll likely be coming down the same track
- consider others in the group
- they may not have skins or may not be as fit or skilled.
- track will later become iced and slick so it will have less traction
- lower angle will be negotiable as conditions worsen
- Someone hauling a sled to a hut will need rounded switchback corners, not kick turn corners
- Look for hazards, like tree wells, buried tree trunks & rocks, buried fence lines
- If snow is sticky, keep the track in the shade
- Maneuver through powder or crusts by kicking and lifting your skis first forward then back, leaning back a bit
- It's hard work! Relay with others in so the front person can rest.
- With heavy packs for a hut trip, alternate skiers without packs
- One group leaves their packs behind & breaks a short section of trail, returns for their packs while another small group goes ahead to break trail.
- everyone should be able to pitch in with trail breaking
- don't wear out one stronger group member
- It's easy to catch up on a well-tracked trail.

Etiquette & Handy Strategies

- Step off the trail to the side to let others pass when you stop.
- cover yellow snow & take any paper with you
- Stop to wait in the sun to stay warm and let others catch up
- Don't stop right in the tracks and block the rest of the party.
- Off trail you may sink into deep powder snow
- small things disappear into powder snow
- keep outside gear attached to pack
- Stomp out a compacted area with your skis before you remove your pack or skins
- two reasons - won't lose gear in powder & level place on a hill

Control in Adverse Conditions:

- Stop to regain control
- Check your speed
- Traverse carefully either up or downhill if conditions warrant extra caution
- Back off the hot-dogging and snowplow or whatever is needed (bad conditions is not where you practice new skills)
- Better safe than sorry if you are tired out (no injuries!)
- Put skins on for downhill if necessary (e.g. for a steep and icy descent with a heavy hut trip pack)
- Stop to regain your composure, look around you and plan your moves & re-focus
- Visualize what you want to do, not what you don't want to do

Skins

- Full-length skins are necessary for most hut trips
- Keep the adhesive bottoms clean (pine needles, leaves, dirt, snow)
- Skins must fit your skis in length and width so there's tension to hold them on and your metal edges are exposed
- Wear gloves/liners when applying or taking off skins to keep your hands warm and dry
- Practice at home BEFORE you go out in the snow for first time
- Cool skins off before putting them in the snow (I.e. don't take them from the warm car or hut straight to the snow! - - warm skins melt snow on contact, get wet - snow sticks to them)
- Stomp compacted flat area with your skis - to apply or remove skins
- In wind, fold over in sections to keep it from sticking in the wrong places or getting in the snow
- Keep your skins dry! Snow sticks to wet skins
- Don't ski or stop in wet, melting snow

Powder Skiing:

- Keep your feet under your body.
- In snowplowing, use less edging to float higher in the snow instead of digging deeper.
- The powder will slow you down so you don't need as much edging.
- In telemark skiing, don't get too stretched out, keep the skis close together (side by side) and the back leg should be parallel to the snow at its lowest. Emphasize weight on the back ski.
- In parallel turns, lean back a little -not too far- to keep your tips up.
- Carve smaller turns in any style of skiing
- In deep snow unweight your skis as you turn, try hopping a bit, pop up as your body moves up and down.
- When touring-striding, kick your tips up as you move forward. Punch your ski upward and lift to keep from catching skis under crust or heavy load of powder

General Hut Information

- Although there are hut systems all over, the NMCCSC usually reserves huts from the Tenth Mountain Hut System in Colorado. See huts.org for information and photos.
- For hut & yurt trips, you bring a sleeping bag, food, clothing--it's like backpacking in the winter
- You melt snow for water, chop wood, heat with a wood stove
- There are typically bunks, tables, cookware, utensils, and gas burners
- Many hut trips gain 2000' or more in elevation to the hut (Tenth Mtn huts are typically at treeline about 12,000' but trailheads are from 9000'- 10,000')
- So it's often uphill all the way to a hut and downhill all the way to the trailhead
- Beginner hut trips are a short distance from a road, others are 9 miles from the road - a long day with a heavy pack!

Back-country Equipment for Huts & Skinning Terrain

vs. Skiing without Skins on Moderate Day Tours

- skis should be a wider, sturdier model, able to handle untracked snow conditions & terrain and heavy backpack
- boots should be stiff and supportive
- boot heels are unlocked, free (back-country AT gear has lockable heels for downhill)
- Bindings sometimes have climbing wires or risers for leg support on steep climbs
- Bindings should have heel cables for better control, some have tour/downhill modes that pivot or lock boot toe
- AT and Telemark boots have walk or ski mode (locks or releases ankle flexibility)
- These days the stores are selling NTN or New Tele Norm bindings and boots. They're not compatible with the tele bindings and boots that have been sold for the last twenty years or more. Know before you buy.
- Check if bindings & boots are in downhill or touring mode
- Telemark & AT skis do not have fish scales or other textures on the bottom
- Back-country touring skis may have fish scales or texture so you don't need skins on low-angle slopes

- For most hut trips you want skins even if you have texture under the boot on the bottom of your ski
- Skins are important because the slopes are steeper, the powder deeper, and you will be carrying a lot of weight
- Bring Emergency Gear
- Good insulation layers (down), quality clothing for your comfort & safety
- space blanket
- headlamp
- fire starter
- survival skills like building snow caves & pine bough shelters in the event of being caught overnight
- talk to experienced hut-goers for more details

**Questions about hut trips?
About anything else?**

References:

See *ski club web links for avalanche courses & winter/wilderness medicine courses*
Allen & Mike's Really Cool Telemark Tips, Allen O'Bannon and Mike Clelland
Allen & Mike's Really Cool Back-country Ski Book, Allen O'Bannon and Mike Clelland
 You tube videos

Touring Uphill Strides:	http://www.youtube.com/watch?v=6IA6rU0QB2E
Touring Basics:	http://www.youtube.com/watch?v=A0nvwYheDVO
Skins on & off	http://www.youtube.com/watch?v=cX5UWvZfihs
Telemark Turn on Cross-country skis	http://www.youtube.com/watch?v=1U8jiKghcAg
From Snowplow to Telemark Turn	http://www.youtube.com/watch?v=kqpS41vV_ww
A Fun back-country ski video:	http://www.youtube.com/watch?v=CZRradvzQ

There are umpteen parallel ski turn videos out there. Find some you like.

Demonstration Materials

- avalanche beacon
 - avalanche probes
 - shovel
 - avy card
 - club scholarship for avy classes
 - URLs for avy classes (Silverton Avalanche School, etc.)
 - Allen & Mike's books (esp back-country book)
 - Wind Chill Chart
 - hut maps & routes
 - GPS
 - *Snow Sense* book
 - telly bindings, boots
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