

## Heli-Ski Survival Guide

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### ABSTRACT

Procedures refined over 12 operating seasons in the North Cascades are reviewed, along with avalanche incidents, by the senior guide. This paper is an attempt to help answer Bruce Tremper's challenge to heli-ski guides, to reveal exactly how we manage risk. Our guide staff continuity emphasis, and internal communications, as well as client relations strategies are included, along with the obvious operating procedures regarding: setting up landings, radios, pits, ski tests, and route management.

The clients' feelings involved are emphasized, especially as they relate to expectations, safety, liability, and the bottom line. Finally the survival of the sport itself, and its contribution to -and interaction with - environmental awareness, is related to its perceived elitist nature. This contributes not only to the problem Bruce Tremper pointed out, but also to ignorance of mountain reality by environmental activists. The future of heli-skiing and backcountry management may be at stake. The role of helicopters in supplying huts, maintaining trails, and rescuing ski tourers, relates to how well informed the involved political constituencies are.

Increased participation of all heli-skiers, guides and clients, in environmental affairs is advocated. This is presented as potentially contributing to both snow safety, and more tolerance of heli-skiing by those unfamiliar with avalanche hazards. We are the eyes in the sky, and need to share our vision.

### INTRODUCTION

Tree wells, crevasses, avalanches, helicopter efficiency, and crashes, are probably the survival challenges most heli-ski guides think about, in small operations. Profit sharing is only possible if there is some profit to share, and the contributing factors - like risk management and flight efficiency, are all too obvious. Client misconceptions about avalanche risks are fundamental to our strategies for improvement. Heli-ski guides can't predict avalanches 99.5% of the time, anymore than anyone else can. What we can do is operate with a margin of safety, in terms of where, and how, we ski - based on our evaluation of risk.

Survival has both short term and long term aspects. Neither are enhanced by the unwillingness to communicate, which Bruce Tremper pointed out in his Avalanche Review editorial last season. Long term survival is key to answering environmentalist critics of heli-skiing, and even nordic skiing. Our North Cascade Heli-skiing involves both alpine and nordic - directly, and bases out of the Methow Valley which has forsaken ski lifts in order to get past environmental opposition to construction of a destination nordic, and trails based, resort.

### NORTH CASCADES PROCEDURES

Small operations have many procedures in common, I suspect. Here is a concise summary of ours.

Experienced guides are our key risk management tool. Senior guides go out with any group, and new guides go along as space permits. All our guides also have "real jobs", or at least other jobs that compliment heli-skiing. That is simply a fact of life for our small operation. We cull the long list of wanna-bes, to pick the very best, with potential for long term relationships. Our experience indicates that it takes a few seasons to get good at this game.

Clients are prepared with: pre-trip mailings - including a customized transceiver instruction pamphlet, personal pre-flight instruction by a guide, and are of course outfitted with fat skis, if they didn't bring their own. We gave up on both slide-tape and video client briefings, after they seemed too impersonal, and therefore - not sufficiently credible. We like to teach helicopter safety at the machine itself, with hands-on practice, and beacon drill out in the snow too, while we're there.

Our safety record includes no burials or avalanche related injuries. Perhaps we've simply been lucky, but maybe we're also doing some things right. We've had guides and clients caught by small slides, but usually we ski out following the suggested procedure for competent skiers in the Ortovox instruction pamphlet. I've occasionally been frightened by unanticipated client behavior, but seldom by snow instability. I don't recall any avalanche that qualifies as even a close call.

Our landings are set up, ahead of use with clients, by separate flights, snowcat, snowmobile, or ski touring. We currently use both one and a quarter, and two meter landing stakes, of different widths, so that when we fly in with the first clients - our lead guide has a visual aid to judge new snow depth and wind transport. For those of you who are not familiar with heli-skiing, the primary purpose of these stakes is pilot reference. These pre-client visits also involve leveling of the site, clearing any brush or trees, snow pit analysis, and ski checking. Typically we get our biggest releases on such trips, because they occur during or after the storm, and we have time to climb or traverse to the best sweet spots in the starting zones. Explosives are used only infrequently, as a check. Usually we simply ski elsewhere, until we are satisfied that conditions have stabilized.

Radios are a potential problem for small operators, and we fail- safe ours with a regular protocol of check ins, from guide to guide, guides to base, and all to - or often relayed through - the helicopter. Yes, THE helicopter, we are a one ship operation. It is an ASTAR with radio channel search, and GIS navigational, capabilities. Our pilot is good enough with all this, that he'll sometimes radio how far my nordic tour is out from the pick-up point. He also spots, and reports, natural avalanche activity - we might otherwise miss. Our pilots both ski, and are intensely interested in avalanches.

Snow study pits are routinely dug by the first guide out, while waiting for the second load. Often the findings con-

firm what we were expecting, based on previous pit data. We plot significant pits on the standard Swiss style seasonal wall chart, along with contributing factors, and a bottom line of avalanche occurrence. We've found color useful to portray temperatures, using the standard nordic ski wax colors. Last season we started Xeroxing each month's portion of the chart, and posting it at other places in the valley, where backcountry skiers congregate. Our clients have immediate access to the full season's chart.

Ski tests are often the responsibility of the second guide out. He or she usually has time to kick a little cornice, or traverse out to a start zone off to the side, and still traverse back in behind the clients' fall line route.

Route management is the lead guide's responsibility, and we hear about it, if he or she thinks our route might risk starting one down on another group. Skiing instructions are specific as to who leads, who follows, whether we ski as groups - or one at a time, how much distance between skiers, etc.. Typically one guide leads, while the second sweeps the tail, providing assistance to slower skiers. One guide may wait out a run, to dig an extra pit or set up another landing.

The buddy system is standard procedure for defense against tree wells in particular, but also to guard against lost skiers in the vast and complex terrain, typical of glaciers and avalanche path ski runs.

### CLIENTS' FEELINGS

Our ability to sense clients' feelings is critical. This is a continual challenge, and perhaps the area of our profession's greatest need for improvement.

"My, what an exciting job you have! I'd love to heli-ski, except that. I'm afraid I couldn't jump out of the helicopter." "Shucks, I figure it's just a crap shoot. That's why you give us these beacons, isn't it?" Or my favorite: "Nordic helicopter skiing sounds wonderful, but what happens when you come to a fence?" I started heli-ski guiding in 1983, after about 16 years as pro-patroller, ski instructor, and snow ranger, and I'm still continually amazed at the misconceptions our clients have about the natural world of snow. The Disneyfication of the Western mind is of course at work here, but those of us that choose to get our information from more reliable sources need to at least attempt to keep up on popular culture. As revolting as it is, it still is where most of our clients are coming from. The Sports Illustrated article about the CMH Bay Street avalanche incident comes to mind as an example of how entrenched these misconceptions are. As a forester, I come up against this same Bambi Syndrome to an alarming degree. Dealing with it requires patience and tact. You can probably sense some of the nature of my attitude problem here. Contact with clients from other heli-ski operations indicates that I'm not the only guide with this challenge.

Anxiety management is a personal and complex affair. Convincing clients not to do dangerous things is made more difficult by the fact that they usually perceive heli-skiing as a highly risky business, in the first place. They often are people who enjoy doing dangerous things - adrenaline junkies. Persuading such clients to respect the more conservative nature of most of their fellow skiers, has proved to be the best ploy with this sometimes

disruptive minority. Small groups help a lot. There simply is more opportunity for contact with the guide. Hopefully the guide has his, or her, own attitude problem under control.

### ELITISM

Anything perceived to be as expensive as heli-skiing is going to have problems with elitism. To pretend otherwise is a perhaps comforting illusion, but to quote the patron saint of the environmental movement - Aldo Leopold: "seems to yield only danger in the long run".

A popular misconception among environmentalists, for instance, is that heli-skiing is somehow at odds with nordic skiing. We read about demonstrations in Colorado, Utah, and Canada against heli-skiing, and my European contacts tell of similar difficulties. Except for resistance to heli-hiking, relayed to us by the U.S. Forest Service, we have been largely spared these distractions in the North Cascades. We do not have any heli-hiking. Our operation was, in fact, started by a local group of guides - who were also nordic ski instructors. So an easy explanation of why we do this elitist thing, is that "If you can't lick 'em, join 'em."

The truth, as usual, is more complex. Heli-skiing gives its participants, and especially its guides, the opportunity to see more terrain, up close, than is possible by any other means. If heli-ski guides are better avalanche forecasters, as Tremper suggested, then this is the reason. We simply are privileged to have more exposure. Helicopters are also the most environmentally friendly means to build and maintain backcountry bridges, huts, and trails. They're very handy for rescue! If we make the effort to communicate this knowledge to other backcountry skiers, the potential for safety education is the best we could hope for.

The role of avalanche paths, as fuel breaks, in efforts to restore natural fire ecology, is but one example of how our airborne vantage could translate into better backcountry management. Nobody else sees, or skis, the forest fire scars the way we do. Nobody else watches the snags go down, the brush come up, and the changes in animal tracks, the rate that our bottom landings grow in - and need to be cleared out, or what happens to the forest when nature clears our bottom landings for us. Don't keep this kind of knowledge out of circulation. We have a responsibility to tactfully, gently, and as friendly backcountry neighbors, educate less well traveled mountain enthusiasts. They just might, in return, allow us to continue to ski. This is one sound business reason for making an effort to communicate. I believe there is a moral obligation too - to give other mountain people the survival knowledge they need for both avalanche safety, and the ability to make long term ecological decisions based on reality.