



# Ski The Difference: Slope Grooming That Goes the Extra Mile

By Deer Valley Resort

Mar. 7th, 2022 / [2 Comments](#)

The images skiers might typically conjure up when it comes to grooming a resort fall impossibly short. Vacuuming a rug? Mowing a lawn? Not even close. To effectively illustrate the scale, challenge, and skill required to groom Deer Valley’s six mountains is far more complex. To continue the analogy, grooming would be more akin to cutting up all the sod on a golf course, tilling the dirt, then laying in new sod row-by-row. Every night. All season long.

Contrary to popular belief, or perhaps not given a second thought when schussing down fresh corduroy, the grooming effort is not simply driving a snowcat up and down a mountain with a grooved spatula in tow. Both an art and a science, with over 20,000 pounds of machine to execute a sophisticated plan, it is a far greater task.

**Ski The Difference. Literally.**



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To understand slope grooming, and specifically why Deer Valley's ethos "*Ski The Difference*" exemplifies the attention to detail the resort is known for, we have to go back to the beginning.

When **Deer Valley was built in the late-'70s** (opening for business in 1981), the resort was the realization of founder Edgar Stern's vision to revolutionize the customer experience in the ski industry. The tactical planning for chairlifts, lodges, and other amenities is a massive undertaking, and during that effort, Mr. Stern also had the foresight to grade the ski runs.



Creating a ski surface that is level on both sides of a run requires moving and tilling the earth to make the ground flat. Ever notice that the trees on one side of many runs are higher or lower than the other side? This is why. Making the fall line (skier parlance for where gravity wants your skis to go) down, rather than towards the side of a run, gives the grooming crew the ability to mimic the level surface of the ground with snow, making skiing smoother and more enjoyable. Ski the difference. Literally. Thanks, Edgar.

#### **Planning Ahead**

Today, Deer Valley operates a fleet of 16 snowcats, with two shifts per night working against time, ruts, moguls, and weather to complete their routes before the chairs spin again the next morning.



Snowcats themselves come in several shapes and sizes. The fleet breaks down like this:

Eleven free groomers. This is the most common, and free meaning the cats operate free of cables. It is no coincidence that the chairlift ramps for loading and unloading just so happen to be the ideal width for these snowcats to work in. Smart planning, indeed.

Three winch cats. When the going gets steep – or icy or uneven – groomers turn to steel winch cables to keep their machines steady and safe.

Two work cats. These machines are not used for grooming, but provide assistance to crews around the mountain. Fun fact: Snowcats can be rigged to power a lift in the (extremely unlikely) event of both a primary and backup power outage!

To pull off a complex operation with this many moving parts, Deer Valley turns to Laura Sexton. After a two-decade career in the military, Laura is a natural and compassionate leader who has built a team of passionate skiers who begin their day around 1 p.m. with a quality control check. Translation: skiing!



Experiencing the product, and the fruits of their own labors, allows the team to identify problem areas that will need extra attention that evening. Many variables play into the plan the team makes: from skier traffic to the weather, and even the direction a run faces.

#### **Aspect, Dishing, and Snowfall**

If a certain run gets a lot of sun or skier traffic, the team makes these areas a priority. For example, Jordanelle ski run can get a lot of sun based on the direction it faces and is a popular run. After a sunny weekend day, the team will spend hours that night rebuilding the run.



Take a trail like Sidewinder, which due to the layout of the run, has several areas where skier after skier is forced to turn in the same spot. This causes dishing – essentially ruts, which become odd-shaped moguls not that enjoyable to ski. The shift leads will identify these areas as a priority, and by 9 a.m. they will have moved a literal mountain of snow in these areas. The first skiers of the day will find no evidence of the previous day's tracks: only a smooth run remains.

An easy run in the eyes of a skier, such as Success, can present difficult challenges for the grooming crew, such as tree islands, they need to avoid. Tycoon, which winds its way in several directions down the mountain, may have seen sun up high and shade down low and calls for a whole other plan of attack.



Fresh snow is a skier's best friend – and, to a point, so it is for a groomer. A few inches of fresh snow offer a great advantage in making things smooth. However, too much of a good thing can literally slow things down. The cats have to drive slower, and use more fuel, to make it through the deep snow. Taking the average speed, and a potential refueling stop, into account is all part of the plan.

### **OK, But How Does Grooming Work?**

If skiing is a downhill sport, grooming is an uphill one. Skiers naturally push snow downhill with every turn. Multiply that by every skier who skis a run each day and it's no wonder a lot of snow winds up collecting lower on the mountain than where it started.



The groomers will use an assortment of the attachments on the front, sides, and rear of their machines to cut into the snow, move it, shape it and, eventually, smooth it out. The tools the operator has at their disposal include a 15-foot blade with a dozen functions and can extend its “wings” out several feet wider. The steel tracks on either side rotate on ten solid rubber tires and sport ice cleats. Bringing up the rear is a tiller that articulates up and down, side to side, and can even flex to follow undulations in the terrain. Operators can change the depth they want to till, digging deeper in harder conditions and easing off in softer snow. Last but not least is a finishing comb – whose evidence is left behind in finished corduroy on a freshly groomed run.



The first objective is to loosen compacted snow and start driving it back up the hill. Steeper runs and obstacles like moguls require a winch cable – measuring almost 4,000 feet long – the aid in this fight against gravity by offering improved traction. Hard and compact conditions offer another set of challenges. By nature, there is less snow available to loosen, either by skier or cat, then move back uphill in the blade.

Skiers would barely recognize their favorite runs in the middle of this process. The trail is literally torn apart: where once stood a mix of fresh snow, a bit of leftover corduroy, or a few moguls instead resembles a frozen sea of snow chunks in the dark of the night. This exercise in organized chaos leaves rows and piles that look more like the handiwork of mythological aliens marking a crop circle than a ski run. That is until the snowcat driver pushes a button on their joystick that lowers their comb and begins smoothing said chunks into corduroy and turning today's leftovers into tomorrow's blank canvas.

#### **Groomer's Choice**

Over the 40+ years since Edgar Stern opened [Deer Valley](#), much has changed – expanded terrain, high-speed lifts, and grooming is no different. Technology has worked its way into the cab of snowcats where interactive screens and joystick controls resemble a video game more than winterized farm equipment. Using Snowgage devices, sort of like a fish finder, but for snow, allow groomers to measure the snow depth around the mountain. They overlay these numbers on Google Earth to give attention to problem areas before they become bigger issues. Filling in these thinner areas with additional snow makes sure the ground stays buried and skiers ski on snow rather than rocks or roots. Thanks to this tool, much of the mountain can be skied on as little as a 24" base when it's spread out evenly.

The job of a groomer is one of mental fortitude. The operator is often working solo in the dark of the night and making complex decisions in changing conditions, all while moving 10 tons of steel up or down a mountainside.

One of the many things Deer Valley does differently is allowing operators to work a run on their own to completion. An alternative process, known as “gang grooming,” would be when a team of snowcats follows one another up and down the mountain working in tandem. That’s not the case here – each run is often the handiwork of a single team member.



Each of these individuals has their own stories and backgrounds – small business owners, construction and trade workers, fishing guides, off-road racers – to name just a few. Others work for Deer Valley in the summer, working on weed abatement, tree thinning, and forest management. The most common thread: dedication and hard work. And of course, a love for skiing.

In a world where employee turnover is high, the majority of the Deer Valley grooming crew have worked together for over five years – and tenures of 40-plus years are not uncommon. The few rookies on the team benefit from experienced team members, who physically go over their work to make sure nothing is short of perfect before a shift ends. While the signature from one groomed run to the next looks intentionally uniform, there is one way to identify which run was worked by a veteran: look for the words “Groomer’s Choice” at the base of any lift and point your skis down those trails.





Originally written by [Nick](#) and [Laura Como](#) for [Deer Valley Resort](#).

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## 2 Responses



[Steven Kornreich](#) says:

March 9, 2022 at 6:14 pm

Hats off to the Deer Valley grooming team  
Thank you so much for another great season

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[Tom Grimac](#) says:

March 15, 2022 at 9:03 am

If you're into blue groomers like my wife and me, there's only one choice for where to ski: Deer Valley! We've skied all over in the west, and have yet to find consistently manicured slopes like this. Snowmass would be #2 in our opinion. As we have aged, we enjoy Deer Valley more all the time. We owned property at the base near Snowpark lodge for 12 years and we are now officially spoiled. Second to none!

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