

# Grooming Program Summary

## Winter 2023/2024

By Nick Beatty, Program Director

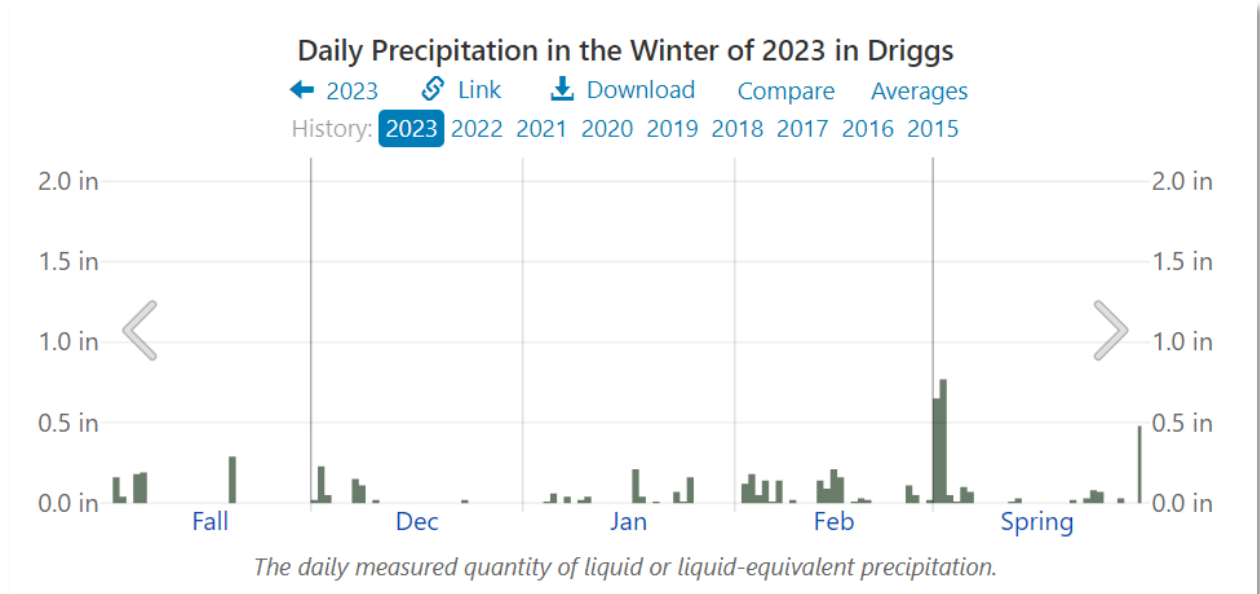
We had a great crew of volunteers and staff who worked tirelessly to keep up with the variable weather conditions. This summary is a deep dive into the data that was gathered during the 2023/2024 winter grooming season. Some of the highlights from this season include:

- Completing the “Grooming The Future” campaign and then making it a reality.
- Implementing a new Grooming Report system
- Adding 12 miles of groomed trail – Horseshoe Yurt Loop = 7mi, T Reserve = 2.5mi, Centennial Pathway = 2.5mi.
- Hosting a Women’s Grooming Clinic (thanks for spearheading that CQ!)

### Precipitation

Wow, what a huge and crazy winter...a meteorological rollercoaster! The winter started off with drought-like conditions in November and December. This delayed the start to the season with a bleak outlook till the Jetstream shifted in February!

**From Dec 2<sup>nd</sup> to April 13<sup>th</sup> we had 50 days of measurable snow. The majority of that arrived in February/March.** Last year was much more friendly with 62 days of measurable snow evenly spread throughout the season accompanied with more consistent temperatures.



### Equipment

I can’t tell you how grateful the groomers are to have such quality equipment to work with. We made it through the whole season without any major breakdowns. It is nice to have efficient and reliable machines that the volunteers enjoy working with. When the equipment works well, the operators are happy, and enjoy grooming. When the operators enjoy grooming, the trails stay in great shape. If the

trails are in great shape, then the trail users are happy. It is a simple formula, and all goes back to having good quality equipment.

### **Snow Rabbit**

So how well did the Snow Rabbit work for us this winter? Well, we have said from the beginning of the campaign that the Rabbit is a specialty tool that will be utilized to support the snowmobile grooming operation. We planned for about 200 hours of operation time and ended the season just shy of that with 190 hours. This is due to the delayed start to winter (no Rabbit grooming in December).

The Rabbit created some great successes this winter. The TRC race would not have been possible without having the ability to push snow around and create a functional racecourse. The trail conditions for the Spud Chase improved dramatically after grooming with the Rabbit. It lays a pretty nice classic track in firm conditions and the tiller works well to consolidate soft snow. The Rabbit proved itself during the significant snow events we experienced in February/March by compacting trails into a skiable surface much more efficiently than snowmobile grooming equipment. The only problem we encountered is that it couldn't be at every venue at once.

We also learned some of the Rabbit's limitations this winter. The functionality of this particular snowcat is rather elementary when comparing it to a much more costly and refined PistenBully or Prinoth machine. One of the big differences is that the hydraulic valving is not progressive, which makes operation less smooth and difficult to dial in. There is no track speed or tiller speed adjustment. The tiller is a rather basic design as well with tiller pressure being regulated by large coil springs and cutting depth is limited based on the geometry of the comb. The weight of the tiller hydraulic pump makes it difficult to leave a clean overlapping pass on the right side of the machine. In firm snow conditions, the Rabbit produces the best quality groom when traveling at slower speeds, which results in long grooming shifts- twice the time as snowmobile grooming. In this first year we have become much more familiar with the machine and have learned many techniques to operate the machine productively and efficiently.

Rabbit stats:

- # of grooms = 37 (\$225/groom)
- Total grooming hours = 189 hrs. (\$45/hr.)
- Total staff hours = 280
- Total Fuel Consumed = 274 gal. (\$1,151)
- Total DEF = 14 gal. \$120

In all, the Snow Rabbit has been a positive addition to our program, and we look forward to producing more quality trails in seasons to come.

### **Distance Groomed**

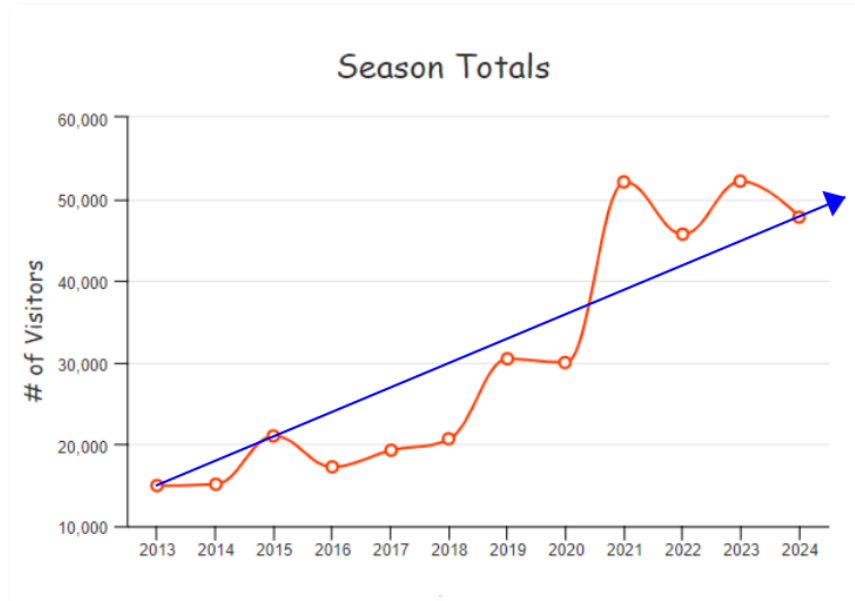
This grooming season was 20 days shorter than last year. As a result, the crew groomed an estimated 7,792 miles, which is a 9% decrease in mileage from last winter (8,581 miles).

### **Trail Use Data**

Each season I set up infrared data collectors that capture the number of warm bodies that pass by that particular spot on the trail. They are installed in the same spot each winter so we can analyze trends in use over time. Unfortunately, several of our counters had issues with moisture problems due to the

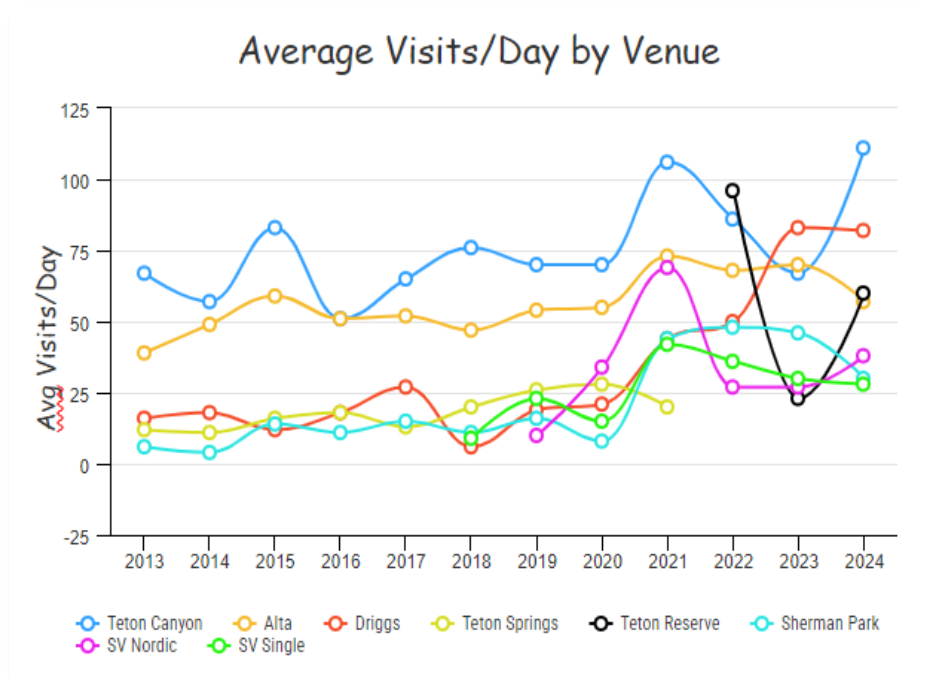
fluctuating temperatures and snowfall. Even with some relatively small datasets, I feel the calculated totals are accurate. We are prioritizing to secure more trail counters for next year.

The total of trail visitation this winter is 47,797 visits, which is an 8% decrease from last winter (2023).



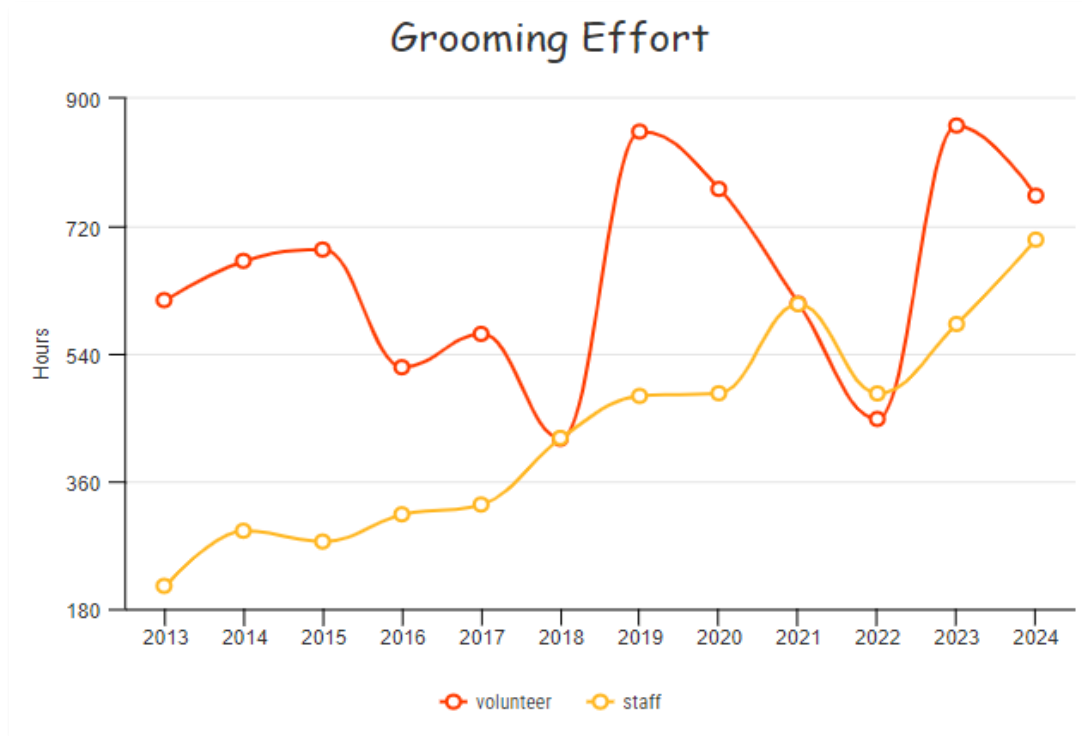
Trail use continues to trend in an upwards direction. We used to see a decrease in use during large snowfall winters, but this isn't the case anymore. People use the trails in all snow conditions.

Considering the shorter season length this year of 134 days, trail use averaged **357 visits/day** on our trail system. Last year the average was 339 visits/day, so the groomed trail system saw a 5% growth rate!



### Grooming Effort

This year our crew of 24 volunteers logged 763 hours of grooming time. TVTAP's staff of four logged 701 hours of grooming, for a grand total of **1464 hours** spent building and maintaining the groomed trails. See graph below.



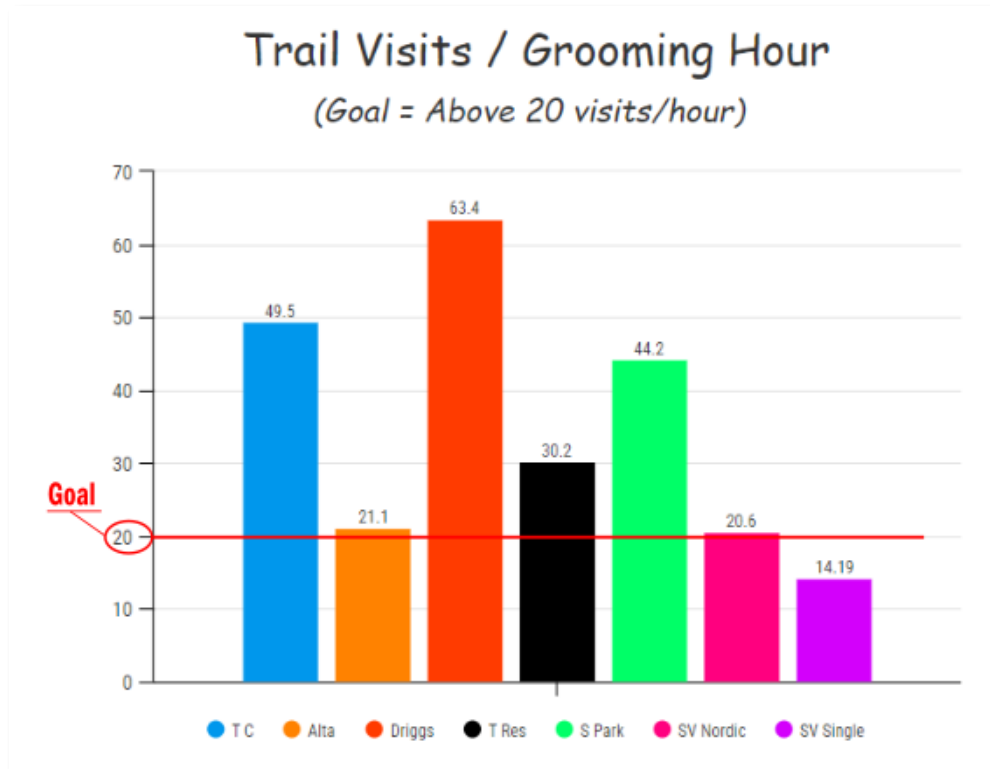
You will notice the volunteer effort decreased and the staff effort increased this winter. This is largely because of the capital campaign, adding a full-time Nordic Program Manager position and staff grooming with the Rabbit. Also, we added grooming of the Centennial Pathway, and increased grooming around Horseshoe Yurt, which was also all staff grooming hours.

### Grooming Program Metric

Years ago, TVTAP determined that we needed a way to analyze if our grooming efforts were worthwhile. The metric that we use for this is to compare our effort (grooming hours) to the amount of visits a trail gets. The formula looks like this:

$$\frac{\text{Total Trail Visits}}{\text{Total Grooming Hours}} = \text{Visits/Hour.}$$

We determined that the objective is to have at least 20 visitors for every hour we spend grooming. The graph below shows how we did this winter. There were a lot of people using the in-town trails which require less grooming effort.



Most years we are averaging around 30-40 visits/hour with a couple venues dancing around the 20 visits/hour mark. This season we averaged 34.7.

You will notice the rather low results on Southern Valley trails. The singletrack is always below the goal because we require team grooming (two operators per grooming session) which doubles the effort. The SV Nordic column would be higher if we secured trail counts on the Centennial Pathway, but we didn't have enough working trail counters. The Alta trail shows relatively low results because the dataset we captured was in the early part of winter when trail use was lower. This isn't a perfect science, but it does let us know that our grooming effort is on par with the community's need.

#### Singletrack Grooming

The grooming strategy that we implemented last winter continues to work well. Trail use on the South Valley singletrack continues to hover around the 30 visits/day mark. Based on this data, I don't see a need to change our strategy for next season.

#### Fuel Consumption

- Snowmobiles = 771 gallons, \$2,552  
This is a decrease of 18% from last year's 944 gallons
- Rabbit = 289 gallons, \$1,151
- TOTAL Grooming Fuel = 1,060 gallons, \$3,703  
This is a gallon increase of 12% and a dollar increase of 8%
- Automobile Expense = \$4,300 – This includes fuel, maintenance, parts, etc.

This winter the snowmobiles burned 771 gallons of fuel averaging 10 MPG. Comparing the Snow Rabbit to the snowmobiles it is best to look at gallons/hour, since we don't track mileage on the Snow Rabbit.

- Snowmobiles = .8 gal/hr
- Rabbit = 1.45 gal/hr

TVTAP paid \$3,703 for equipment fuel. \$500 of that will be reimbursed by the City of Victor. Teton Reserve donated 81 gallons, and the City of Driggs donated 75 gallons.

If you compare our total Trail Visits (47,797) to the amount of fuel, we burned (1,060 gallons) you could say that this winter we achieved **45 smiles per gallon** (last year was 55 smiles/gal).

To wrap it up, this winter 27 operators (23 volunteers and 4 staff) regularly maintained 61 miles of trail (a 24% system increase) in Teton Valley, grooming a total distance of about 7,790 miles. The delayed start to winter shortened the season by 20 days, but we still saw significant trail use with 47,797 trail visits that averaged 357 visits/day (5% increase over last year). The snowmobiles consumed 18% less fuel than last winter, but when adding the Rabbit into the mix we burned a total 1,060 gallons which was a 12% overall increase. The Snow Rabbit provided some great skiing opportunities and did a great job supporting the snowmobile grooming program.

In all, we had another great season and fulfilled our mission of providing quality winter trails in Teton Valley for our community to enjoy.

Nick