

Minutes of the Friends of Laham Peak Snowmaking Committee  
Web meeting via Zoom  
April 18, 2023 6:00 PM-8:00 PM

**Present via Zoom:** Anne Riendl, Joanne Ziarek, Mike Graham, John McCarthy, Jim Marschalek, Mark Herr, Mike Koester, Rich Marusinec, Charlie Ritter, and Colton Kelly, Advisor.

**Next meetings:** May 16, June 13, August 15 from 6PM to 7:45PM via Zoom. July 11 to be in person potluck cookout with members of the FLP Board at the Mike Fort Shelter at Lapham Peak.

**Approval of Minutes:** Minutes of the March 14 meeting were approved. Joanne Z. will notify John Hillmer to distribute and post to the website as appropriate.

**FLP Snowmaking Funds:** Anne presented a brief summary of snowmaking funds from the March 2023 treasurer's report.

**Snowmaking:** Rich M. provided a very detailed report as follows:

Snow Making Season Highlights and Key Takeaways:

- Started snowmaking Dec 1 and skied Dec 6 – 6am grooming done.
- 16 different days, 28 shifts (8 hours). 8 days in Dec, 7 days in Jan and 1 day in Feb
- About 4M gallons of water used, similar to last year.
- Completed more trail touch up ahead of time (before we had bare spots), which worked well. Trail held up well considering rain and warm temps.
- Once trails are open and we have a lot of skiers it's very hard to make snow after Friday noon, and especially Sat and Sunday during the day. Best days are Mon – Wed, and especially mornings.
- Our location tends to be very humid with moderate temps. In the woods humidity builds as we make snow. Very challenging season this year due to high humidity levels. Working with SMI engineers to optimize the snow guns for "moderate to high humidity" conditions.
- During very cold spells it's very difficult to keep up to 7 snow guns running with 2 volunteers, so 3 people are needed or else need to run 4-5 guns or throttle back on water. Had about 5 nucleator freeze ups which we will discuss with SMI for reasons/solutions/prevention.
- The yellow chains worked well keeping hikers off the trails both during snowmaking and after trails are open. Need a few tweaks to locations.
- Hard doing touch-up on open and active trails, especially if need to spread a lot of snow. Some skiers tend to ski around or under chains. Would like to have a large sign at the trailhead mentioning that Snowmaking is in progress.
- Adding a lot of antifreeze just before deep freeze helped, along with insulated hydrants.
- John M. mentioned we had groomed trails for 105 days but we did lose about 20 days to rain and warm temperatures.
- Great grooming support this year from DNR. Beattle plans to provide a grooming report at the next meeting.

Snowmaking Volunteer Season Overview & Needs for next Season:

- 547 volunteer hours and 71 DNR hours – actual snowmaking time. – Very typical for last 3 years
- Rich M. and Mike K. put in 42% of volunteer hours plus a lot of planning and coordination hours that were not included, which is higher than desired.

- Mike Koester's training/transition to primary snowmaker leader went very well and having 2 co-leaders is really beneficial. Ideally 3 is best, so will look for one more.
- Training of Collin (DNR) went really well. Very appreciative that Jay was available this season yet to train and help make snow.
- Great volunteer availability through Dec. Once we hit January many of the volunteers travel (especially to ski in various locations) and both Mike K. and Rich M. had to handle a lot of double shifts to cover open time slots.
- Need to review and plan how to recruit a few more shift coordinators and January snowmakers. Jim M to help with this – maybe meet in summer a few times to discuss.
- Off shifts are hard to fill and need 3 volunteers on really cold nights. Also Friday through Sunday shifts are hard to fill once trails are open.
- Unsure if we need to pay a few more snowmakers – especially for 11PM to 7AM shifts.
- Maybe form a small group to discuss: Mike Koester, Rich, Jim M, Mark Herr, Anne, Colton. Start in a few months to do this. (*See note about subcommittee group under Volunteers Needed section*)

#### SMI Snow Gun Technical Discussion#2

- Held a technical review with SMI lead engineer on high humidity and nozzle hole diameters. Rich is ordering some new nozzles for two snow guns to try next year.
- Nozzle opening sizes need to be a bit different as temps start warmer in early season, and then slowly drop by the end of December.
- Discovered that the water filters on 2 of the Kid Polecat guns are much finer mesh than the others and get clogged quickly, thus making wetter snow. Ordering replacements.
- 2<sup>nd</sup> meeting planned with SMI on this topic – actually the new SMI parts coordinator was the Polecat test expert for 15 years. During a recent call by Rich he provided a lot of information on making snow in humid conditions as well as in very cold temperatures.
- It's likely that snow guns are generally optimized for the hill conditions of temperature and humidity for Alpine use, but we need to make a few changes to the snow guns and the nucleators for our warmer December temperatures and high humidity for Nordic use.
- Rich will be summarizing this during the next two weeks with specific things we will try next year as well as documenting key advice from SMI.

#### Snow Gun Maintenance & Repairs Planned:

- All guns in WRSB and water filters cleaned.
- Other maintenance planned for late May. (Oil changes and part repairs)
- Several lights and gauges not working so will replace 4 lights, 4 air pressure gauges and 4 water pressure gauges.
- Need to check all compressors, heaters and misc.
- Gun #7 seemed to also make wetter snow this year and last year. We will make adjustments to the nucleator in fall.
- Parts and oil will be \$1066 (includes \$340 for new water filters on 2 Kid Polecats)

#### Water Pump & Hydrant Summer Activities:

- Pump house ran well this season – no issues. Routine maintenance in May or June.
- It does seem that we lose water pressure faster once we turn it off and all valves closed. We also get air build up at trail section 3C high point
- Plan to have Rob Garner work with us in May or June or July to test the system and check troublesome hydrants using his engineering expertise.

- Several hydrants freeze up once we get really cold temps. Need to pull out shafts and check sprockets to make sure they are closing completely.
- Several hydrants actually leaked water up through the hydrant after closing – how tight is tight issue? Or is there a leaky valve sprocket?
- Consider doing a test of pressure drop with John M. between sections and valves also.

#### Light System & Electric Review for this Summer:

- Prototype lights worked well. Plan to investigate Birkie new trail lights as an option also.
- Many of the old lights need replacing. Collin plans to document issues during the next month and we will start a proposal for Colton to pursue funding from DNR.
- Several pole junction box failures at outlet or j-box as well as underground light failure between 2 poles on 3B – Used extension cords during season – will check more on this Friday.
- Also had some flickering light issue which means GFCI outlet below is failing.

#### Well Pump:

- John has not received any pump info from Tony Anhalt, whose company did the install. Tony had indicated it could be the aquifer level, or a pump issue.
- We are averaging only about 55 to 60 gallons per min (gpm) vs 80+. Ideally, we would want to be around 100 to 110 gpm.
- Colton is digging up info on existing well details that is in the DNR system and reaching out to the DNR coordinator for all wells on DNR properties.
- John mentioned that in the next few months Waukesha County will be off of this aquifer and on to the Milwaukee Lake Michigan water supply, which could have a positive impact for us.

#### New Hose Winder Built by Rob Garner:

- Rob updated the design, bought parts, and built a new, more stable hose winder this spring.
- This will be really helpful – works great.
- He donated all materials. Formal thank you needed. He is retiring in about a year and open to helping out with Snowmaking.

#### Other Summer Activity

- John Kolbe and John Hilmer from the Habitat Group will be clearing out lanes on the east side of Two Tier to Hoot Owl for snow gun access.
- Need about another 4 hours of tree trimming in early Dec along the trail
- Rich is summarizing a project list for the summer and fall months and will have a first draft completed in the next few weeks for review by all. John M asked that the list includes WRSB driveway stone work, lengthening of culvert at corner of 3B and 3C, and installation of underdrain at WRSB.

**Safety Flashers on Hwy C:** Colton and Anne R. are applying for an Enhancement Grant from the DNR to install safety flashers at the pedestrian crossing near Evergreen on Hwy C. This will include early flashers before the crossing from both directions to give motorists ample time to slow down. The Waukesha Co. Hwy Department. has issued the permit for this project. In addition to the Grant, the FLP has pledged \$5000 and the IATA has pledged \$2000 to cover the costs of the project.

**Volunteers Needed for Snowmaking:** It was suggested that a Snowmaking subcommittee group have meetings starting in July to plan ways to get more volunteers for 3<sup>rd</sup> shift and in January, including ways to utilize the Lapham Peak Ski Club to publicize this need. Colton mentioned that the state DNR uses the Volunteer Impact System and he will look into a way to post qualifications needed for snowmakers.

**Lapham Lodge Update:** Mark H. reported that the 95% documents have been submitted to the DNR and they are still awaiting a response. They have received the signed Part 3 of the Site Certification Form from the DNR so it could be submitted to the EDA, and are still hopeful that they will receive the other needed documents from the DNR in time to open the project for bids on May 12, as planned. John M. and Mark H. plan to attend the Natural Resources Board meeting on May 23 to submit the request from the FLP to donate the new lodge building to the DNR. The fund raising is approaching 2.2 million dollars including a recent Stewardship grant for \$20,000. They are also looking for donors who wish to fund various elements inside the lodge. Charlie R. will follow up with Cindi Duchow on the state finance committee budget process regarding the \$200,000 he and Mark requested for the Lodge. John M. reported that brick donations are coming in. There followed some discussion about a suggestion that the snowmaking committee donate a \$500 brick from the snowmaking funds, as this would be another way to advertise snowmaking. It was decided that John M. would present a written proposal to be discussed and voted on at the May 16 meeting.

**Volunteer Hours:** Everyone is reminded to keep track of all volunteer hours during 2023. Hours can be documented on the Google docs snowmaking volunteers spread sheet.

**Respectfully Submitted: Joanne Ziarek**