

Quarry Hill Trail Development:

April 20, 2008 Update

Prepared for the **Rochester Area Foundation** to document the progress and success of the trail development project they generously supported.

The Quarry Hill Trail project is now finishing its second full year since the Rochester Active Sports Club (RASC) entered into the agreement with the City of Rochester to build multi-use trails in the Quarry Hill Park. Over the past 2 years, all trails in the base plan have been cleared, graded, and seeded. The remaining work for this summer consists of planting trees and re-seeding in selected areas. Compared to the initial schedule, the project is significantly ahead of schedule.

Public response to the trails has been extremely positive. They are very popular with walkers, hikers, and joggers in the warm weather months, and skiers and snow shoe traffic in the winter. The two photographs in **Figure 1** below illustrate examples of the finished trail. They show both a wooded segment and a meadow segment of trail. These particular joggers are associated with the Rochester Track Club. Members of the club like using the trails as part of their distance training as an occasional alternative to asphalt. The undulating hills provide a good workout, the grassed surface is much easier on the joints than asphalt, and they also enjoy the peacefulness of the park atmosphere.



Figure 1 Trail runners on the east trails, summer 2007

It's also interesting to note these runners taking advantage of the unique width of the trails that allows them to run abreast of one another and enjoy the social aspect of a group outing. High School Cross Country teams have also inquired about running on the trails as part of their practice and we expect they have put them to similar use.

We've also received input about the trail's popularity from the Nature Center staff. Below is a comment we received recently from Pam Meyer, Interim Director, Quarry Hill Nature Center:

*"I can definitely say that we have seen a large increase in overall ski traffic... and we have heard nothing but wonderful things about the ski trails from patrons. The staff also echo's their sentiments. The trails are **fabulous**. They have been a great tool to help us in getting more of our middle school classes out on the trails. I mentioned this to you when I saw you and I am sending you some pictures of the kids making great use of the trails. The easy nature and great conditions of the trails helped set these kids up for a successful and certainly memorable experience. For first time skiers they had a great time and learned a new skill. And these are kids that likely wouldn't have otherwise had the opportunity."*



Figure 2: Middle school skiers ascending the hill heading east toward the Payne sheds.

Another group that uses the trails extensively is the Rochester Nordic Ski Team for Middle and High School students. This program continues to grow serving 99 students this past ski season. The Quarry Hill trails provide a great practice site for them with challenging terrain and shelter from the wind. This is especially important on cold days when wind chills on an open golf course or field would result in conditions too cold to ski in.

This year, a number of the team members participated in the 23 kilometer Kortelopet race that is part of the American Birkebeiner event in Hayward/Cable Wisconsin. They signed up together as a high school team and placed in the top 3 finishing groups. We like to think that this achievement was helped in part by their ability to practice all winter long on well groomed trails even during the 2 freeze-thaw cycles we experienced.

Finally, all of the trail groomers and RASC members associated with the trail construction routinely get many words of thanks and appreciation from skiers. In addition to local skiers, the number of visitors from Iowa, and surrounding cities such as Austin, Winona, and Minneapolis/St. Paul has been surprising as well. Now that the trail is 10 km long, it is beginning to draw guest skiers looking for variety in their training routine.



Figure 3 Rochester Nordic Ski Team Members, February 2008

We also receive notes of thanks. We've attached one of these we received as an email toward the end of the season. We found this particular example both entertaining as well as touching in its sincerity.

*From: "Jim Bennett, DVM" <bennettvac@embarqmail.com>
To: <rascgrooming@charterinternet.com>
Subject: Quarry Hill
Date: Sun, 9 Mar 2008 18:32:22 -0500*

I skied the Quarry Hill trails in Rochester, MN, this morning, Sunday, March 9. It was 16 degrees; there was about one half inch of fresh, fluffy snow on beautiful, fresh corduroy. The skiing was as good as it has been for the 100 days or so of skiing we have had this year: fast and flat with a bit of give. Through deductive reasoning I concluded that since none of this makes any sense, and is not likely possible, I must be dead. I have been skiing in heaven instead of in skiing heaven. Apparently this event happened around December 1, 2007. Since then the trail has been groomed religiously by angels. Thank you to the groomers for making this a wonderful ski season. Thank you to Henry Walker and all the others that made all this possible. You are all truly angels.

Jim Bennett

The grant we received from the Rochester Area Foundation has truly served as the foundation funding for both trail construction and ski trail grooming equipment. Part of the reason the trails enjoy such an excellent reputation is our ability to obtain and employ the best grooming equipment made for small trail systems. This allows our volunteer groomers to achieve excellent results in a time efficient manner. Details about how the equipment has been used in terms of number of grooming outings, kilometers of trail groomed, and number of ski days enabled, can be found in the Year End Grooming Reports attached at the end of this document.

Project Updates and Route Changes

Figure 4 shows the trail map for this past ski season and illustrates the final trail configuration. One change from the original plan occurred after discussions with the Quarry Hill Nature Center staff in early spring 2007. Phase III of the trail originally planned to parallel the entrance road along the base of the goat prairie and loop past the Nature Center. After careful consideration, the staff felt the impacts to the goat prairie area and the birds that inhabit the woods below were too high. A substitute trail was added as a replacement around the east perimeter of the park along with an additional trail to the shed area. It was implemented along with Phase II in summer 2007. The final trail length remained the same.

The map also shows a potential extension into the north section of the Parkwood Hills Park. This segment was offered up as a possibility by Dennis Stotz of the Park Department. It may be implemented this summer however it will be funded solely by RASC funds.

Summer 2007 was a challenging one for trail construction and growing grass. May and June were very dry while August presented us with dramatic rain and floods. While there are small sections of the trail that will require over-seeding, the bulk of the grass came in very well. Similarly, even with the torrential rains, no significant trail erosion occurred. The trails are indeed working as designed.

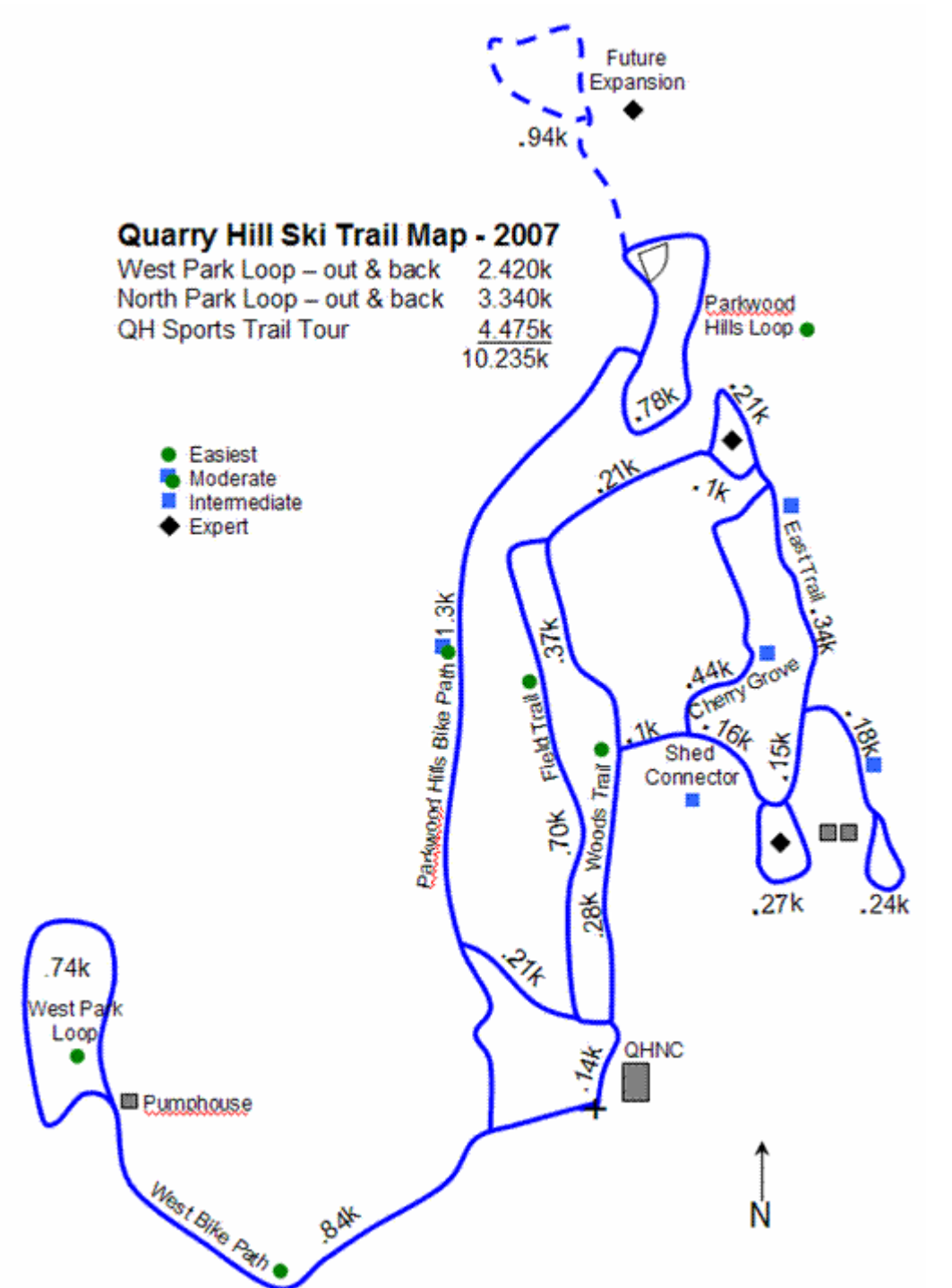


Figure 4 Quarry Hill Ski Trail Map – 2007/2008 Ski Season

Costs and Expenditures

We are please to report that the Quarry Hill trail project is progressing well within the proposed budget. Table 1 itemizes the major cost categories, the amount spent to date, and how the grant funds have been allocated. Specifically, the second column highlights grant fund allocations as we originally planned them. The third column contains the costs to date by major category. The route changes requested by the Nature Center eliminated the need for a retaining wall. We would like to apply these funds toward grading and seeding

expenses. The fourth column shows how the final grant fund allocations would be applied assuming this is acceptable.

Table 1 Summary of Costs and Grant Funding Allocation

	Original Grant Allocation	Actual Trail Cost To Date	Revised Grant Allocation
Grading	\$3000	\$4901	\$3700
Seed/Mulch	\$600	\$1998	\$1400
Utility Snowmobile	\$4500	\$7010	\$4500
XC Trail Groomer	---	\$4990	---
Retaining Wall – Phase III	\$1500	\$0	---
Trees	\$750	\$0	\$750
Other Misc	---	\$2533	---
Total	\$10,350	\$21,432	\$10,350

Items and their budgeted cost that will be completed this year include:

1. Trees - \$750
2. Seed/Mulch - \$250
3. Fertilizer - \$200

Assuming these figures, the total project cost will be \$22,632.

Summary

We sincerely appreciate the generosity of the Rochester Area Foundation in their support for building and maintaining the Quarry Hill Trail for four-season use. It has literally opened up the east side of the park for public enjoyment in the spring, summer, and fall, and provided first class cross country ski trails enjoyed by hundreds if not thousand of area skiers. We anticipate finishing the project in the coming months and will provide a final update at that time.

Supporting Documents

- 1) 2007/2008 Season XC Ski Trail Year End Grooming Report
- 2) 2006/2007 Season XC Ski Trail Year End Grooming Report

2007/2008 Season XC Ski Trail Year End Grooming Report



RASC Volunteer Ski Trail Grooming started this season on December 1, 2007 and concluded on March 16, 2008. This year was the best season in many years with good snow cover for greater than 100 days. During that time, a team of 7 volunteer groomers performed trail grooming on approximately 10km of trails at the Quarry Hill Nature Center. A 3.6km loop was also groomed on the fields of Schmidt Park. Grooming highlights are summarized below.

	Quarry Hill	Schmidt Park
Number of Ski Days	104	70
Number of Grooming Outings	47	20
Estimated Volunteer Grooming Hours	164.5	50
Snowmobile Mileage - Miles/Km	615/991	202/325

Grooming operations started off with difficult conditions consisting of a ½" thick layer of ice over 4" of snow. Repeated grooming soon brought it under control however we believe these tough conditions contributed to damage to the groomer comb and the need to have the snowmobile clutch repaired 2 weeks into the season. Fortunately repairs on all equipment were soon successful and grooming continued for the remainder of the season without incident, i.e. there was no further equipment damage, personal injury, or other unexpected events.

This past year we added an integrated track setter to the YTS Ginzu Groomer. It performed very well allowing us to set a quality classic track for the majority of the season even in low-snow conditions without adding to grooming time. We also added a packing drag to our equipment pool and re-acquired a scarifier from Chester Woods that had been in storage for a number of years. These both helped handle difficult conditions such as deep snow or frozen rutted hard-pack that are not well suited to the Ginzu. Grooming the Quarry Hill Trails took between 2.5 and 3 hours per outing. When extra packing was required, it added an additional 1-2 hours.

Trail conditions and grooming plans for all Rochester area ski trails were made available to area skiers at: http://www.rasc-mn.org/nordic/rasc_grooming.html throughout the ski season. We thank Dave Brudwick of the Rochester Park and Recreation Department, and Tom Eckdahl and Kevin Crilly of the Olmsted County Parks Department for taking time to provide trail information to us.

The following major observations are summarized below for each trail.

Quarry Hill Observations:

1. Ski trail use continued to be consistently high. Users consisted of a fairly even distribution of skate and classic skiers spanning all ability levels from novice to advanced. The trail also drew skiers from surrounding areas that had heard of it and were looking for a change of venue.
2. The east trails provided consistently good skiing even after freeze-thaw cycles due to their shelter and careful trail design and management.
3. No significant trail problems were identified throughout the season – surprisingly, they all worked well!
4. The temporary snow fence placed on the north loop did a good job providing a visual barrier for skiers and groomers alike to avoid the steep bank. This technique will continue to be used next season.
5. The park's sheltered valley provided an excellent venue for skiing, especially on cold, windy days.

Schmidt Park Observations:

1. Trail use was light to moderate the first half of the season. Use did decrease after the blizzard events when trail conditions were icy and less consistent.
2. The open field is exposed to wind and prone to drifting in windy, dry snow conditions. The two significant blizzard events this past season proved to be a challenge as they completely removed the snow from some areas and deposited it in 2 foot drifts in others.

3. There were at least 3 occasions of snowmobile and ATV damage to the trails this winter in spite of clearly marking them in 5 locations with XC Skier symbols.

Our thanks are extended to the following volunteer groomers: Dave Greymont, Brennan Kelly, John Resman, Jeff Robertson, Greg Rowley, Bruce Walk, and Henry Walker.

This year was unquestionably the best cross country ski season in recent memory. We'll continue to make trail improvements during the off season and be back ready to go next winter. We will also work with the Park and Recreation Department to explore better options for grooming on the northwest side of town with the hope of continuing this service next season.

Bruce Walk – April 3, 2008

2006/2007 Season XC Ski Trail Year End Grooming Report



Rochester
Active Sports Club

RASC Volunteer Ski Trail Grooming started this season on November 11, 2006 and concluded on March 12, 2007. During that time, a team of 7 volunteer groomers performed trail grooming on approximately 4.5K of trails at the Quarry Hill Nature Center. A 2.25K loop was also groomed on the fields of Schmidt Park on an experimental basis. Grooming highlights are summarized below.

	Quarry Hill	Schmidt Park
Number of Ski Days	58	49
Number of Days Groomed	33	13
Estimated Volunteer Grooming Hours	118	26
Snowmobile Mileage - Miles/Km	316/510	110/177
Fuel Used – Gas/Oil in gallons	90/1.3	31/0.5

Grooming operations were conducted without incident throughout the season, i.e. there were no occurrences of equipment damage, personal injury, or any other unexpected events. The new grooming equipment performed well. The most amazing results came from YTS Ginzu Groomer's ability to renovate an icy trail back to an ideal combed skiing surface in one pass. Packing and grooming for skate skiing took approximately 2.5 hours per outing. Setting a classic track took an additional 2.5 hours. Current trail conditions and grooming plans were made available at: http://www.rasc-mn.org/nordic/rasc_grooming.html throughout the ski season.

The following major observations are summarized below for each trail.

Quarry Hill Observations:

1. Ski Trail use was much heavier than expected by RASC. Users consisted of a fairly even distribution of skate and classic skiers spanning all ability levels from novice to advanced.
2. Setting a classic track is highly desirable even with a thin trail base due to the large number of classic skiers. We need to explore further options to set tracks in low snow conditions as our present track setter requires a minimum 3" packed base before it can be used.
3. When deeper snow arrived, snowshoe users created a third lane beside the ski trail thus demonstrating that a skate lane, classic track, and snow shoe lane can co-exist quite nicely.
4. The bike paths and shoulders provided a great base for both skate and classic trails after temperatures dropped below freezing. Their level surface allowed them to be used with a minimum of 1-2 inches of packed snow.
5. Adjustments are needed to a few areas on the current woods trail to adjust grade, width and smoothness.
6. The park's sheltered valley provided an excellent venue for skiing, especially on cold, windy days.

Schmidt Park Observations:

1. Trail use was light to moderate however those that used it seemed to return consistently. This most likely was due in part to limited publicity.
2. Two ski trail markers placed along Overland Drive next to the ski trail virtually eliminated snowmobile traffic on the park's field. Sleds for the most part respected the trail and stayed along the road.
3. The open field is somewhat exposed to the wind and prone to drifting in windy dry snow conditions.
4. This experiment of grooming Schmidt Park appeared to validate that if a site is groomed in NW Rochester, skiers will come.

Our thanks are extended to the following volunteer groomers: Dave Greymont, Brennan Kelly, John Resman, Jeff Robertson, Greg Rowley, Bruce Walk, and Henry Walker.

We're looking forward to grooming next season. We'll be researching better equipment and methods to pack large snowfalls as well as options for setting classic tracks with minimal snow. We will also work with the Park

and Recreation Department to understand their preferences for grooming on the northwest side of town with the hope of continuing to offer this service next season.

Bruce Walk - March 16, 2007