

Bulkley Valley Nordic Centre
Trail Plan 2023 to 2026

This plan describes the Bulkley Valley Cross Country Ski Club's priorities to maintain and improve the cross-country ski trail network at the Bulkley Valley Nordic Centre.

Background

The BV Cross Country Ski Club completed a trail plan in 2017 which launched a five year "Trails for Tomorrow" program. That program focussed on addressing risk from beetle-killed trees, improving drainage and grading, addressing climate change by creating an early season trail network, expanding the trail network, improving signage, and reducing the effort required to maintain and groom trails. From 2017 to 2021, the club undertook approximately \$255,000 of work with major funding from:

- Recreation Sites and Trails BC;
- Wetzin'kwa Community Forest;
- BC Rural Dividend Fund; and
- BV Cross Country Ski Club

In the spring of 2021, the club began a process to develop a new trail plan. This plan incorporates the results of a membership survey conducted in the spring of 2021 as well as consultation with interested members.

The trails are located on the Cas Yex house of the Gitumd'en clan. Our goal is to increase cooperation and collaboration with the Wet'suwet'en peoples. The club will engage with the House group, through the Office of the Wet'suwet'en, before submitting new trail construction requests to Recreation Sites and Trails BC.

Current Situation:

As a result of the 2017-2022 improvements, the trail system is in good condition. Most of the trails now allow quality skiing on a lower snowpack which extends the ski season. The improvements also make it easier to brush the trails in the off season further ensuring early and high-quality skiing. The upgrades to trail signage and mapping have substantially improved the ability of skiers to find their way on the trails and to feel welcome to explore.

The membership survey in March 2021 indicated that 99% of respondents were satisfied or very satisfied with the variety of trails. A major theme of the responses was that improving current trails was more important than expansions and that expansions should not come at the expense of reduced grooming quality on current trails.

There are still some areas needing improvements on the existing trails. Drainage improvements on Pine Creek are needed to allow early season skiing. A bypass has been proposed for the old Pine Creek swamp crossing that was closed in 2021 (moving water from two streams made it impossible to guarantee safe ice to traverse). One Log culvert crossing the outflow of the Pine Creek swamp, and

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another on the Wetzin'kwa trail are made of native logs and will need replacement by 2026. Other trail improvements will help adapt our trails to a changing climate.

Despite the high level of satisfaction in our survey, there have been many suggestions to add or extend trails. Any expansion of the trail system will require volunteer leadership to plan, fundraise and supervise trail projects. Any expansion also needs to consider the club's capacity to groom and maintain the additional trails. The current trail system is diverse, and its length is closely matched to the current capacity of our tracksetting equipment, our normal revenue and our available workers.

With these factors in mind, our trail goals are to:

- Maintain our current network and bring existing trails up to a standard that makes maintenance easier and improves skiing.
- Continue improvements that extend our season and help adapt to a changing climate. and
- Undertake targeted trail expansions that are consistent with our existing tracksetting and volunteer capacities, and which increase the diversity and quality of the ski experience.

Annual Maintenance

Annual maintenance ensures trails are brush free with a dry and level base. Generally, this includes mowing, hand brushing, maintaining signage, inspecting culverts, and ensuring safety equipment is in place. This current maintenance strategy should continue. Our fleet of mowing equipment is in excellent condition. The skid steer has low hours and effectively mows all trails as well as side brush. It is, however, complex to learn to operate.

Several years effort to address danger trees, with the assistance of Wetzin'kwa Community Forest and the BC Wildfire Service, has effectively addressed known patches of danger trees. Addressing individual danger trees has now entered a maintenance mode which needs regular attention.

Strategy

- Undertake annual routine trail maintenance to keep trails safe and in good condition.

Priority actions

- Mow all trails annually.
- Recruit and train one additional operator of the skid steer mower for 2022 or 2023.
- Carry out annual culvert and trail inspection in the spring and repair as needed over summer.
- Carry out annual sign and safety check.
- Identify potential danger tree hazards during trail work and grooming.

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Trail Improvements

Strategy

Complete drainage and grading improvements to allow early season skiing on 80% of trail network, and replace end-of-life structures to allow safe, long-term access.

Actions: High Priority

- Complete drainage and grading of early season trails.
 - Pine Creek loop, Pine Creek 5 km, and West Connector are the remaining early season trails that need drainage addressed.
- Replace one log culvert on Pine creek before 2026.
- Install new gate or cable at West Connector.

Actions: Medium Priority.

- Minor grading to improve early season skiing. Small sections of Pooch Paradise, Hound Heaven, Upper Logging Trail, Wetzin'kwa, Goldeneye, Down the Mountain and Wild Dog.
- Replace cables with gates on Wetzin'kwa (2 gates), Upper Logging Trail, and Valley View.
- Replace log culvert on Wetzin'kwa trail with a permanent structure.
- Homologation¹: Our current race loops have not been recently homologated and may not meet competition standards in some places. A technical assessment is proposed for 2023 which would identify and potential improvements to existing trails that are required to host national calibre races.

Actions: Lower Priority.

- Upgrade Demo Forest trail by installation of two small bridges and grading.
- Fix rough sections on Hilltop and Perimeter. These areas are very rocky so it would take considerable machine time and possibly importing material to cover rough areas.

¹ Homologation is a “system of evaluation/certification” that is designed to guide the development and upgrading of cross country racecourses. See [Nordig Canada Competition Officials Manual](#)

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Trail Expansions

Strategy

Subject to securing project leadership, funding, and approvals, we will focus on projects that improve tracksetting efficiency or can be managed within existing capacity, while diversifying the ski experience.

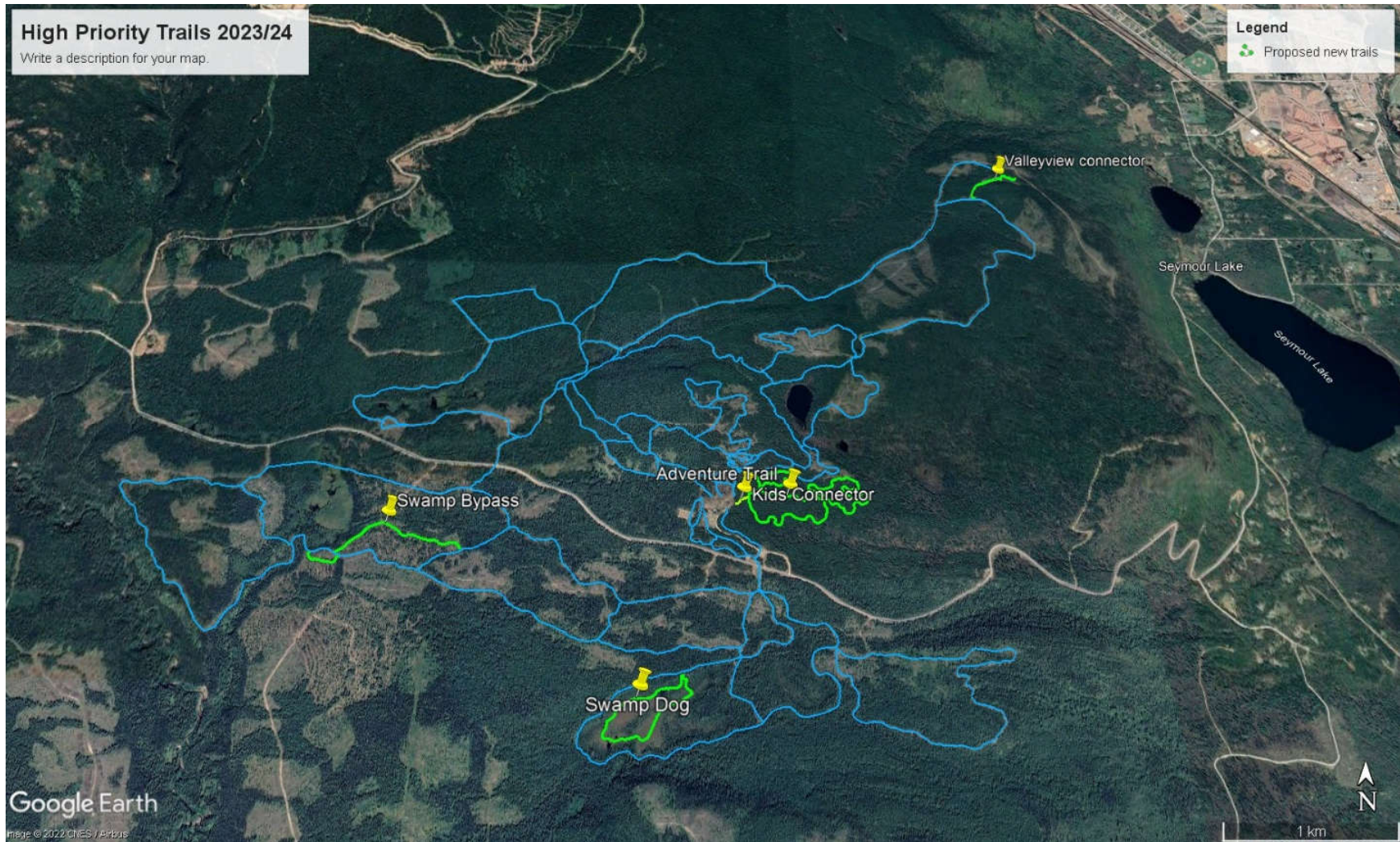
High Priority New Trails

Five projects are the highest priority for 2023 to 2024 (See Figure 1 on next page). Due to the benefits of trail optimization from the new Pine creek bypass, these can be managed within existing tracksetting capacity.

- Swamp bypass: complete a new trail to bypass the closed section of trail over the Pine Creek swamp. This uses the old 5k connector plus new trail through previously logged patches to the 7.5k junction and reduces “out and back” tracksetting.
- Swamp Dog: create a short loop inside the Pooch Paradise wetland to increase the diversity of the dog trails. Due to the increase in dog trail usage in the past decade, expansion of dog trails is a priority. This trail would about 1.8 km long designed for classic only skiing to be set with auxiliary grooming equipment. It would be low cost as it can be built by hand.
- Valley View Connector: construct a short connector from Down the Mountain to Valley View. This mostly uses an existing spur road and would eliminate “out and back” tracksetting on Valley View, creating a single long outer loop. The resulting loop would mean a reduction of about 0.7 km of tracksetting each time this trail is set.
- Adventure Trail: a single-track trail proposed just east of the lodge. It would consist of two stacked loops, and wind through the forest with a narrow right of way so it can be set with auxiliary grooming equipment. It would be groomed for classic skiing. The trail has been located so it does not cross the Nature Trail (which is maintained by the BV Backpackers and the BV Naturalists). A short “Kid connector” trail would link the Adventure trail to the lodge and would not be trackset.
- Kid Connector; a 100 m narrow trail linking the lodge to the Adventure trail. This trail would not be groomed and would have a right of way large enough for a single skier to pass.

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Figure 1. Approximate Location of High Priority Trails



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Future Trails

Planning for these trails (see Figure 2) may be undertaken if there are volunteers who are willing to lead the process of trail design, tracksetting capacity assessment, approval applications, fundraising, and construction supervision.

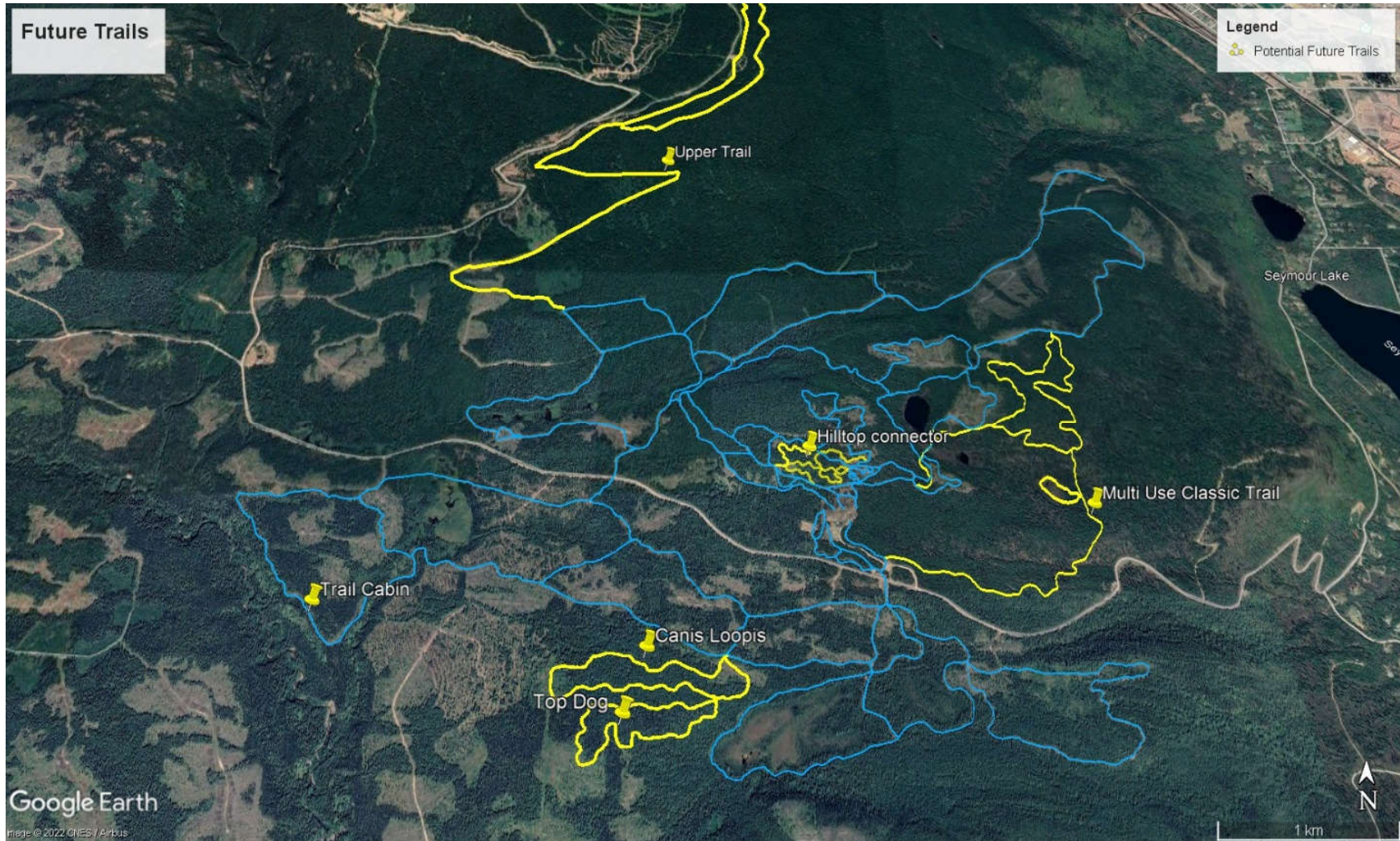
- **Dog Trail expansion:** To accommodate high demand for new dog trails, two stacked loops south of Hound Heaven are proposed (Canis Loopis and Top Dog). These stacked loops would have a total length of 5 km and would allow skiers to elect a shorter or longer ski. Canis Loopis would be easy terrain similar to Pooch Paradise and Top Dog would be an easy/intermediate trail (easier than Wild Dog) to increase the diversity of skiing in the dog trails. With these expansions (and Swamp Dog, proposed above) the total length of dog trails would be around 19 km.
- **Single-Track/multi-use trails:** a new set of trails that are designed for classic skiing is proposed in the areas north and east of the lodge. These trails would add a diversity of ski experience that does not exist currently and could be set with auxiliary grooming equipment. The terrain in this area is rolling and complex with many openings. This type of trail may be suitable for biking or hiking in the summer so discussions with the BV Backpackers and Smithers Mountain Biking Association will be part of the trail planning. Preliminary design and discussions have resulted in a commitment not to cross the existing Nature Trail. Further work is required to address other values in the area including moose habitat and hiking trails.
- **Trail Optimization:** There are several places on the current trails where the PistenBully grooms a section of trail twice or more often. In some locations, it may be possible to build a trail that is near the duplicative section, adding new trails but with no additional tracksetting needed. A preliminary review indicates good potential for improvements at:
 - Pine Creek; eliminate duplicate tracksetting on Harvest Connector (G to Hudson Bay Mountain Road) and Hound Heaven from B to H. Total length is about 750 m.
 - Demo Forest Road; Potential connector from L3 to L5 (700m) to reduce double setting along the demo forest road.
 - Valley View: Potential connector from L7 to K. Length approximately 1.2 km. Would eliminate duplicate track setting along Valley View and could add a more forested intermediate loop.
- **Hilltop connector:** Eliminate double track setting in the vicinity of Northern Lights and Hilltop by adding two connector loops of 500 m and 1.6 km. These additions will be designed to:
 - Enhance the current race loops available for biathlon and Nordic competitions.
 - Greatly increase the amount and variety of technical training terrain in proximity to the staging area, and the number of short loop options.

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- Provide recreational skiers with a rolling trail option bypassing technical features.
 - Provide younger skiers a ‘fun trail’ alternative to the existing descent on Northern Lights, using gully features.
 - Increase connectivity with Hilltop area, which is currently underutilized.
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- Upper Mountain Trail: This “project” would only involve planning during the term of this plan. The concept is to locate trails higher on the mountain to maintain a longer season even with climate warming. A separate parking lot may be needed up the mountain. Discussion and coordination with Wetzin’kwa Community Forest would help align future forest roads to serve as new trails. Hudson Bay Mountain Resort should be included in discussions as good terrain exists adjacent to the chair access road.
 - Trails that are not trackset. Some members may be interested in ski trails that are cleared, marked but designed to never be groomed. Because no grooming is needed, this sort of trail would be low cost. Some work would be required to plan, clear, and maintain trails.

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Figure 2. Proposed Future Trails



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Other Projects

Several projects have been identified that are of interest, but they will only be pursued if they have a leader who will take on the planning, approvals, fundraising and construction.

- New outhouse at lower parking lot; the current outhouse is hard to access and could be replaced by a modern and accessible outhouse. This would also benefit summer users who access hiking trails from the lower parking lot.
- Biathlon Target roof; construct a roof for biathlon targets. Improves target performance and significantly reduces volunteer effort to shovel and clean targets.
- Trail Cabin; a small warming hut could be a nice destination for day skiers. The viewpoint from Pine Creek loop looking west is a good site that is off any summer access roads and reduces the possibility of vandalism. Another good location is the end of Valley View..

Trail Questions and Answers

Question: Why don't you allow dogs to use all of the Pine Creek trails?

Answer: There are a lot of skiers who use the Pine Creek trails and who do not want to encounter dogs during their ski. In the membership survey, we asked what trails members skied; the Logging Roads were the most popular followed by the Dog Trails and then Pine Creek. Skiers who frequently use Pine Creek report that it is more accessible than other trails on the north side.

When the dog trails were introduced, the club committed to keep dog trails separate from the existing trails on Pine Creek so that people who do not wish to encounter dogs or the signs of dogs on the trails would not have to. The club recognizes that dog trail users would like to have more variety in their ski experience. This trail plan proposes a two-phase expansion of dog trails to create more diversity. New trails would bring our dog trail system to almost 1/3 of the total trail system, and would not have a negative effect on skiers who use the existing trail system.

Question: What is an Adventure trail?

Answer: The Adventure trail in this plan will be a narrow trail that winds through the forest, with a rolling and fun grade that helps skiers grow their balance and agility on skis. Its intended to be easy to access from the lodge so that young skiers can easily go on an adventure through the woods. Connecting loops would allow skiers to choose a length and type of trail that suits their abilities.

Question: What is a multi-use trail?

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Answer: A multi-use trail is specifically designed to support winter as well as summer use. The trail would be designed and groomed for classic skiing at an easy/intermediate level of skiing. For summer use, the trail will be designed to support entry-level cross-country mountain biking, as well as hiking.

Question: Why does the plan propose some future classic-only trails?

Answer: This is a specific type of ski trail that we currently do not have in our trail system. Narrower classic trails are fun and popular at other ski areas and would be a complement to our current set of trails. Because they are groomed with small machines (not a PistenBully), expansions to include this type of trail does not put pressure on our existing grooming capacity as we can use volunteers and small equipment to groom a classic-only trail.

Question: Why can't we continue the long loop all the way around Pine Creek?

Answer: The old crossing of the Pine Creek swamp was closed due to safety concerns arising from thin ice over the two fish streams; moving water is unpredictable in how it freezes. During the development of this trail plan, we investigated several different options to re-route or replace the outer loop. There is a route to the north of the swamp which would require two costly bridges over the fish streams. Due to modern environmental standards it is not possible to build a structure across the streams that is in the wetland. The route that bypasses the swamp to the south uses the existing crossings of the streams feeding the swamp.

Question: Why not build a new parking lot just for dogs?

Answer: We examined the potential for a new dog trail parking lot south of the Hudson Bay Mountain Road. There is a suitable site that could be developed for approximately \$25,000. However, it would substantially expand the length of road and parking area that needs to be plowed. Currently plowing already takes a substantial amount of volunteer time as well as machine costs. The club determined that a new parking area was not feasible at this time, so the existing lower parking lot was expanded to allow up to 45 vehicles, and is now expected to have ample capacity if people park carefully.

Question: What will it take to move forward with building a new dog trail?

Answer: Any trail expansion requires approval by the province as well as engagement with the Cas Yex House of the Wet'suwet'en. The first proposed expansion, a short loop in the Pine Creek swamp, could be built with available volunteers and resources. The larger proposed expansion (Canis Loopis) requires a volunteer to lead the project. This includes seeking authorizations, fundraising, and project management. This is probably a 2-year project from planning to construction.

Question: How much does a new trail cost

Answer; It depends..... a good quality trail with proper drainage will cost between \$8,000 and \$12,000 per kilometer. The cost depends on the type of ground and soil conditions. This assumes no stream crossings are required and grades that are generally easy.