

# EAGLECREST NORDIC DEVELOPMENT PLAN



GETTING MORE PEOPLE ON SKIS MORE OFTEN.

Submitted by the Juneau Nordic Ski Club to the Eaglecrest Board of Directors

April 5, 2017

April 6, 2017

To: Eaglecrest Board of Directors  
From: Juneau Nordic Ski Club (JNSC)  
Re: Nordic Development Plan (NDP)

The Juneau Nordic Ski Club (JNSC) respectfully requests the creation, review and adoption of a Nordic Development Plan (NDP) as part of the Eaglecrest Master Plan. The genesis of the NDP comes out of requests by Eaglecrest Board members and Staff for information on Nordic skier needs.

The JNSC is committed to assist in the implementation of a Nordic Development Plan in partnership with Eaglecrest and we look forward to developing a more detailed effort and priority list in the future. At this time we think it's premature to include cost estimates for three reasons: Eaglecrest and JNSC could easily be boxed into a corner of expectations difficult for either to fulfill; it reduces flexibility to engage when elements of a project further down the list unexpectedly coalesce to move forward; and we support the upcoming public review process as part of the 5-year Eaglecrest Master Plan update.

Nordic skiing is a part of the total Eaglecrest revenue for operations and nordic revenues generally pay 100%, or more, of nordic operating costs at Eaglecrest. With improved facilities and grooming the revenue from Nordic could easily increase. The Juneau community will benefit by further developing the Nordic community as an integral partner in skiing, as a partner in Eaglecrest facilities and in generating more revenue for Eaglecrest as a multidimensional, year-round, facility.

We look forward to discussing, defining and refining this project list with you, as well as establishing a fund-raising campaign to help with projects in need of broader support.

Sincerely,

The Juneau Nordic Ski Club Board

Frankie Pillifant, President  
Mike Hekkers, Vice President  
Tim Blust, Treasurer  
Bart Watson, Secretary

- Jess Brown - Odin Brudie - Ray Imel - Erik Boraas - Wayne Carnes - Fred Hiltner -

## EAGLECREST NORDIC DEVELOPMENT PLAN 2017

The addition of a Nordic Development Plan (NDP) to the Eaglecrest Master Plan comes out of a need of the growing numbers of Nordic skiers in Juneau seeking consistently groomed, improved and increased kilometers and facilities. Additionally, it has become clear over the seasons that some relief for Eaglecrest staff and Nordic skiers is necessary to alleviate frustration regarding expectations of grooming priorities and facility development. This plan was developed based on nordic notations included in the *2012 Eaglecrest Master Plan*, from the JNSC letter in the appendix of that document and the evolved priorities and needs requested by JNSC Board and it's membership before and in the intervening years since 2012.

Eaglecrest's core mission is stated as 'Eaglecrest Ski Area is a community-owned winter recreation area and a year-round destination for outdoor recreation and education, providing a wide range of affordable nonmotorized winter and summer outdoor recreational activities'. With information contained in the *2012 Eaglecrest Master Plan*, the Eaglecrest Board of Directors will establish priorities for the direction of future recreation and commercial use development. After priorities are established additional detailed facility planning may be required, as well as a fund-raising plan, implementation scheduling, and operational planning to provide clarity on how additional recreation and commercial uses will be incorporated into existing Eaglecrest operations. As acknowledged in the *2012 Eaglecrest Master Plan*, a 70% cost recovery rate for Eaglecrest establishes it as a uniquely successful, publically owned and operated recreational facility in terms of revenue generation.

The *2012 Eaglecrest Master Plan* findings also states that 'Eaglecrest's core market (the residents of Juneau) has not grown over the past ten years and is not expected to grow substantially in the foreseeable future'. If Eaglecrest is looking for incremental improvements that increase use within its limited local market without substantially increasing operating costs, then the growing Nordic ski community is the obvious focus to further develop the local ski market by providing consistently groomed, lighted, increased and connected kilometers. Together with the Eaglecrest effort to establish year-round, non-motorized uses the revenue opportunities are further improved.

Additionally, the adoption of a Nordic Development Plan (NDP) into the larger Eaglecrest Master Plan will allow both the CBJ and the non-profit JNSC to apply to granting organizations to help meet costs of future facility and project capitalization.

It's clear that improvement and development of facilities and activities will require ongoing, consistent commitment and energy from both JNSC volunteers and CBJ/ Eaglecrest. Many of the facility improvements will increase loyalty of Nordic users and improve multi-season uses and revenues.

Attached below is the listing of projects:

## PROJECT LIST

Lower loop	<ul style="list-style-type: none"> <li>•Complete hardening.</li> <li>•Increase north parking lot.</li> <li>•Connect Lower loop to Upper loop.</li> <li>•Add safety signage to slopes where ski styles cross.</li> <li>•Improve Beginner level access and comply with ADA.</li> <li>•Install a trailside warming/waxing facility.</li> <li>•Improve and Groom 'Lower Meadow Loop' (Dog Loop).</li> <li>•Light trails.</li> <li>•Install snow-making capability.</li> <li>•Develop 'snow-banking'.</li> </ul>
Upper Loop	<ul style="list-style-type: none"> <li>•Review and revise grooming policy for Upper Loop.</li> <li>•Improve drainage.</li> <li>•Harden surface.</li> <li>•Expand kilometers groomed for Beginner and Intermediate.</li> <li>•Reroute Troy Loop for safety.</li> <li>•Add signage to develop back-country skier safety considerations and etiquette of Nordic trails.</li> <li>•Add trail lighting when electrifying Black Bear.</li> <li>•Install warming shelter.</li> </ul>
Connectors	<ul style="list-style-type: none"> <li>•Review, revise and educate uphill travel policy</li> <li>•Humpy Trail route development (west side of Eaglecrest road north of tubing hill)</li> <li>•Cropley Lake</li> <li>•Lower/Upper loop connector trail rerouted</li> </ul>
Multi-use trails	<ul style="list-style-type: none"> <li>•Develop the Trail Network Master Plan for multi-use per 2012 Eaglecrest Master Plan.</li> <li>•Improve safety signage in areas where Nordic and Alpine skiers paths cross</li> </ul>
Seasonal	<ul style="list-style-type: none"> <li>•Brushing and canopy opening</li> <li>•Ground vegetation brushing.</li> </ul>
Grooming	<ul style="list-style-type: none"> <li>•Groom all kilometers.</li> <li>•Review and revise grooming policy for Upper Loop</li> <li>•reduce the fall away angles and tight curves ;</li> <li>•Create and groom Nordic skills park</li> <li>•Improve use of Eaglecrest web site</li> <li>•Establish grooming agreement with JNSC</li> <li>•Groom walk outs</li> </ul>

## PROJECT DESCRIPTIONS

### LOWER LOOP

- **Complete hardening.**

Hardening of the Lower Loop surface area needs to be completed, approximately one kilometer of linear distance. Smoothing undulations allows for more efficient grooming and snow cover. Additional depth is not required to compensate for irregularities in the terrain and surface drainage. Additional efforts needed include: redirecting areas of pooling water to culverts and placing crushed material on top of geotextile fabric. The crushed material for placement is currently in the North parking area. The volunteers of JNSC will assist where needed and appropriate and can commit to assisting with vegetation reduction.

- **Increase north parking area when removing crushed material.**

This project is best accomplished in conjunction with the effort to complete the trail hardening on Lower Loop. At that time the movement of this crushed material to the areas being hardened on the Lower Loop should occur.

- **Add safety signage to slope areas where different ski styles cross paths.**

Currently the uphill ski route along the east side of Trickster and lower slopes are the most notable areas where nordic and alpine skiers share slopes. When trail connectors are designated across other alpine slope areas they will also benefit from safety/etiquette educational signage on approval by Ski Patrol personnel.

- **Improve Beginner access and comply with ADA skier accommodation.**

Currently the best terrain for physically challenged and Beginner skiers is the Lower Loop meadow areas. Lack of a pull-off next to the meadow makes direct access difficult. In low snow seasons the connector trail from the north parking lot to the meadow is intermediate to advanced terrain, making access to the meadow a challenge from the North parking area. In high snow years Eaglecrest groomers have been able to move snow into the area so that it reduces the grade angle, improving the ability of beginner and ADA skiers to access this terrain.

- **Trailside warming/waxing facility.**

Creation of a warming and waxing facility is attractive for families, beginners and ADA nordic skiers. A nordic gathering place creates a more attractive location for nordic users.

- **Improve and Groom Lower Meadow Loop (Dog Loop) by glading.**

The usefulness of the Lower Meadow Loop and confidence of groomers will be greatly improved by removal of stumps and reducing curve arcs. A place for dog owners to roam continues to be a needed aspect at Eaglecrest. Skiers with dogs lightly visit the current Lower Meadow Loop because grooming is rare and inconsistent. The JNSC can assist with ground and canopy grooming to improve snow coverage.

- **Light Trails.**

Providing lights on a trail, even a loop of three kilometers, allows Eaglecrest to expand ski lesson offerings to include after school and work. Evening races and events can be hosted expanding the user base. LED low-energy and high output are available in many styles.

- **Install Snow-making.**

Making snow for nordic trails, during cold but snowless times, will allow Eaglecrest to maintain a short (2 to 3 kilometer) ski loop and can extend the opportunity to provide a place to hold nordic ski lessons, racing and other events. There are many technologies in snow-making equipment to be explored for Eaglecrest.

- **Develop 'Snow-banking'**

Creating a storage shed of man-made snow would assist in the effort to provide consistent snow for skiers.

## **UPPER LOOP**

- **Improve drainage.**

By using standard methods of trail hardening, drainage routing and culvertizing flow early/late season grooming snow cover and trail retention will improve greatly. Additional efforts needed include: redirecting areas of pooling water to culverts and placing crushed material on top of geotextile fabric.

- **Expand Km's groomed for Beginner and Intermediate skiers.**

This can easily be accomplished by utilizing more of the meadow areas with a zig-zag route. On the sloped areas around Black Bear lift the same method of zig-zag will reduce the angle of the downhill run and increase the confidence of skiers.

- **Review and revise grooming policy for Upper Loop.**

- **Reroute Troy Loop.**

While the Troy Loop has some beautiful sloping meadow areas, two parts of the Troy Loop need safety improvement: the steep succession of drops into the Hilda Creek and the crossing of a hairpin turn from either direction. For a more specific example, by skiing clockwise around this loop, about a third of the way down a re-route would turn left slightly and side hill until above the bridge where it would turn for a straight shot across creek. The creek crossing would be improved by culvertizing and the angle of approach widened with some rerouting.

- **Add signage to develop skier safety and etiquette.**

With the development of Black Bear lift and the expansion of use around it by alpine and back-country skiers more interactions are occurring with different ski modes crossing. The nordic trails are consistently criss-crossed by walkouts, skiers and boarders which has a detrimental effect on the set nordic tracks.

- **Add trail lighting when electrifying Black Bear.**

In low snow years when the Lower Loop isn't groomed the Upper Loop has often seen enough snow cover to be set. While headlamps have traditionally been used during the dark, lighting will make the Upper Loop more attractive for evening events and training.

- **Install warming building.**

Creation of a warming and waxing facility is attractive for families, beginners and ADA nordic skiers. A nordic gathering place creates a more attractive location for nordic users. A building in this area could potentially serve as an over-night hut.

## **CONNECTORS**

- **Humpy Trail development.**

The need for a more moderate, multi-use trail that snow-shoers and skiers, and off season bicyclists use is needed. The Humpy route generally parallels the main road on the uphill side up to main parking area and then along edge towards old tubing hill at Eaglecrest. Tasks include determine route and flag trail, reduce canopy, determine additional needs and implement such as culverts, drainage diversion, place culverts, develop drainage ditching, and connector tunnel to the Lower Loop.

- **Cropley Lake connection.**

Cropley Lake connection is a long desired route to additional terrain of beginner to moderate level nordic skiing. Route determination and establishment has several natural opportunities to be determined as part of a larger trail network around the mountain for all seasons. Additionally, this connection would be combined with Eaglecrest effort to have a hardened surface route to Cropley for access to the Brakel cabin, a source of all-season revenue. Hardened surface will create a multi-use route for mountain bikers outside of ski season.

- **Lower/Upper loop connector**

Rerouting for beginner access and trail hardening of this connector will provide additional off-ski-season hiking and mountain biking opportunities. During ski season it will provide an improved base for holding snow and draining during melt sessions. This project will follow an existing switchback trail through the woods that was historically used for nordic access before Trickster was a formalized run. It generally connects to the Trickster slope approximately half-way up. Once on Trickster, both alpine and nordic skiers will benefit from safety/etiquette educational signage along the portion of shared route. The JNSC volunteers can assist with canopy and vegetation management and sign placement.

## **MULTI-USE, MULTI-SEASON TRAILS**

- **Develop the Trail Network Master Plan.**

As identified by the *2012 Eaglecrest Master Plan*, there is an increased opportunity for by developing a trail plan for nordic specific and multi-use. That plan would include a

policy review and revision to uphill, side and back-country traffic, and cross-slope etiquette and safety, etc. A revised policy would accommodate the growing number of in bounds, uphill skiers, moving it from fringe activity to growth model and would increase access during downhill operation times. Importantly, that plan would add protection for non-motorized side and back country areas such as Troy and Ben Stewart by creating human-powered preserves. The world has changed with the addition of Motorcycles with skis and treads, aka Timbersleds. Ski-cycles can navigate tight gladed tree runs and steep sidehills that are anathema to snow-machines increasing pressure on untracked ski slopes.

- **Improve safety signage.**

In conjunction with ski patrol approval, add signage in areas where Nordic and Alpine skiers paths cross.

## **SEASONAL**

- **Open canopy.**

Brushing and canopy opening on a regular basis for improved snowfall coverage will help to insure that skiing can occur with minimal snow cover. JNSC volunteers are able to assist and/or manage this effort with approval from Eaglecrest.

- **Ground vegetation brushing.**

Ground brushing vegetation for height will allow snow to be groomed sooner. JNSC volunteers are able to assist and/or manage this effort with approval from Eaglecrest

## **GROOMING**

- **Groom all Kilometers.**

The adoption of this stance will improve nordic users confidence for planning their skiing location around the greater CBJ.

- **Reduce fall away angles and curves (Upper and Lower loops).**

By using the Piston Bulley, to mine, push and sculpt snow, flatter tracks on angled terrain will be produced and fall away angles reduced. Opening the arc of hairpin turns will also create trails for more moderate to beginner skiers and reduce the 'clumping' of snow under the PB's machinery. Clumping snow can be a safety hazard for skiers, especially as it freezes and sets.

- **Nordic skills park development.**

Many ski areas use their PB's to sculpt terrain parks. A dedicated area where nordic trail groomers can mine, push and sculpt snow into standard shapes and terrain challenges would assist visitors to nordic facilities. Nordic skiers also like to develop their skills and a potential added bonus, depending on location, would be the creation of a nordic sprint course.

- **Use Eaglecrest web site to accurately note nordic trail conditions.**

Good information creates trust and confidence in where to ski, what to wear and can influence waxing. All of these elements together can create an experience that brings skiers back.

- **Establish agreement with JNSC to set trails.**

During pre- and post- season and other closed days the JNSC has groomer equipment, and volunteer capacity to set trails. In past years the JNSC has developed and executed an agreement with Eaglecrest to set trails pre and post season. The JNSC would like to revisit this as our lighter grooming equipment is well sized for this effort. Additionally, the JNSC would be interested in discussing how JNSC can further serve the grooming effort at Eaglecrest during the regular season.

- **Groom 'walk-outs'.**

To take pressure off nordic trails, groom some alpine/boarder walk-outs on the 'Ho Chi Minh Corner' (The base of East chutes), walk out from Hilda Loop, for Orient skiers, The old Cropley trail under the zip line, the trail under 'show boat' that connects the lower track to the snow bridge to the maintenance area.