



# Girdwood Valley Trails Management Plan

2020 Revision

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# Introduction



The Girdwood Trails Committee members’ primary goal is to create a highly functional, interconnected, multi- use trail system that meets current and future needs of the community. This document, Girdwood Valley Trails Management Plan, has been written to provide a context and framework to create that trail system and to best develop, manage, maintain, and assess our current trails.

The Plan addresses the benefits and challenges of building trails here, the importance of trails to the Girdwood community, the principles and policies that are critical to building sustainable trails, individual trail goals and descriptions, and recommendations. At the heart of these elements are the core values of adventure, health, achievement, safety, and respect for nature.

The Girdwood Valley Trail Management Plan is the first major document produced specifically for Girdwood trails. It is a living document, one that can be altered as community priorities and trail systems shift over time. The Plan should be considered a companion document to the Girdwood Area Plan and other planning documents for the Girdwood community. Changes to the text, including yearly trail reviews, require a motion of approval by the Trails Committee.

To write this plan, Girdwood Trails Committee members have drawn from other Alaska and United States Forest Service sources to supply additional, accurate information. These are credited in the text.

We thank all Girdwood community members who contributed their time and expertise to this document and to Nanette Stevenson, graphic designer.

## *Girdwood Trails Committee 2017 Officers*

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## CHAPTER 1

# Girdwood and Its Trails



## History of the Community and Its Trails

The Upper Cook Inlet, Kenai Peninsula, Turnagain Arm region has been occupied for thousands of years. Dena'ina, Alutiiq and Chugachmiut people have moved through, lived in, and gathered together throughout this vast area. The Girdwood Valley, like other valleys in the region, served as a travel corridor for indigenous people and provided a variety of resources that supported and continues to support cultural practices and ways of life. Some of the trails in the valley likely originated as indigenous travel corridors.

When gold miners came to the Turnagain Arm area at the turn of the 20th century, the surrounding valleys were attractive for trying their luck. Girdwood, originally named Glacier City, was founded as a gold mining town when several claims were staked on the Crow Creek, Virgin Creek, and California Creek drainages. As the number of miners increased, Glacier City also became a supply camp on the route between Seward and Ship Creek, which is now Anchorage. James Girdwood, an Irish immigrant and linen merchant, had four gold claims on Crow Creek. He later became the namesake for our mountain community.

Miners and other workers developed a supply trail that went from the ice-free ports of Seward and Whittier to the gold mining districts of Western Alaska that included a route through Girdwood and over Crow Pass. This supply track was known as the Iditarod Trail. The Iditarod Trail was designated a National Historic Trail when the National Recreation Trails Act was amended in 1978 to include historic trails of national significance. The Iditarod Trail was one of four trails included with the passage of the act; there are now 19 National Historic trails. The well-known Iditarod sled dog race from Anchorage to Nome uses portions of the Iditarod National Historic Trail.

The development of Girdwood was further spurred with railroad construction by the federal government in 1915. The little town boomed with new businesses. Mining in the upper Crow Creek area continued until 1942, when mine closures by a presidential order made Girdwood a near ghost town. However, in 1949 Girdwood again flourished as construction began on the Seward Highway, connecting Seward to Anchorage. Girdwood citizens were now connected by road to Anchorage and the Kenai Peninsula.

Outdoor recreation activities became an important part of Girdwood life in 1954 when the Alyeska Ski Corporation was formed. In 1959, a poma lift and the day lodge were in use on Mt. Alyeska, and the first chair lift was built in 1960. Skiers started to flock to Girdwood to enjoy the town's abundant snowfall and winter recreational opportunities.

A pivotal moment in the development of Girdwood occurred on March 27, 1964, when a 9.2 magnitude earthquake shook Southcentral Alaska. The damage to many of Alaska's coastal communities was enormous. Along the Turnagain Arm of Cook Inlet, the land dropped 8 to 10 feet, putting much of Girdwood below the new tide line. The town site was moved up the valley to the present location.

Skiing and tourism grew throughout the 1960's and 1970's. The next major development of the ski area occurred in the 1980's when Seibu Corporation purchased Alyeska Resort and invested heavily in its development. Seibu Corporation installed new chair lifts and built the aerial tramway, mountaintop restaurants, and the 307-room Alyeska Prince Hotel, which opened in 1994.

In 2006, John Byrne III purchased Alyeska Resort and has invested heavily in new lifts, downhill mountain biking trails, and a hiking trail up the North Face of Mt. Alyeska.

The Girdwood Hand Tram has become an important valley trail asset. Financed through grants and built by volunteers during 1999 to 2001, it is now an integral part of the valley's recreational opportunities. The tram crosses Glacier Creek in the Four Corners area, where miners had originally built a bridge to access the upper valley. After a major grant was awarded, volunteers spent the first summer preparing the site, digging holes in bedrock, and pouring concrete. The second summer was spent finishing the foundation, building the timber frame, lining the cable, and installing the tramcar. Girdwood volunteers finished and dedicated the project during the third summer.

The grant covered approximately a fifth of the total cost of the installation. Local volunteers, including Cub Scouts, donated the rest of the cost by working during the summers, giving helicopter time, and establishing a staging area on private property. More than 60 helicopter trips were required to finish the project. The Hand Tram at Four Corners is one of the biggest trail draws in the valley for visitors and locals and has become the icon for Girdwood trails.

Present-day Girdwood consists of a diverse population of outdoor enthusiasts, local business owners, and Anchorage commuters. Other outdoor enthusiasts throughout Southcentral Alaska come to use the town's trails for nordic skiing, snowshoeing, hiking, rafting, and biking. The town's historic roots as a mining community and as an access route for the original Iditarod Trail provide many unique routes and trails.

Girdwood's skiing and snow sports offerings continue to receive national accolades and summer visitor numbers increase every year; it is time to plan systematically for the trail system to fully realize the community's year-round adventure sports resources.

## Physical Features

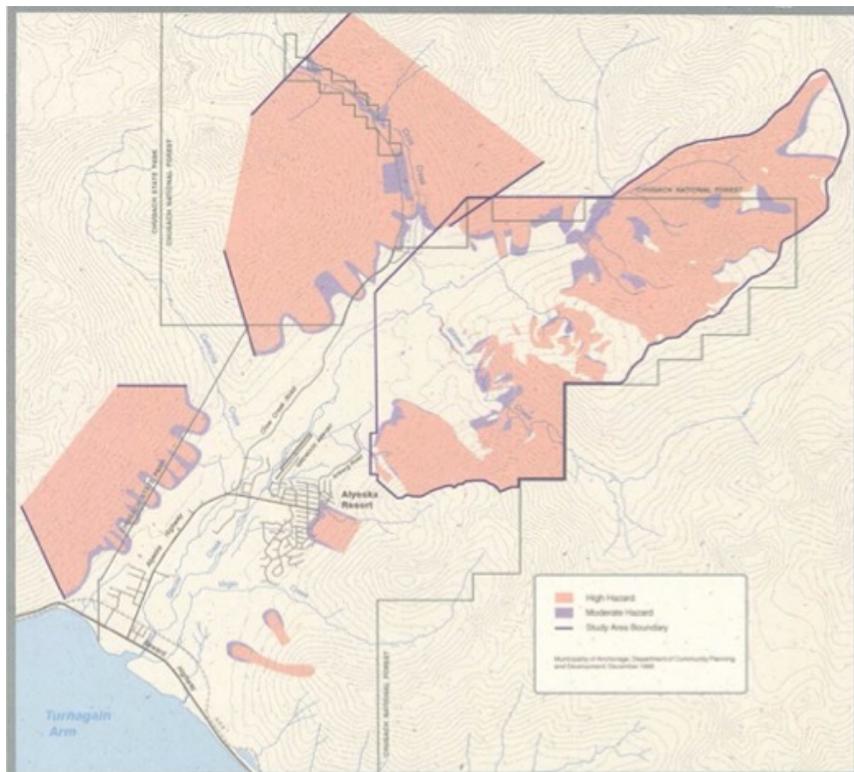
(Section adapted from *Girdwood Area Plan*, 1995)

### Geology and Topography

Girdwood Valley developed initially along a major structural trend in the bedrock that was later deepened and widened by glaciation. The valley generally runs along a northeast/southwest line and is relatively short in length--only six miles long. It is nearly two miles wide at tidewater and gradually narrows as it progresses inland to the headwall. The lower portions of the valley are broad and flat with abruptly ascending slopes along the mountainsides that rise to 3,500 feet. The upper valley narrows, with rolling terrain being wedged between the 6,000-foot peaks that make up the headwall.

The topography of Girdwood Valley is typical of the Chugach Range where glacial action has been the predominant force in shaping the landscape. Topographic features throughout the valley consist of open meadows, cliff bands, prominent knolls, gullies, ridges, and glacial bowls. On the valley floor, unconsolidated sediments overlie the bedrock. The sediment's distribution is complex because of the interrelated effects of glacial actions, marine influences from Turnagain Arm, and melt-water streams.

The alignment of our trails and their condition are directly influenced by the geology and topography of the valley. They make the area a very challenging environment to build and maintain trails. For example, many areas of the valley are severe avalanche zones—places where winter travel should not be encouraged. Upper Winner Creek Trail, the lower section of Beaver Pond Trail, Crow Pass Trail, and Max's Mountain Trail are quite dangerous in the winter.

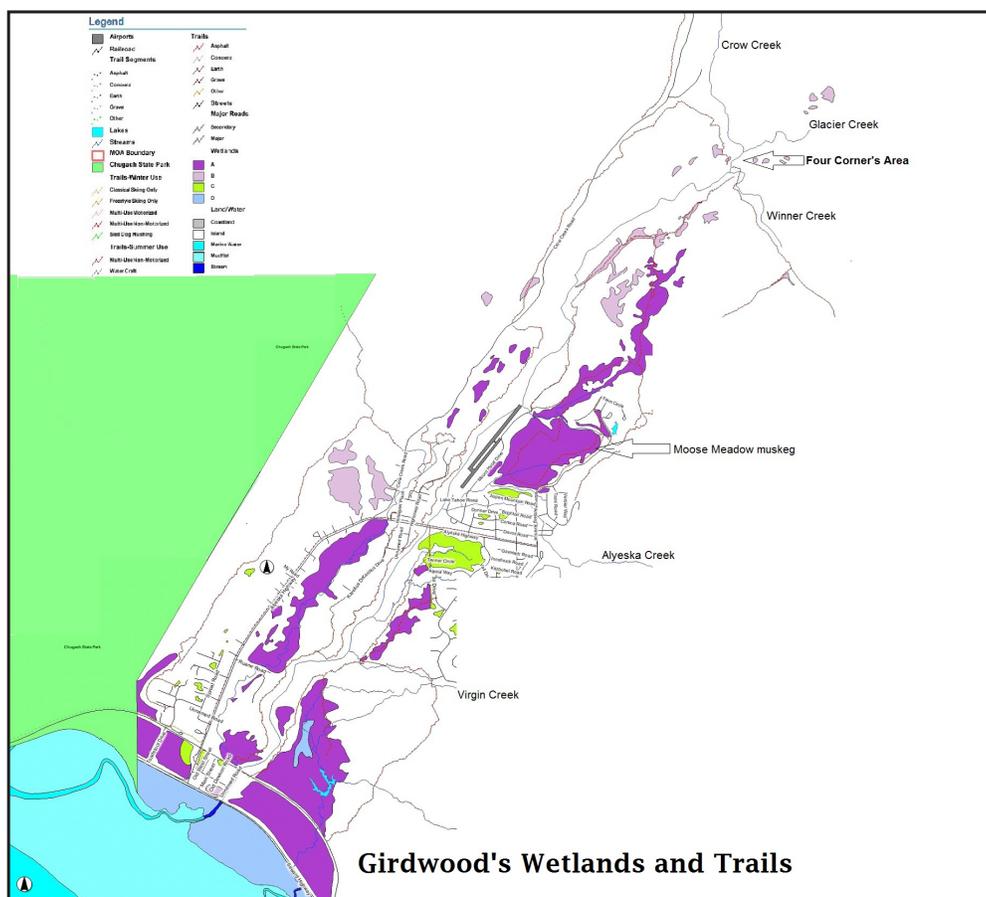


Avalanche slide paths surrounding Girdwood (from the *Girdwood Area Plan*, 1995)

## Hydrology

The current major melt-water stream is Glacier Creek, which begins at the termini of several glaciers on Goat Mountain. From its head, the stream flows southwest to tidewater. In the upper valley, two other major melt-water streams flow into Glacier Creek in close proximity. Crow Creek flows in from the northwest, and just downstream, Winner Creek joins from the southeast. In this area of confluence, the streams flow through narrow, deeply cut bedrock. This important environmental feature is referred to as the “Four Corners” area. A large system of muskegs (bog-like wetlands) are located near the Hotel Alyeska, stretching northeast towards the Four Corners area. The Moose Meadow stream drains from this “sponge” into Glacier Creek.

Further downstream, a couple of other significant melt-water creeks flow into Glacier Creek. Alyeska Creek flows from the ski resort to the east and joins Glacier Creek just north of the airport, and California Creek originates on the western side of the valley and flows generally southwest parallel to Glacier Creek through the area east of the Alyeska Highway bridge over Glacier Creek, down to where it joins Glacier Creek near the Alaska Railroad right-of-way. These two creeks form an extensive flood plain with beaver dams and other wet-lands along California Creek. One other significant melt-water creek in the valley is Virgin Creek. It flows out of the lower eastern side of the valley, runs generally south, and empties into tidewater just south of Glacier Creek. Wetlands surround the lower portion of this creek.



Major Streams and Wetlands in Girdwood (from the *Girdwood Area Plan*, 1995)

## Soils

According to the U.S. Geological Survey, Girdwood sits mostly on a thick Mesozoic marine deposit that extends through the Chugach-Kenai mountain system. This layer was heavily glaciated during the Pleistocene period, particularly along the weakness that eventually became the Girdwood Valley. At one time ice was nearly 3,500 feet thick in the valley. As the ice melted, it deposited unconsolidated materials on the valley floor. The commonly found deposits of unconsolidated material that form the basic soil units are alluvial, colluvial, glaciomarine, and estuarine deposits. These deposits of unconsolidated material lie over bedrock composed of argillite, slate and greywacke. Deposits range in thickness from 98 feet near Glacier Creek to two feet or less up the slope from the base area of the resort. Local deposits may be 160 feet deep or more.

Alluvial deposits are chiefly composed of sand and gravel with some layering of silt. They are found primarily on the lower terraces and floodplains of Glacier Creek and the outwash fans of Alyeska Creek, California Creek and Virgin Creek. Alluvial soils are well drained.

Colluvial deposits are accumulations of mixed materials that are thickest along the bottom portions of the mountain slopes along the sides of the valley. Colluvial materials are mixed with a wide range of grain sizes. Drainage is fair to poor. Some colluvial areas along the base of Penguin Ridge contain numerous seeps.

Glaciomarine and Estuarine deposits are poorly drained; fine grain silt and clay materials are found on some of the upland ridges, in natural depressions, and in the lower flat portion of the valley that is close to tidewater. Many are overlain with a mat of peat or muskeg and closely correspond to wetland areas. Materials that make up these soil units have a high water-holding capacity and are poor areas to align trails as integrated water management is very challenging because of the flat topography. Trail alignments need to avoid these areas whenever possible.

The soils in the Girdwood Valley are different from those in the Anchorage area in one notable way. They are much wetter and contain extensive organics that hold moisture. This distinction has to do with the climatic differences between the two areas.

## Vegetation

Girdwood Valley is located at the northern edge of the Pacific coastal rainforest zone. This is in contrast to the drier boreal or interior forest zone of most of Alaska. The forest growth in the valley consists of western hemlock, Sitka spruce, and black cottonwood. These trees are typical for parts of coastal forests at this latitude and topographical conditions. The forest extends up the mountainsides to about 1500 feet. Shrub and scrub growth continues to a slightly higher elevation but is soon replaced by alpine tundra ground cover. The dominant shrubs and scrubs are alder, willow and devil's club. There are no known threatened or endangered plant species in the Girdwood Valley.

## Fish

All five species of salmon, steelhead, and Dolly Varden have been observed in Girdwood Valley streams. Anadromous salmon species have been observed as far up Glacier Creek as the Four Corners area. Significant fish milling areas are the confluences of California Creek and Moose Meadows Creek with

Glacier Creek. The most significant fish spawning areas are located on California Creek, between Alyeska Highway and Crow Creek Road and on the lower portion of Moose Meadows Creek. All of the small tributary/wetland complexes associated with Glacier Creek, California Creek, and Moose Meadows Creek are important fish rearing areas.

## **Wildlife**

Because of its location between coastal and boreal ecosystems, Girdwood Valley and its surrounding environs support a high diversity of wildlife species. There are no threatened or endangered animal species known to inhabit the valley. Species commonly seen in the Girdwood Valley are beaver, moose, black and brown bear, red squirrel, and mountain goat. Birds include eagles, hawks, owls, waterfowl, shorebirds, arctic terns, ravens, magpies, ptarmigan, spruce grouse and warblers as well as a wide variety of resident and seasonal passerines.

## **Climate**

Girdwood Valley has a maritime climate characterized by cool summers, relatively mild winters and year-round precipitation. This is typical of southern coastal areas of Alaska where the ocean exerts a moderating influence. Compared with Anchorage, Girdwood experiences warmer winters, slightly cooler summers, and a great deal more precipitation year-round.

Winter weather in Girdwood is typified by periods of cold, stable weather followed by long periods of warmth. January and February are normally the coldest months. Average winter temperatures in the lower valley from Turnagain Arm up to Alyeska Resort will typically range from 15 to 25 degrees Fahrenheit.

The radically variable weather patterns that affect Girdwood during the winter are replaced by a more stable climate regime during the spring and summer months. Typical summer temperatures are in the 60's, with July being the warmest month.

Average annual precipitation ranges from 171 inches at Whittier, to 27 inches at Anchorage, with Girdwood averaging approximately 67 inches. Stormy periods produce either rain or snow at sea level, but consistently generate snow above the 1,000-foot level in the winter. This high freezing level occasionally results in a shortage of snow at lower elevations. Average November to April snowfall at Alyeska Resort reflects this difference: 197 inches at the base area with an elevation of 250 feet, 507 inches at the midway elevation of 1,700 feet, and 635 inches at the top of the lift-serviced area at 2,750 feet. By comparison, the average November to April snowfall for Anchorage is 52 inches. Elevation and temperature, more so than aspect, play a dominant role in the valley for both snowfall and snow retention.

Historically, precipitation in Girdwood has occurred on average 15 days each month for May, June and July. However, total accumulations per month through this period are relatively modest, averaging two to four inches. The average number of precipitation days and total monthly accumulations gradually increase beginning in August, reaching an average of 21 precipitation days and total water accumulation of eight inches for the month of October.

## Impacts of Climate Change on Girdwood Trails

Alaska is at the forefront of experiencing the impact of climate change, having warmed twice as rapidly as the rest of the United States in the post-WWII period. While much of the media focus has been on the northern coastal regions of the state, there are significant impacts across all regions, including the Southcentral region where Girdwood is located.

The climate of Southcentral Alaska is strongly affected by the Pacific Decadal Oscillation, so there is considerable variation in climatic conditions year to year and even over multi-year periods. However, there is a clear long-term warming trend. Yearly average temperatures in the Anchorage area have increased by over 3°F since 1949 with the bulk of the change seen during winter when temperatures have increased by almost 6°F. These winter temperature increases are particularly noteworthy as small fluctuations above and below freezing have a major impact on the type of precipitation and snowpack condition.

A US Forest Service technical report (2017) addressed the impact of climate change on the Chugach Mountains and Kenai Peninsula. In preparation for that report, the Scenarios Network for Alaska and Arctic Planning (SNAP) produced a set of downscaled climate projections specific to the Chugach and Kenai region.

These projections lead to several likely climate changes to the region:

- Overall warmer temperatures, with earlier spring and later autumn, therefore a longer growing season;
- Shorter, less severe winters;
- Slight increase in annual precipitation;
- Increased rainfall and less snowfall at elevations below 1000m, with likely increased snowfall at elevations above 1500m.

For the Girdwood Valley, this means less snowfall in the southern end of the valley, even at Alyeska Resort. However, the northern, upper reaches of the valley, which feed the headwaters of Glacier Creek and Crow Creek, will likely see an increase in winter snowfall.

As the expected snowline increases in elevation, feasibility of lowland winter activities, such as Nordic skiing, will become marginal in coming years. Access to backcountry skiing from existing trailheads will also become more challenging.

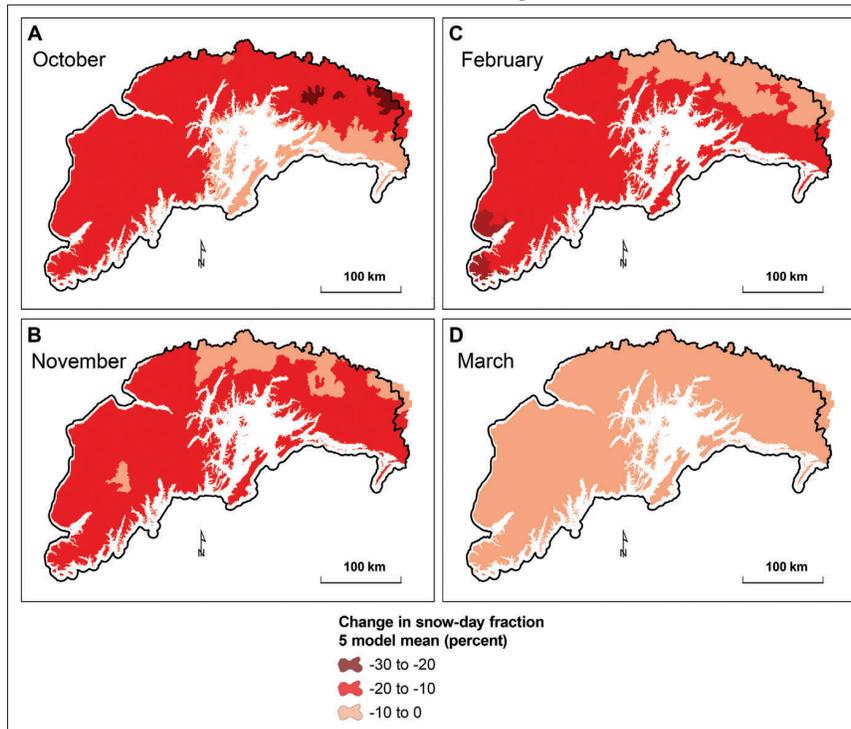
The increase in annual rainfall and the likely additional rainy season during autumn will have consequences for erosion protection of many of the valley's trails. Attention will be needed to improve drainage in some areas and to manage trails popular with mountain bikers to prevent extensive rutting during wet seasons.

Due to the likely changes in winter snowpack, stream flows are likely to change across the valley with slightly increased volume everywhere and larger late spring flows in streams originating in the upper valley.

Finally, the anticipated increase of the growing season will necessitate more focus on brushing of trails and, combined with milder winters, may also allow a wider variety of invasive species to establish themselves.

## Projected 2030–2059 Changes in Mean Snow-Day Fraction Relative to Historical Data (1971–2000) for Selected Months, Kenai/Chugach Assessment Area

Turnagain Arm is represented by the single white line in the northwest quadrant of each map. Girdwood is located toward the right end of the line. Prince William Sound is the white, spider-like mass.



Hayward, Gregory H.; Colt, Steve; McTeague, Monica L.; Hollingsworth, Teresa N., eds. 2017. Climate change vulnerability assessment for Chugach National Forest and the Kenai Peninsula. Gen. Tech. Rep. PNW-GTR-950. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 340pp

## CHAPTER 2

# The Importance of Girdwood Trails and This Plan's Goal



## Why Trails Are Important to Girdwood

Trails are a critical component of everyday life in Girdwood. Our trails range from pedestrian facilities like sidewalks and paved bike paths, to developed forest trails, to primitive routes marked only by cairns or scuffed earth. The trails provide many benefits to residents and visitors, among them a healthy lifestyle and safe, convenient access to stores, library, school, playgrounds, disc golf courses, and the valley's special places. These trails are significant pieces of public infrastructure that provide recreational opportunities and alternative transportation corridors; they link neighborhoods and bind the community together. Trail-based recreation has a positive economic impact on the entire community of Girdwood. Many communities in Alaska have formally recognized the importance of trails. As described in Anchorage's *Areawide Trails Plan* (1997), social and economic benefits of trails are:

- Connectivity among neighborhoods
- Non-motorized access to other community resources
- Access to affordable exercise to all within the community Numerous mental and physical health benefits of outdoor exercise
- Appreciation of natural assets
- Creation of buffer zones and emergency routes
- Stimulation of the local economy
  - Job creation
  - Tourism (bed tax as well as consumer spending)
  - Increased property values

## **Health and Fitness**

The health benefits of exercise derived from trail-based recreational activities contribute to improved user health and reduced health care needs. Regular, moderate exercise has been proven to reduce the risks of many health problems, such as coronary heart disease, diabetes, certain kinds of cancers, and obesity. Regular exercise can also protect against injury and disability because it builds muscular strength and flexibility.

## **Walk-Friendly Community**

Neighborhood connectors, the path along Alyeska Highway, and sidewalks near businesses and the school promote a safe walking environment for the community. Residents cite these paths as a critical part of living in Girdwood. The paths create a space where people can see each other and visit, can exercise, and be in the fresh air. They demonstrate the value that Girdwood residents place on outdoor access, mobility, and safety.

## **Trails as Transportation**

Trails and greenbelt connecting trails offer adults and children alternative transportation networks that provide an opportunity to integrate moderate, individualized exercise with daily trips to work and school. When the valley trails are used as transportation corridors, there are less vehicular trips in our community, reducing emissions, dust and traffic in our neighborhoods.

## **Trails and Their Economic Impact**

Over the last 50 years, Girdwood has become a wonderful resort community for its residents and visitors from Alaska and the world beyond. The town has helicopter powder skiing and sightseeing companies, hiking and rafting companies, scores of bed and breakfast inns, a world-class hotel, a ski resort, a medical clinic, and all the attendant restaurants and services required by a resort community. A good, safe trail system directly impacts these businesses by helping to draw and keep residents and second-home owners and by contributing positively to the visitor experience.

Consistent use of trails, whether paved or not, improves health, which in turn, saves money for an individual and the health care system. The 2015 study, *Economic Benefits of Trails, Parks, and Open Space in the Mat-Su Borough*, found that “the estimated average value in medical savings for adults who exercise in public outdoor spaces is \$288 per year. This value is consistent with the estimated cost related to obesity in Alaska divided by the population. For the senior population, the healthcare cost was doubled compared to adults (\$576), but no loss of productivity was taken into account since they are less likely to work. For children, the estimated average value in medical savings is \$127 per year” (p. 8).

## **Goal of This Plan**

The Girdwood Valley Trails Management Plan (GVTMP) will provide direction on how the community shall develop, manage, maintain, and assess our trails. It is designed to provide a framework to guide sustainable trail development and management practices.

The goal of this plan is to create a highly functional, interconnected, multi-use trail system that meets current and future needs of the community. To accomplish this, the following best practices from Alaska Trail’s

Sustainable Trail Framework, will be implemented:

- Adopt accepted sustainable trail construction and maintenance techniques;
- Organize the process to assess, prescribe, and prioritize Girdwood trail system needs;
- Use a consistent set of principles and policies for trail management and trail managers;
- Promote wise management of the valley’s trail resources through proper planning, design, construction, and training;
- Achieve long-term reductions in maintenance costs; and
- Provide a basis for identifying and protecting existing trails in collaboration with future planned land development.



## CHAPTER 3

# Girdwood Valley Trails' Management Areas



Girdwood Valley has over 30 recognized trails that cover more than 100 miles from the valley floor to the high alpine terrain. Of these, there are 5.7 miles on three trails that are ski trails only and another 21 miles on seven trails that are used year-round. The other trails are predominately used during summer months.

These trails are significant pieces of public infrastructure that provide recreational opportunities and alternative transportation corridors; they link neighborhoods and bind the community together. Trail-based recreation has a positive economic impact on the entire community.

The current trail alignments in Girdwood have their origins in the transportation corridors used to move people and materials to gold producing sites in the valley and throughout the state. Through use, these early corridors have evolved into the recreational trails that we now travel and maintain.

Most of the trails run along the valley floors and the lower slopes of the mountains that confine the valley. Direction of travel on most trails is loosely along a north/south line. The alignments of the trails within Girdwood Valley are dictated by natural and manmade features. Their collective condition is impacted by environmental factors and the standards to which they were built and are maintained.

The valley is divided into five areas for management purposes. Trails are grouped by the area in which they traverse, and they share similar management issues.

- **Upper Valley Trails:** These trails lie east of the Highway Corridor and north of the Alyeska Highway. The Resort trails are east of this area. Upper Valley trails have the most concentrated use of any trails in the valley with the highest diversity of user groups. Hikers, mountain bikers, nordic skiers, snowshoers, tourists, and residents alike use these trails. Some of the winter trails are on wet ground unsuitable for summer use. Trails range from class 1 to class 5. The popular Girdwood Hand Tram connects the two portions of the Winner Creek Trail. All of the groomed nordic trails are in this management area as are many ungroomed nordic trails.

- **Resort-Managed Trails:** The trails in this area are on Alyeska Resort private property. Summer trails include the North Face Trail, Winner Creek Extension, and Alyeska mountain biking trails. An access point to the Winner Creek Trail is located adjacent to Hotel Alyeska. These trails are open to the public.
- **Alyeska Basin & South Valley Trails (ABS):** These are the locals’ trails—“my back door is my trailhead.” The trails lie east of the Alyeska Highway Corridor and south of the soccer field. The majority of these trails are routes that have evolved through use into class 1 and 2 trails. There are numerous social trails that are important community links. These are high value trails with high maintenance requirements, especially regarding snow storage issues each winter. Their alignments are generally across flat ground with numerous streams, wetlands, and flood plains.
- **Alyeska Highway Corridor (AHC):** This area contains all of the paved multi-use trails in the valley, from the Hotel Alyeska to the intersection of the Alyeska Highway and the Seward Highway, as well as the trails found in Girdwood’s Town Center and in the park where the Forest Fair is held. The core trail is the Alyeska Highway Bike Path. There are three other paved bike path trails that radiate from it: the Hightower Bike Path to the school, the Moose Meadow Bike Path to Hotel Alyeska and the Bird-to- Gird Bike Path. The Tiny Creek trail is also located in this corridor.
- **Backcountry (BC):** This area surrounds all the other areas and contains the more remote and consequently more rustic trails. This area stretches from Turnagain Arm to the top of the ridges surrounding our valley. It encompasses all lands west of the Alyeska Highway Corridor and extends east to Berry Pass. These trails are mostly along historic transportation routes.

Trails in this corridor face significant pressure from potential development of the new south town site and the proposed Crow Creek neighborhood developments, including the Holtan Hills subdivision. All INHT segments are within this area (Girdwood Iditarod, Crow Pass, and both upper & most of lower Winner Creek Trails). The Athabaskan Environmental Physics (AEP) Trail, Beaver Pond Trail, California Creek Trail, Abe’s Trail, and the Ragged Top route are all found in this area. Several trailheads are found along Crow Creek Road, and the hand tram at Four Corners is within this area.

## Landowners

Girdwood Valley’s landowners are numerous and varied. Girdwood Trails Committee is concerned with all trails in the valley, regardless of land ownership; however, the authority to improve or dedicate trails resides with the owner.

The primary private landowner in the Girdwood Valley is Alyeska Resort. Resort trails include popular summer hiking and biking trails.

Public landowners hold most of the valley’s land. The Municipality of Anchorage’s Heritage Land Bank (HLB) is a major landowner as is the USDA Forest Service. In general, municipal and state lands are located in the upper valley, with Chugach State Park on the far west side of the valley.

For trails on HLB lands, the Girdwood Board of Supervisors, Parks and Recreation, and Trails Committee all provide recommendations to the Anchorage Assembly for approval of major trail decisions, such as trail easement establishment or new trail construction. Less major decisions require approval of the Girdwood Board of Supervisors.

Girdwood Valley trails on Chugach State Park and Department of Natural Resources (DNR) lands are owned by the State of Alaska. The Chugach Park Superintendent approves, with Trails Committee input, all Park trail decisions, which are guided by the *Chugach State Park Management Plan* (2016). The Girdwood Trails Committee holds a renewable, five-year permit from Alaska Department of Natural Resources for the northern Beaver Pond Trailhead and the trail's corridor to HLB land. Copies of this permit are available at the Girdwood Municipality of Anchorage office.

For trails owned by the Chugach National Forest, the District Ranger approves, with input from the Girdwood Trails Committee, all Girdwood Valley trail decisions. An MOU is maintained with the U.S. Forest Service Glacier Ranger District and the Municipality of Anchorage. It is renewed every five years. Current copies are available at the Girdwood Municipality of Anchorage office.

Federal and state programs and organizations assist Alaskan communities with pedestrian paths and trails. Grants and assistance for Girdwood are available through Safe Routes to Schools, Walk-Friendly Communities, The Alliance for Biking and Walking, American Hiking Society, Alaska Trails, the Iditarod Historic Trail Alliance, and the Kenai Mountains–Turnagain Arm National Heritage Area.

The Girdwood Trails Committee plans to collaborate with the Alaska Railroad and the State of Alaska Division of Statewide Aviation to work out access to trails that are within their rights of way.

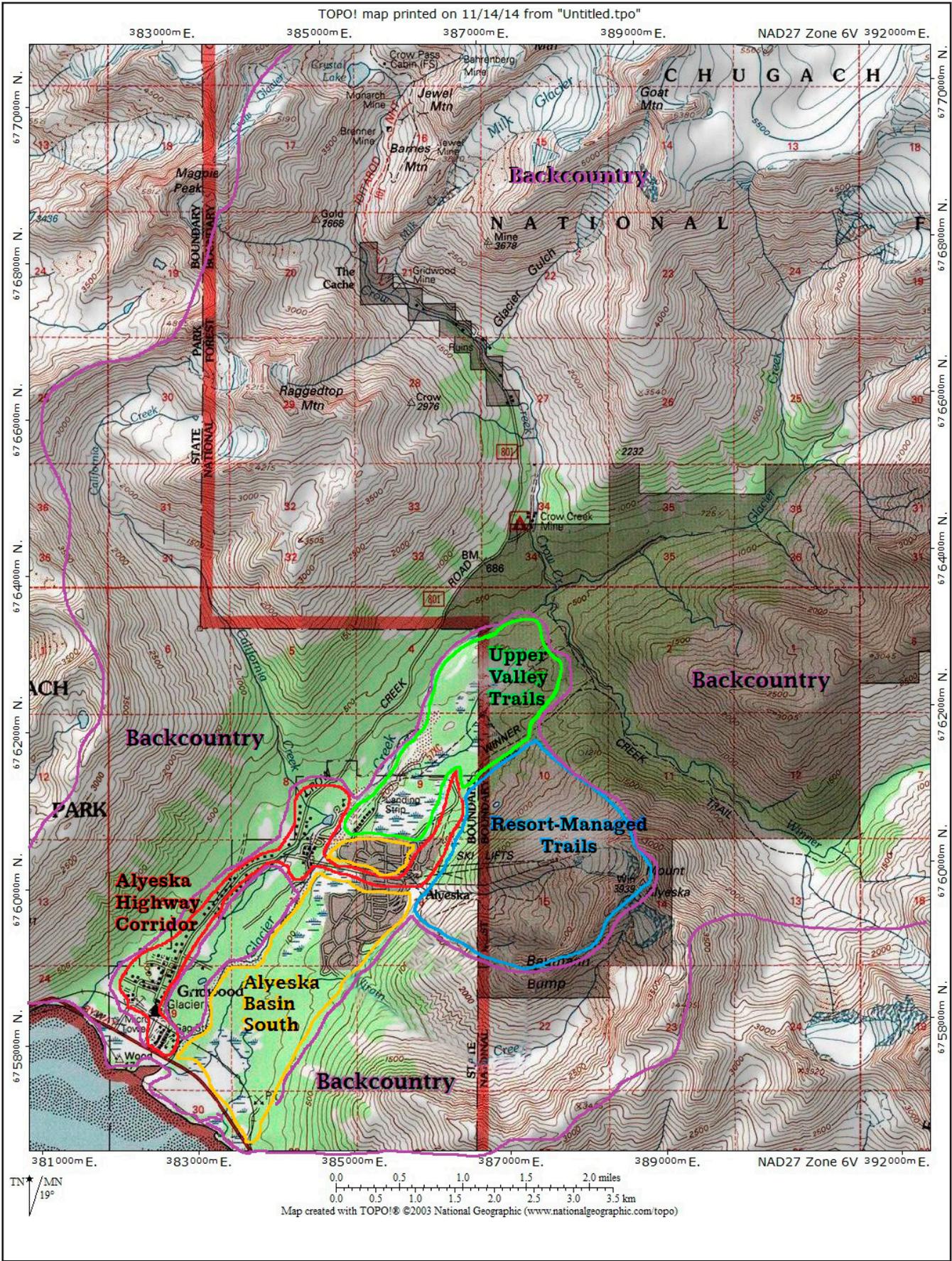
## Trail Managers

Trail managers are non-profit organizations or businesses that have obtained an easement from the Municipality of Anchorage's Heritage Land Bank (HLB) to build and manage a trail in the Girdwood Valley. These groups first gain approval from the Girdwood Trails Committee, then Land Use Committee, and finally Girdwood Board of Supervisors in order to apply for a trail easement from HLB and the Anchorage Assembly. After gaining approval of the easement, the organization or business constructs and manages the trail.

Local committee approval is gained by developing a plan for a specific class of trail with a single designed use. Any parameters approved by the Girdwood Trails Committee must be included. To then apply for the easement, the organization completes an HLB land disposal application and receives approval from HLB and the Anchorage Assembly. A copy of the completed application is kept with Girdwood Parks and Recreation.

Trail managers are responsible for developing, constructing, and maintaining the trail per any constraints from the Girdwood approval process and their land disposal application specifications. They are expected to use national standards for keeping out invasive plants while building the trail. If the entity is no longer able to maintain the trail easement, the Girdwood Trails Committee and HLB will address the issue.

The current trail managers are the Girdwood Nordic Ski Club (GNSC), which constructed and manages the Nordic 5K loop, Chugach Powder Guides, which constructed and manages the Snow Cat Trail, and the Girdwood Mountain Bike Alliance, which constructed and manages the bike trails around the Nordic 5K loop area. The GNSC, along with Alyeska Resort and Girdwood Trails Committee, groom some of the nordic ski trails in the valley. Chugach Powder Guides is responsible for maintaining the Snow Cat Trail and its bridge for access to Sunnyside Mountain for cat skiing.



## CHAPTER 4

# Trail Principles



The goal of the Trails Management Plan is to develop a sustainable and functional trail system that meets the needs of the many user groups in the Girdwood Valley, while simultaneously providing for the protection of natural resources.

## Trail User's Experience

There are multiple user groups that recreate in the Girdwood valley; hikers, bikers, skiers, moms with strollers, snow-shoers, and tourists with little outdoor experience, to name a few. All of these people have different reasons for using Girdwood's trail system and different needs for trail types. How people interact with the trail system is referred to as the Trail User's Experience (TUE).

Many elements contribute to a Trail User's Experience (TUE) while traveling on a trail. Human values are important to recognize, understand and consider when designing and managing trails for TUE. While some people may feel threatened by potential bear attacks on a trail that is not widely brushed, others may feel that a trail with a downed tree that has been chain-sawed in half has lost its primitive quality. The group of mountain bikers wanting a high-speed technical downhill is looking for a much different TUE than the cross-country hiker enjoying the silence broken only by a chickadee.

The key to creating a positive TUE for the diverse user groups is variety. The Girdwood trail system strives to provide multiple trail options, featuring differing skills, surfaces, settings, grades, etc. Trails that are enjoyable, safe, and appropriately challenging for the intended user group (walkers, runners, hikers, bikers, skiers) create a positive TUE.

While it is hard to define all the values that the various users will bring to the trailhead, the following chart highlights the core values of most trail users.

Trail User Objectives	Description
Nature	Connection to nature. This can be anything from being among a few trees in the middle of the city to remote backcountry. Nature is an important factor for many trail users.
Escape	Something that takes you away from your daily grind; releasing or reducing stress.
Solitude	Enjoying solitude, isolation, and independence. Getting away from the urban environment and people; time for reflection.
Challenge	Seeking to improve physical abilities; sense of accomplishment; testing endurance.
Risk	Adventure; intentional interaction with uncertainty. The possible exposure to danger creates a thrill for many trail users. It can be a positive or negative part of the trail experience, depending on user expectations and risk tolerance.
Safety	Feeling secure, physically and mentally, in an outdoor setting.
Fun	Amusing or enjoyable experience. Engaging in the activity purely for the enjoyment, bringing a childlike wonder to the pursuit.
Exercise	Health and fitness are part of using trails. For some this is a primary goal, for others a bonus, for some an obstacle. Recognition of the physical fitness needed for using a trail is important in setting user expectations appropriately.
Socializing	Provides a shared experience and a time/space for conversations. Enjoying the closeness of friends and family. Enjoying meeting new people with similar interests.

Adapted from “Guidelines for a Quality Trail Experience” BLM/International Mountain Bicycling Association, 2017

## Sustainable Trails Principles

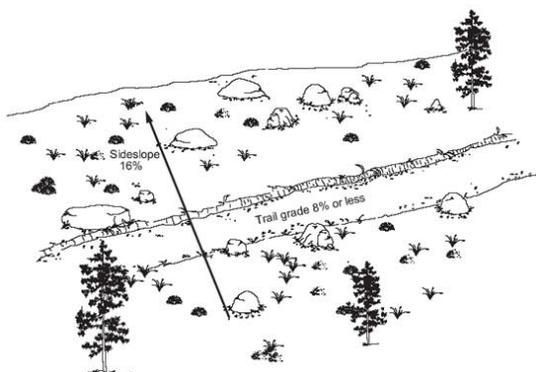
Adapted from the Alaska Trails Volunteer Handbook, 2019

A sustainable trail is defined as a trail that conforms to the terrain, without ruining the aesthetics or ecological integrity of the environment that it traverses. A sustainable trail is capable of handling its intended use without serious resource degradation, and requires minimal maintenance.

**Planned and designed:** Trail development is guided by trail management objectives (TMO) and constructed to design parameters that support the intended use with low impact to the surrounding environment.

**Full bench construction:** When a trail traverses a side-hill, full bench construction provides the most compact tread surface possible, encourages sheet flow, does not trap water on the trail, and eliminates the potential for tread slump failure.

**Controlled grade:** The trail grade should not exceed 10% along the alignment of the trail. The percent grade of the trail should also not exceed half of the grade of the side-slope (otherwise known as the half-rule). By building trails that follow the curvilinear alignment of topographical contour lines, rather than going perpendicular to them, “fall-line” trails and over-steep grades are prevented. Trail maintenance is reduced as the trail promotes even sheet flow of water off the trail, thereby reducing erosion and ruts.



Grade can be expressed as a percent or an angle. Percent is easier to understand.

Percent grade equals the rise (elevation change) divided by the run (horizontal distance) multiplied by 100.

Example: Rise of 10 feet/run of 100 feet x 100 = 10 percent.

Elevation change, up or down, is always a positive

**Integrated water control:** Use alignment, not structures, to shed water off the tread surface and maximize sheet flow; water control designed into the alignment reduces dependence on water bars or drains, which can fail. Examples include “grade reversals” and out-sloped tread:

- **Grade Reversals:** The grade of the trail is reversed for 10 to 15 feet, then “rolled” back over. Grade reversals should be placed frequently—about every 20 to 50 feet—depending on the grade of the trail. The local topography can provide natural grade reversals, while dips and curves in the trail to go around trees and boulders also create integrated grade reversals.
- **Out-slope:** As the trail contours across a hillside, the downhill or outer edge of the tread should be lower than the inside or bankside edge. Out-sloping lets water sheet across the trail naturally. The tread should be out-sloped at least five percent (5%).

**Durable tread surface:** Ensure long-term durability of tread surface by utilizing on-site native material or importation of material (i.e. gravel) to rectify poor drainage or tread surface, especially on flat ground and when full bench is not possible.

**Regular maintenance:** Being able to accurately predict maintenance tasks allows land managers to plan for volunteer, service learning or professional crews to fill the maintenance needs.

## Sustainable Trail Design

Adapted from Chugach State Park Management Plan, 2016

Achieving a sustainable trail begins with establishing an integrated design process. This relies on a multidisciplinary team (trail advocates, designers, major stakeholders, and land managers) working collaboratively from the pre-design phase through construction. The process ensures that a trail is developed in keeping with the spirit of the trail design and future maintenance obligations.

**Revegetation:** Local and native plant materials must be used for any revegetation of disturbed areas. Any intrusion of non-native plants will not be allowed and must be fully mitigated. Revegetation will be used to provide screening and help stabilize slopes. Construction techniques to preserve vegetation and trail routing

should be employed to minimize visual intrusion. When possible, plant material removed from the trail corridor for clearance should be transplanted only to other eligible locations where revegetation is necessary.

**Clearing:** Clearing widths and heights should conform to the trail class and design parameter specifications assigned to a particular trail or trail segment. Deviations to the design parameters may occur only when the deviation is documented in the Trail Management Objectives form for a particular trail or trail segment. Additional clearing may be prescribed to remove falling hazard trees adjacent to developed areas or to improve views as guided by community zoning rules.

**Natural Considerations:** Where significant wildlife or other natural features exist, special trail routing, construction methods, and trail management should be considered. Trails should have a natural flow and rhythm that avoid long, straight alignments. Where hazards are present, special trail construction techniques or alignment should be used to mitigate the hazard. Hazardous areas such as steep slopes, avalanche zones and rockslide areas should be either avoided or be closed seasonally when hazardous conditions present a problem.

**Historic and Cultural Resource Considerations:** Like natural resources, cultural resources must be considered when planning and constructing trails. Cultural resource identification should occur early in any trail project and possible impacts assessed. As needed and in consultation with the State Historic Preservation Office (SHPO), special trail routing and construction techniques should be used to reduce adverse impacts to cultural resources.

**Environmentally Sensitive Sites:** Special alignment or construction methods may be necessary to reduce impacts and minimize disturbance in environmentally sensitive areas. Examples of environmentally sensitive sites include wetlands, highly visible hillsides, significant vegetation areas, threatened and endangered species habitat, highly erodible soils, unstable slopes, and ridgelines. Techniques such as site-specific trail routing, erosion control measures, site-specific adjustment of construction standards, and site-specific construction practices should be implemented to minimize environmental, visual or construction impacts.

Construction methods that should reduce impacts include installing retaining walls to reduce cut-and-fill slopes on a visually prominent hillside, hand construction of a trail, or stabilizing a hazard that is located within or adjacent to the trail corridor. Special care should be taken in areas close to rivers, streams, or wetlands.

Trails that cross or are located adjacent to wetlands should be designed for minimal impact. Boardwalks or other techniques may be necessary to impose minimal construction impacts. Wildlife needs should also be considered when setting trails near wetlands. For example, locate trails well up and away from potential beaver ponds. Managers should consider decommissioning underutilized trails in sensitive areas to minimize erosion of sediment into streams. Connectivity between drainage ditches and streams should be minimized to reduce sediment delivery potential.

## CHAPTER 5

# Trail Planning and Process



In the 2019 Girdwood Area Plan Survey, respondents were asked what aspect of Girdwood life they liked the most. The top choice was outdoor recreation (61%). When asked what they would like to see change in Girdwood in the next 10-20 years, again the top choice was recreation. In a follow-up question at the Imagine! Girdwood public meeting in April 2019, the top outdoor recreation priority for respondents was new 4' wide trails for hiking/running, mountain biking, and classic Nordic skiing. This data strongly suggests a desire for an expanded trail network within the Girdwood Valley.

Within the next five years, Girdwood will develop a Trails Master Plan that will provide a clear direction to the Girdwood community and Heritage Land Bank for any future trail construction. This valley-wide trail vision will insure that the Valley's diverse user-group needs are addressed in a cohesive manner, with access and parking integrated into the plan. This Trails Master Plan, which is a condition for future trail approvals by the Heritage Land Bank (HLB), will be adopted as a comprehensive plan element in the Girdwood Area Plan.

## Trail Planning Process

The construction of a new trail in the Girdwood Valley creates a community asset that will be used for decades. It involves a lot of planning, fund raising, and public input. The following information provides a road map to help guide potential trail builders through that lengthy process. The Heritage Land Bank (HLB) owns most of the land in Girdwood that is available for trails, so this outline describes the process needed for HLB approval.

The process begins when a user group identifies a need for a new trail. This need could be due to existing trails becoming too crowded or because of the popularity of some new recreation type has specific trail requirements that are not met by existing trails.

A user group crafts an initial conceptual design for the new trail using the Trail Management Objective form (TMO) found in Chapter 6. The TMO identifies the trail type, trail class, the designed use, and the construction parameters. The land owner is then contacted and asked to provide a letter of support for the proposed trail. This is critical so that the owner is informed of the proposal from the beginning, as well as the user group and the Trails Committee has assurance from the landowner that they can proceed.

At this point, the user group brings the new trail concept (preliminary map, TMO, and landowner letter of support) to the Girdwood Trails Committee (GTC). The purpose of this meeting is simply for GTC to give some initial feedback that could provide guidance to the user group as its members work on creating a more detailed plan for the new trail.

Using ideas gathered from GTC and through discussions throughout the community, the group develops a fleshed-out trail design. The trail should be designed using sustainability principles (see Sustainable Trails Principles section in Chapter 4). The proposal shall include a map of the preliminary trail alignment, construction and design specifications, and sketches of typical trail cross sections. The proposal should also describe a plan for future maintenance and long-term sustainability.

When the design phase is completed, the group is ready to present their project to Girdwood Trails Committee as New Business. To encourage public involvement, one month prior to presenting the trail proposal to GTC, the group should post notices describing their proposal at the Girdwood Post Office and on the Girdwood Facebook page. Copies of the proposed plan need to be placed in the Girdwood Library and emailed to all known interested parties. An article in the local newspaper, if possible, is a great way to inform and connect with all Girdwood residents.

Now the formal public process begins. The user group presents their trail proposal to each of the three Girdwood committees (Trails-GTC, Land Use-LUC, and Girdwood Board of Supervisors-GBOS) first as New Business and then as Old Business. The group can choose to schedule the meetings in any number of ways, consecutively or concurrently, spread out over a minimum of two months or for as long as is necessary. The usual format is to present to all three committees as New Business in the first month, then return to GTC as Old Business in the second month. If the trail proposal is not recommended by GTC after the second meeting, GTC may form a subcommittee of interested parties to resolve the outstanding issues. The subcommittee will report back to GTC for further discussion until the proposal either receives GTC's motion of support or the plan is not approved. While GTC approval is not mandatory for a project to succeed at the LUC or GBOS, it is certainly preferred by those entities.

If the Girdwood Board of Supervisors (GBOS) approves the proposal, it is then forwarded to the Municipality of Anchorage (MOA) Planning Department. The MOA Planning Director decides whether the project needs to be reviewed by the Urban Design Commission (UDC) (refer to MOA Code Title 21.03.190.C). Generally, trails that are major multi-use trails, trails more than one-half mile in length along streams or through community or special use areas, or trails that are likely to create significant public interest, will require UDC Review. Trails that are minor in scope and are not likely to cause impacts on surrounding properties and neighborhoods may be exempted. In addition, trails that are included on the Girdwood Trail Master Plan will be exempted as they will have previously been reviewed as part of the Trail Master Plan approval process.

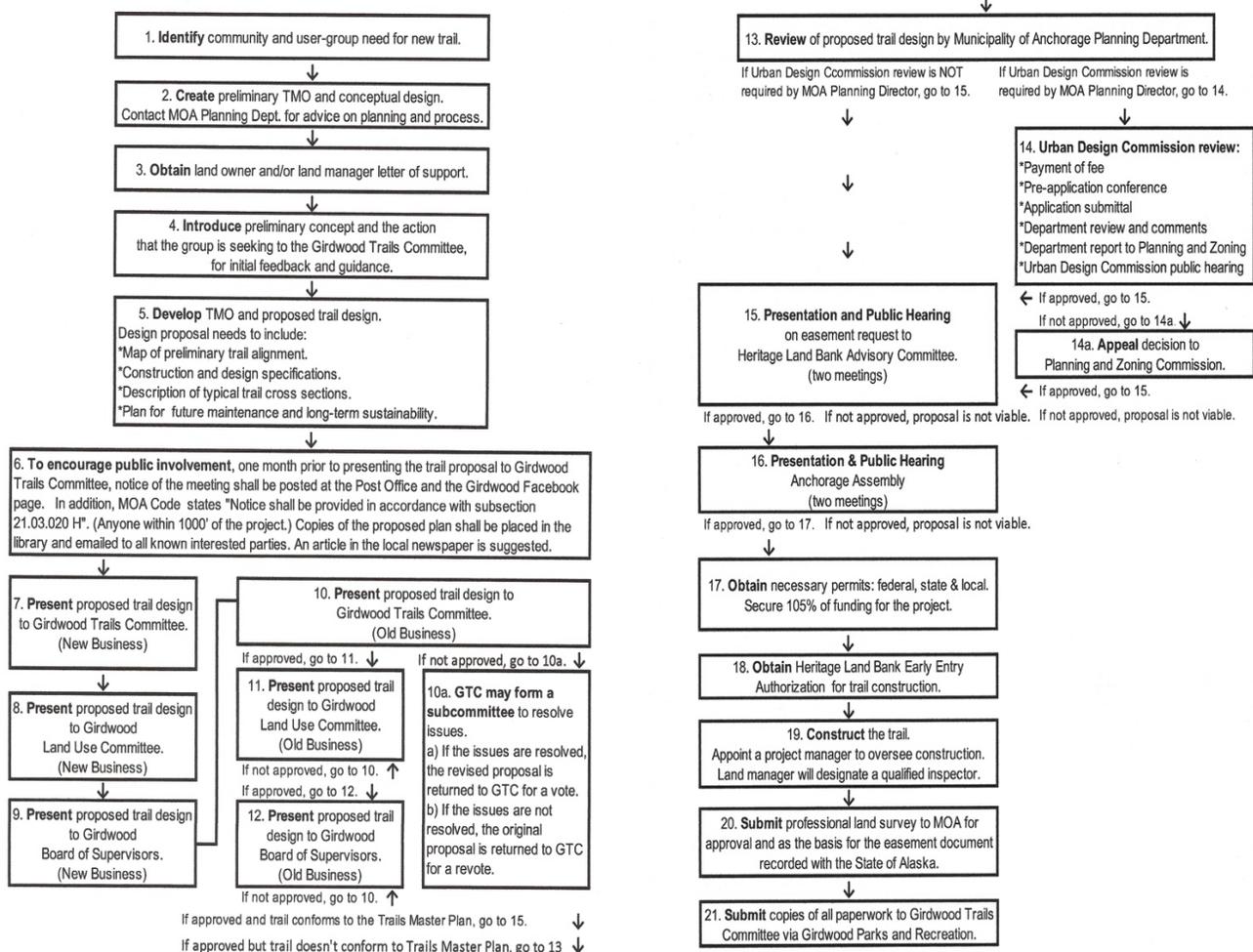
If a trail project needs to go through a review by the Urban Design Commission, the first step is a pre-application meeting with the MOA Planning Department. This meeting helps familiarize the group with the various requirements of the application process (refer to MOA Code Title 21.03.20). The group then submits

the application and pays the application fee (\$4000 in 2019). The Planning Department reviews the application and distributes it to other reviewers as deemed necessary. Based on the results of those reviews, the Planning Department sends a report to the UDC. Finally, the UDC holds a public hearing and either approves, approves with conditions, or rejects the application. If the application is denied, the group can appeal the decision to the Planning and Zoning Commission. If the application is approved, the group moves on to the Heritage Land Bank Advisory Committee.

Two meetings are required with the Heritage Land Bank Advisory Committee. If approval is granted there, two meetings are held with the Anchorage Assembly.

Upon final approval, the group can now obtain all the necessary federal, state, and/or local permits. The group members must also provide HLB with documentation that they have secured 105% of the funding necessary for construction. HLB will then issue an Early Entry Authorization so that construction can finally begin! To ensure that the trail is constructed as planned, the group must appoint a project manager to oversee construction, and HLB will designate a qualified inspector. Once the trail is finished, the group submits a professional land survey to the MOA that is the basis for the easement document recorded with the State of Alaska. Finally, the group submits copies of all the paperwork to GTC via Girdwood Parks and Recreation.

**PROPOSAL PROCESS FOR NEW TRAILS IN GIRDWOOD**



## Trail Access and Parking

Parking to access to Girdwood Valley's trails is becoming more challenging every year, and some trails do not have parking adjacent to the trailhead. Principal access to most of the trails is a collection of "wide spots in the road". Access during winter is further complicated by snow storage needs.

Every managed trail in Girdwood Valley should have an identifiable trailhead that can be easily located on a map and by the user. The trailhead should be the connection from the community to the trail. Each trailhead should have an adjacent area for sufficient parking (this may not be possible at all trailheads due to land ownership issues).

## Signage

Trails should be named, and names should be posted at the trailheads. Signage is important because it provides descriptive information about the trail to users and enables them to identify ground locations from maps. Names for trails should be descriptive of the terrain/area the trail traverses or of the trailhead/destination. Sign standards will vary by trail classification and managed use.

Trail signage should generally be kept to a minimum and include only what is needed to convey necessary information. Highly developed trails will typically include more directional signage and interpretative information. Locations of signs need to be evaluated on a case-by-case basis, and signs should only be posted when they contribute to the trail user's experience. Trailheads and major intersections are appropriate sign locations.

## Legal Access and Trail Easements

All managed trails in the Girdwood Valley should be within an easement that is managed by the appropriate land management entity. A trail that lies within an easement is protected from encroachment by adjacent land development. It is the goal of the Girdwood Trails Committee that every established trail in the Girdwood Valley has legal access—such as an easement, intra-governmental agreement, or permit—that is overseen by the trail management entity. Some trails, like Moose Meadow Multi-Use Trail, are located within a dedicated park, so they require only review and approval by Girdwood Parks & Recreation.

Easements should be no less than 20 feet wide—10 feet on either side of the trail centerline. The centerline alignment of trails with easements will be documented and recorded as accurately as possible using GPS devices capable of measurement to within 1 meter (3 feet), unless the trail manager requires more accuracy. The data will be processed and archived in a GIS format.

In special circumstances, a trail might require realignment to accommodate community projects or development. This realignment should be accommodated when the realignment results in a trail built to the same or higher standards and the Trail User Experience (TUE) remains consistent with the original TUE.

## Climatic Trail Use Opportunities

Designers should locate trails for both summer and winter activities, where possible. Trail alignments should take advantage of terrain exposure and utilize elements that contribute to optimal seasonal influences. For example, a winter trail should exploit openings in the canopy for better snow coverage of the ground while a summer trail should avoid crossing wetlands.

## Loop Trail Layout

While destination trails are the dominant long-distance trail type in Girdwood Valley, more loop or linked trails are planned within the trail system. Loop trails can provide a more diverse experience for trail users and allow for a customized experience, a change of plans, or adding on a little more mileage. Loop trails also allow for users of different fitness or skill levels to recreate together in parallel play.

Specific designed uses, such as mountain biking and cross-country skiing, can benefit from short, concentrated loops within a confined “park” area. Additionally, higher use can be accommodated using loops without placing greater impact in back-country areas or wilderness zones. Where appropriate, construction of connecting links with existing trails or connecting other loops should be incorporated in future trail design to create more options within the existing trail infrastructure.

## Pedestrian Facilities

Pedestrian facilities should be included initially during any subdivision or roadway improvement project and designed in such a way so that pedestrians’ needs are considered and prioritized above vehicular needs. Several ideas identified by the Girdwood Trails Committee to improve the safety for pedestrians crossing roads include:

- Constructing underpasses or overpasses at busy roads.
- Directing people to an underpass already existing at the highway bridge over Glacier Creek.
- Locating cross walks away from intersections where vehicles are turning.
- Using roundabouts to slow traffic.
- Installing four-way stop signs at busy intersections.
- Installing push-button stop or warning lights.

## CHAPTER 6

# Trail Management Objectives



The Trail Management Objective (TMO) form is a method used by the US Forest Service to describe the planned status and maintenance of each trail. The TMOs synthesize and document, in one form, the management intent for the trail while providing basic reference information for any subsequent trail planning, management, condition surveys and reporting. The Girdwood Trails Committee has adopted the Trail Management Objective system. TMOs are approved by Girdwood Trails Committee to ensure that the objectives for the trail are consistent with this plan and future land management actions. Proposals for new trails will need to include the trail's TMO in the initial presentation to the Trails Committee.

A TMO is also required for each trail or trail segment as a prerequisite for completing trail condition assessment surveys and subsequent prescriptions for work needed to meet standards. Before trail maintenance and repair strategies can be fully developed for a trail, an assessment of the trail and its condition will be made based on the TMOs developed for that trail. Trail assessments will offer a snapshot of existing conditions and what is needed to meet the sustainable standards described in the TMO. Corrective measures and rehabilitation efforts to address identified shortfalls shall use the sustainable trail concepts and best management practices described in Chapter 4.

Information derived from assessments will also aid in the determination how a trail may be best managed given its current condition. Some routes and trails will not be managed. These may be trails where managed use may be inconsistent with land ownership, the ability to adhere to sustainable management practices is not possible, or their alignment needs to be ignored. Conversely, they may be trails that are left alone to preserve a level of challenge or trail user experience. These trails might become managed trails at a later date.

Appendix 2 is a comprehensive list of existing Girdwood trails. The trail listings are written to include each trail's TMO.

TMO forms can be obtained from Girdwood Parks and Recreation office.

# Components of a TMO Form

**Trail Management Objectives**  
MOA Park District: \_\_\_\_\_

Trail Name: \_\_\_\_\_ Trail Number: \_\_\_\_\_

Trail Beginning Terminus: \_\_\_\_\_ Beg. Milepost: \_\_\_\_\_  
Trail Ending Terminus: \_\_\_\_\_ End. Milepost: \_\_\_\_\_  
Trail Inventory Length: \_\_\_\_\_ Miles Trail Mileage Source:  Wheel  GPS  Map  Unknown

**TMO Trail Section**

Section Beg. Terminus: \_\_\_\_\_ Beg. Milepost: \_\_\_\_\_  
Section End. Terminus: \_\_\_\_\_ End. Milepost: \_\_\_\_\_

**Designed Use Objectives**

**Trail Type** (Check one)  
 Standard Terra Trail  
 Snow Trail  
 Water Trail

**Trail Class** (Check one)  
 1 (Primitive/Undeveloped)  
 2 (Simple/Minor Development)  
 3 (Developed/Improved)  
 4 (Highly Developed)  
 5 (Fully Developed)

**Difficulty Rating** (For designed use of mountain bike and cross-country ski only. Check one.)  
 Easiest (white circle)  
 Easy (green circle)  
 Intermediate (blue square)  
 Difficult (black diamond)  
 Most Difficult (dbl. diamond)

**Elev. Gain / Loss**  
 Gain (ft): \_\_\_\_\_  
 Loss (ft): \_\_\_\_\_

**Level of Use**  
 Low (0-10 / day)  
 Moderate (10-100 / day)  
 High (100+ / day)  
 Jet  Packed  Quarter

**Designed Use** (Check one)  
 Hiker / Pedestrian  
 Mountain Bike  
 Bicycle  
 Cross-Country Ski (Skate)  
 Cross-Country Ski (Classic)  
 Skijoring  
 Dog Sledding

**Design Parameters** (Fill in all that apply)  
 Tread Width (inches) \_\_\_\_\_  
 Target Grade (%) \_\_\_\_\_  
 Short Pitch Maximum (%) (up to 200' lengths) \_\_\_\_\_  
 Target Cross-Slope (%) \_\_\_\_\_  
 Clearing Width (feet) \_\_\_\_\_  
 Clearing Height (feet) \_\_\_\_\_  
 Switchback Radius (feet) \_\_\_\_\_

**Target Frequency Per Year** (Fill in all that apply)  
 Trail Opening \_\_\_\_\_  
 Tread Repair \_\_\_\_\_  
 Drainage Cleanout \_\_\_\_\_  
 Logging Out \_\_\_\_\_  
 Brushing \_\_\_\_\_  
 Snow Trail Grooming \_\_\_\_\_  
 Condition Survey \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

**Trail Management Objectives**  
Trail Name: \_\_\_\_\_ Trail Number: \_\_\_\_\_

**Travel Management Strategies**

**Managed Use** (Fill in all that apply)  

	From Date (mm/dd)	To Date (mm/dd)
<input type="checkbox"/> Hiker / Pedestrian		
<input type="checkbox"/> Mountain Bike		
<input type="checkbox"/> Bicycle		
<input type="checkbox"/> Cross-Country Ski (Skate)		
<input type="checkbox"/> Cross-Country Ski (Classic)		
<input type="checkbox"/> Skijoring		
<input type="checkbox"/> Dog Sledding		
<input type="checkbox"/> _____		
<input type="checkbox"/> _____		
<input type="checkbox"/> _____		

**Prohibited Use** (Check if applicable)  
 All Motorized Use  

	From Date (mm/dd)	To Date (mm/dd)
<input type="checkbox"/> Hiker / Pedestrian		
<input type="checkbox"/> Mountain Bike		
<input type="checkbox"/> Road Bike		
<input type="checkbox"/> Cross-Country Ski (Skate)		
<input type="checkbox"/> Cross-Country Ski (Classic)		
<input type="checkbox"/> Skijoring		
<input type="checkbox"/> Dog Sledding		
<input type="checkbox"/> _____		
<input type="checkbox"/> _____		
<input type="checkbox"/> _____		

**Other Use** (Optional: Check any that apply)  

	Accept	Discourage	Eliminate
<input type="checkbox"/> Hiker / Pedestrian			
<input type="checkbox"/> Mountain Bike			
<input type="checkbox"/> Road Bike			
<input type="checkbox"/> Cross-Country Ski (Skate)			
<input type="checkbox"/> Cross-Country Ski (Classic)			
<input type="checkbox"/> Snowshoe			
<input type="checkbox"/> Skijoring			
<input type="checkbox"/> Dog Sledding			
<input type="checkbox"/> Wheelchair			
<input type="checkbox"/> _____			
<input type="checkbox"/> _____			
<input type="checkbox"/> _____			

**Special Considerations** (Check any that apply. Provide specifics and reference information below.)  
 Shared System (shared with other system road or trail)  
 Accessible per Current Agency Guidelines  
 Mechanized Tools or Equipment Prohibited  
 Threatened & Endangered/Sensitive Species Present  
 Heritage Resource Present  
 Easement: Existing \_\_\_\_\_ Needed \_\_\_\_\_  
 Existing Permit or Agreement: Trail-Specific \_\_\_\_\_ Area \_\_\_\_\_

**Remarks / Reference Information**  
 (Use continuation sheet if needed.)

Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Title: \_\_\_\_\_ Date: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

Sample Girdwood Trails Committee TMO Form

**Trail Types:** Standard/Terra Trail, Snow Trail, and Water Trails. Some trails are both standard and snow trails.

**Trail Class:** There are five Trail Classes, ranging from the least developed (Trail Class 1) to the most developed (Trail Class 5).

**Design Parameters:** Technical guidelines for the survey, design, construction, maintenance, and assessment of a trail based on its Designed Use and Trail Class. These parameters help trail developers by setting the design criteria to meet the trail’s intended use.

**Managed Use:** Modes of travel that are actively managed and appropriate on a trail, based on its design and management. Additional kinds of use may also be allowed, but the trail would not be specifically designed to accommodate them.

**Designed Use:** Only one Designed Use is identified as the design driver for a trail— that use which has the most limiting design requirements. The seven designed uses found on Girdwood trails are:

- a. Hiker/Pedestrian
- b. Mountain Bike
- c. Bicycle
- d. XC Ski (Skate)
- e. XC Ski (Classic/Diagonal)
- f. Skijoring
- g. Dog Sledding

We currently have no designated “water trails” or “non-motorized watercraft” as a designed use in the valley. However, Glacier Creek has become a popular pack-raft float and could be soon recognized as a water trail with a non-motorized watercraft for the designed use. Stand-up paddleboards (SUPs) are another type of watercraft that is becoming more popular locally. The valley has several floatable stretches of creeks where this designed use would be appropriate, and they may be written into the plan when we have the ability to manage these routes.

All pack & saddle activities (horses, mules, camelids) are excluded from all managed trails in the Girdwood Valley Trail System (GVTS). It is not possible at this juncture to provide a durable tread surface capable of handling livestock traffic.

Other designed trail uses not found in the Municipality of Anchorage, including Girdwood, are motorized uses such as ATVs, dirt bikes, snow machines, and one-wheels.

Within the Municipality of Anchorage, including Girdwood, low-speed electric bikes (e-bikes) cannot exceed 20 mph. They are allowed to operate in the same areas as human-powered bikes. A high-speed e-bike (exceeding 20 mph) is considered a motor vehicle and not allowed on Girdwood recreation pathways or sidewalks.

Incompatible/unauthorized uses on trails will be regulated by the managing entity. Girdwood Trails Committee will help bring these issues to the attention of the appropriate land manager.

## TMO Trail Class Matrix

Trail Attributes	Trail Class 1 Minimally Developed	Trail Class 2 Moderately Developed	Trail Class 3 Developed	Trail Class 4 Highly Developed	Trail Class 5 Fully Developed
<b>Tread &amp; Traffic Flow</b>	<ul style="list-style-type: none"> <li>Tread intermittent and often indistinct</li> <li>May require route finding</li> <li>Single lane with no allowances constructed for passing</li> <li>Predominantly native materials</li> </ul>	<ul style="list-style-type: none"> <li>Tread continuous and discernible, but narrow and rough</li> <li>Single lane with minor allowances constructed for passing</li> <li>Typically native materials</li> </ul>	<ul style="list-style-type: none"> <li>Tread continuous and obvious</li> <li>Single lane, with allowances constructed for passing where required by traffic volumes in areas with no reasonable passing opportunities available</li> <li>Native or imported materials</li> </ul>	<ul style="list-style-type: none"> <li>Tread wide and relatively smooth with few irregularities</li> <li>Single lane, with allowances constructed for passing where required by traffic volumes in areas with no reasonable passing opportunities available</li> <li>Double lane where traffic volumes are high and passing is frequent</li> <li>Native or imported materials</li> <li>May be hardened</li> </ul>	<ul style="list-style-type: none"> <li>Tread wide, firm, stable, and generally uniform</li> <li>Single lane, with frequent turnouts where traffic volumes are low to moderate</li> <li>Double lane where traffic volumes are moderate to high</li> <li>Commonly hardened with asphalt or other imported material</li> </ul>
<b>Obstacles</b>	<ul style="list-style-type: none"> <li>Obstacles common, naturally occurring, often substantial and intended to provide increased challenge</li> <li>Narrow passages; brush, steep grades, rocks and logs present</li> </ul>	<ul style="list-style-type: none"> <li>Obstacles may be common, substantial, and intended to provide increased challenge</li> <li>Blockages cleared to define route and protect resources</li> <li>Vegetation may encroach into trailway</li> </ul>	<ul style="list-style-type: none"> <li>Obstacles may be common, but not substantial or intended to provide challenge</li> <li>Vegetation cleared outside of trailway</li> </ul>	<ul style="list-style-type: none"> <li>Obstacles infrequent and insubstantial</li> <li>Vegetation cleared outside of trailway</li> </ul>	<ul style="list-style-type: none"> <li>Obstacles not present</li> <li>Grades typically &lt; 8%</li> </ul>
<b>Constructed Features &amp; Trail Elements</b>	<ul style="list-style-type: none"> <li>Structures minimal to non-existent</li> <li>Drainage typically accomplished without structures</li> <li>Natural fords</li> <li>Typically no bridges</li> </ul>	<ul style="list-style-type: none"> <li>Structures of limited size, scale, and quantity; typically constructed of native materials</li> <li>Structures adequate to protect trail infrastructure and resources</li> <li>Natural fords</li> <li>Bridges as needed for resource protection and appropriate access</li> </ul>	<ul style="list-style-type: none"> <li>Structures may be common and substantial; constructed of imported or native materials</li> <li>Natural or constructed fords</li> <li>Bridges as needed for resource protection and appropriate access</li> </ul>	<ul style="list-style-type: none"> <li>Structures frequent and substantial; typically constructed of imported materials</li> <li>Constructed or natural fords</li> <li>Bridges as needed for resource protection and user convenience</li> <li>Trailside amenities may be present</li> </ul>	<ul style="list-style-type: none"> <li>Structures frequent or continuous; typically constructed of imported materials</li> <li>May include bridges, boardwalks, curbs, handrails, trailside amenities, and similar features</li> </ul>
<b>Signs<sup>2</sup></b>	<ul style="list-style-type: none"> <li>Route identification signing limited to junctions</li> <li>Route markers present when trail location is not evident</li> <li>Regulatory and resource protection signing infrequent</li> <li>Destination signing, unless required, generally not present</li> <li>Information and interpretive signing generally not present</li> </ul>	<ul style="list-style-type: none"> <li>Route identification signing limited to junctions</li> <li>Route markers present when trail location is not evident</li> <li>Regulatory and resource protection signing infrequent</li> <li>Destination signing typically infrequent outside of wilderness; generally not present in wilderness</li> <li>Information and interpretive signing not common</li> </ul>	<ul style="list-style-type: none"> <li>Route identification signing at junctions and as needed for user reassurance</li> <li>Route markers as needed for user reassurance</li> <li>Regulatory and resource protection signing may be common</li> <li>Destination signing likely outside of wilderness; generally not present in wilderness</li> <li>Information and interpretive signs may be present outside of wilderness</li> </ul>	<ul style="list-style-type: none"> <li>Route identification signing at junctions and as needed for user reassurance</li> <li>Route markers as needed for user reassurance</li> <li>Regulatory and resource protection signing common</li> <li>Destination signing common outside of wilderness; generally not present in wilderness</li> <li>Information and interpretive signs may be common outside of wilderness</li> <li>Accessibility information likely displayed at trailhead</li> </ul>	<ul style="list-style-type: none"> <li>Route identification signing at junctions and for user reassurance</li> <li>Route markers as needed for user reassurance</li> <li>Regulatory and resource protection signing common</li> <li>Destination signing common</li> <li>Information and interpretive signs common</li> <li>Accessibility information likely displayed at trailhead</li> </ul>
<b>Typical Recreation Environments &amp; Experience<sup>3</sup></b>	<ul style="list-style-type: none"> <li>Natural, unmodified</li> <li>ROS: Typically Primitive to Roaded Natural</li> <li>WROS: Typically Primitive to Semi-Primitive</li> </ul>	<ul style="list-style-type: none"> <li>Natural, essentially unmodified</li> <li>ROS: Typically Primitive to Roaded Natural Typically</li> <li>WROS: Typically Primitive to Semi-Primitive</li> </ul>	<ul style="list-style-type: none"> <li>Natural, primarily unmodified</li> <li>ROS: Typically Primitive to Roaded Natural</li> <li>WROS: Typically Semi-Primitive to Transition</li> </ul>	<ul style="list-style-type: none"> <li>May be modified</li> <li>ROS: Typically Semi-Primitive to Rural Roaded Natural to Rural setting</li> <li>WROS: Typically Portal or Transition</li> </ul>	<ul style="list-style-type: none"> <li>May be highly modified</li> <li>Commonly associated with visitor centers or high-use recreation sites</li> <li>ROS: Typically Roaded Natural to Urban</li> <li>Generally not present in Wilderness</li> </ul>

Trail Class Matrix courtesy of the USDA.

## TMO Design Parameter Matrices

Designed Use HIKER/PEDESTRIAN		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
<b>Design Tread Width</b>	<b>Wilderness</b> (Single Lane)	0" – 12"	6" – 18"	12" – 24" Exception: may be 36" – 48" at steep side slopes	18" – 24" Exception: may be 36" – 48" at steep side slopes	Not applicable
	<b>Non-Wilderness</b> (Single Lane)	0" – 12"	6" – 18"	18" – 36"	24" – 60"	36" – 72"
		<b>Non-Wilderness</b> (Double Lane)	36"	36"	36" – 60"	48" – 72"
	<b>Structures</b> (Minimum Width)	18"	18"	18"	36"	36"
<b>Design Surface</b>	<b>Type</b>	Native, ungraded May be continuously rough	Native, limited grading May be continuously rough	Native with some onsite borrow or imported material where needed for stabilization, occasional grading Intermittently rough	Native with improved sections of borrow or imported material, routine grading Minor roughness	Likely imported material, routine grading Uniform, firm, and stable
	<b>Protrusions</b>	≤ 24" Likely common and continuous	≤ 6" May be common and continuous	≤ 3" May be common, not continuous	≤ 3" Uncommon, not continuous	No protrusions
	<b>Obstacles</b> (Maximum Height)	24"	14"	10"	8"	No obstacles
<b>Design Grade</b>	<b>Target Grade</b>	5% – 25%	5% – 18%	3% – 12%	2% – 10%	2% – 5%
	<b>Short Pitch Maximum</b>	40%	35%	25%	15%	5% FSTAG: 5% – 12% <sup>2</sup>
	<b>Maximum Pitch Density</b>	20% – 40% of trail	20% – 30% of trail	10% – 20% of trail	5% – 20% of trail	0% – 5% of trail
<b>Design Cross Slope</b>	<b>Target Cross Slope</b>	Natural side slope	5% – 20%	5% – 10%	3% – 7%	2% – 3% (or crowned)
	<b>Maximum Cross Slope</b>	Natural side slope	25%	15%	10%	3%
<b>Design Clearing</b>	<b>Height</b>	6'	6' – 7'	7' – 8'	8' – 10'	8' – 10'
	<b>Width</b>	≥ 24" Some vegetation may encroach into clearing area	24" – 48" Some light vegetation may encroach into clearing area	36" – 60"	48" – 72"	60" – 72"
		<b>Shoulder Clearance</b>	3" – 6"	6" – 12"	12" – 18"	12" – 18"
<b>Design Turn</b>	<b>Radius</b>	No minimum	2' – 3'	3' – 6'	4' – 8'	6' – 8'

Design Parameters courtesy of the USDA.

Designed Use BICYCLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	Single Lane	6" – 12"	12" – 24"	18" – 36"	24" – 48"	36" – 60"
	Double Lane	36" – 48"	36" – 48"	36" – 48"	48" – 84"	72" – 120"
	Structures (Minimum Width)	18"	18"	36"	48"	60"
Design Surface	Type	Native, un-graded  May be continuously rough  Sections of soft or unstable tread on grades < 5% may be common and continuous	Native, limited grading  May be continuously rough  Sections of soft or unstable tread on grades < 5% may be common	Native with some onsite borrow or imported material where needed for stabilization, occasional grading  Intermittently rough  Sections of soft or unstable tread on grades < 5% may be present, but not common	Native, routine grading with improved sections of borrow or imported materials  Stable with minor roughness	Likely imported material, routine grading  Uniform, firm, and stable
	Protrusions	≤ 24"  Likely common and continuous	≤ 6"  May be common and continuous	≤ 3"  May be common, not continuous	≤ 3"  Uncommon, not continuous	No protrusions
	Obstacles (Maximum Height)	24"	12"	10"	8"	No obstacles
Design Grade	Target Grade	5% – 20%	5% – 12%	3% – 10%	2% – 8%	2% – 5%
	Short Pitch Maximum	30%  50% on downhill-only segments	25%  35% on downhill-only segments	15%	10%	8%
	Maximum Pitch Density	20% – 30% of trail	10% – 30% of trail	10% – 20% of trail	5% – 10% of trail	0% – 5% of trail
Design Cross Slope	Target Cross Slope	5% – 10%	5% – 8%	3% – 8%	3% – 5%	2% – 3%
	Maximum Cross Slope	10%	10%	8%	5%	5%
Design Clearing	Height	6'	6' – 8'	8'	8' - 9'	8' - 9'
	Width	24" – 36"  Some vegetation may encroach into clearing area	36" – 48"  Some light vegetation may encroach into clearing area	60" – 72"	72" – 96"	72" – 96"
	Shoulder Clearance	0' – 12"	6" – 12"	6" – 12"	6" – 18"	12" – 18"
Design Turn	Radius	2' – 3'	3' – 6'	4' – 8'	8' – 10'	8' - 12'

Design Parameters courtesy of the USDA.

**Mountain Bike Design Parameters:** The following are design parameters authored by the Girdwood Mountain Bike Alliance, specifically for Girdwood mountain bike trails. These parameters are based on the US Forest Service Bicycle Designed Use Parameters, shown on the previous page.

**Machine-built, single-use, one-way, downhill bike trail:**

The design parameters of this trail are most similar to a Class 4/5 bike trail listed above.

**Design Tread Width:** 48” – 72”

**Design Surface:** Firm, smooth, hardened tread, well drained, bike features

**Design Grade:** 5%-8% avg.; increased grades over short distances

**Design Cross-slope:** 3%-5%; increased cross-slopes for bike features

**Design Clearing:** 12’ wide; 8’-10’ feet high

**Design Turn Radius:** 12’ - 18’

**Hand-built, one-way, single-use, downhill bike trail:**

The design parameters of this trail are most similar to a Class 2/3 bike trail listed above.

**Design Tread Width:** 18” – 48”

**Design Surface:** Native surfaces and obstacles, natural bike features, well drained

**Design Grade:** 8%-10% avg.; increased grades with more difficult trail rating

**Design Cross-slope:** 3%-5%; increased cross-slopes due to natural terrain

**Design Clearing:** 12’ wide; 8’-10’ feet high

**Design Turn Radius:** 6’ – 12’

**Machine-built, two-way, multi-use trail:**

The design parameters of this trail are most similar to a Class 4/5, two-way bike trail listed above. Even though this is multi-use trail, the bike user group will set the design parameters.

**Design Tread Width:** 72” – 96”

**Design Surface:** Firm, smooth, hardened, well drained

**Design Grade:** 5%-8% avg; 10-12% max grade over short sections, when needed

**Design Cross-slope:** 3%-5%; increased cross-slopes for bike specific features

**Design Clearing:** 14’ wide; 8’-10’ feet high

**Design Turn Radius:** 12’ – 18’

Design Parameters courtesy of the Girdwood Bike Park Master Plan Proposal, Land Use Committee February 2019 meeting packet.

Designed Use <b>CROSS-COUNTRY SKI</b>		<b>Trail Class 1</b>	<b>Trail Class 2</b>	<b>Trail Class 3</b>	<b>Trail Class 4</b>	<b>Trail Class 5</b>
<b>Design Groomed Width</b>	<b>Single Lane</b>	Typically not designed or actively managed for cross-country skiing	2' – 4'	6' – 8'	8' – 10"	Typically not designed or actively managed for cross-country skiing
	<b>Double Lane</b>		Typically not groomed	(or width of grooming equipment)	(or width of grooming equipment)	
	<b>Structures (Minimum Width)</b>		6' – 8'	8' – 12'	12' – 16'	
<b>Design Grooming and Surface</b>	<b>Type</b>		Generally no machine grooming	May receive occasional machine grooming for snow compaction and track setting	Regular machine grooming for snow compaction and track setting	
	<b>Protrusions</b>		No protrusions	No protrusions	No protrusions	
	<b>Obstacles (Maximum Height)</b>		12" Uncommon	8" Uncommon (no obstacles if machine groomed)	No obstacles	
	<b>Target Grade</b>		5% – 15%	2% – 10%	0% – 8%	
<b>Design Grade</b>	<b>Short Pitch Maximum</b>		25%	20%	12%	
	<b>Maximum Pitch Density</b>		10% – 20% of trail	5% – 15% of trail	0% – 10% of trail	
<b>Design Cross Slope</b>	<b>Target Cross Slope</b>		0% – 10%	0% – 5%	0% – 5%	
	<b>Maximum Cross Slope (For up to 50')</b>	20%	15%	10%		
<b>Design Clearing</b>	<b>Height (Above normal maximum snow level)</b>	6' – 8'	8' (or height of grooming machinery)	8' – 10'		
	<b>Width</b>	24" – 60" Light vegetation may encroach into clearing area	72" – 20" Light vegetation may encroach into clearing area	96" – 168" Widen clearing at turns or if increased sight distance needed		
	<b>Shoulder Clearance</b>	0" – 6"	0" - 12"	0" – 24"		
<b>Design Turn</b>	<b>Radius</b>	8' – 10'	15' – 20' (or to accommodate grooming equipment)	≥ 25'		

Design Parameters courtesy of the USDA.

Designed Use		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
<b>Nordic / Skate Ski: Snow Trail</b>						
Design Groomed Width	Single Lane	Typically not designed or actively managed for skate skiing, although use may be allowed	Typically not designed or actively managed for skate skiing, although use may be allowed	6' – 8'	8' – 12'	12'-16'
	Double Lane <sup>1</sup>			Or width of grooming equipment	Or width of grooming equipment	Or width of grooming equipment
	Structures (Minimum Width)			8' – 12'	12' – 16'	14'-24'
Design Grooming and Surface	Type			36"	36"	36"
	Protrusions			May receive occasional machine grooming for snow compaction and track setting	Smooth compaction using implements designed for creating skate lanes.	Smooth compaction using implements designed for creating skate lanes.
	Obstacles (Maximum Height)			No protrusions	No protrusions	No protrusions
				8"	No obstacles	No obstacles
Design Grade	Target Grade			Uncommon (no obstacles if machine groomed)		
	Short Pitch Maximum			2% – 10%	0% – 8%	0% – 6%
	Maximum Pitch Density			20%	20%	20%
Design Cross Slope	Target Cross Slope	5% – 15% of trail	5%- 10% of trail	5-8% of trail		
	Maximum Cross Slope (For up to 50')	0% – 5%	0% – 5%	0% – 5%		
Design Clearing	Height (Above normal maximum snow level)	15%	12%	10%		
	Width	8'	8' – 10'	At least 10'		
	Shoulder Clearance	Or height of grooming equipment	Or height of grooming equipment	Or height of grooming equipment		
Design Turn	Radius	6' – 14'	8' – 18'	8' – 26'		
		Light vegetation may encroach into clearing area	Widen clearing at turns or if increased sight distance needed	Widen clearing at turns or if increased sight distance needed		
		0" - 12"	0" – 24"	0" – 24"		
		15' – 20'	≥ 25'	25' - 30'		
		Or to accommodate grooming equipment	Or to accommodate grooming equipment	Or to accommodate grooming equipment		

Chugach State Park Trail Management Handbook, 2015

Designed Use <b>Dog Sled: Snow Trail</b>		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Groomed Width*	Single Lane	N/A not designed or managed for dog sleds as primary user.	3' - 4'. If groomed, width of grooming equipment.	6' - 8' (or minimum width of grooming equipment).	8' - 10', but typically managed to accommodate two-way passage.	N/A not designed or managed for dog sleds as primary user.
	Double Lane		Typically not designed for two-lane travel. Employ 6'-8' passing areas in steeper sections.	>8' (or minimum width of grooming equipment) and/or accommodate with passing areas 8'-12' wide.	12'-14'	
Design Surface	Type		Coarse compaction. Occasional or no grooming (may be ski-packed). Snowmobile packing is sufficient. Track layer is optional.	Groomed or compacted using implements and/or tracklayer when packed surface is snow-covered, drifted, melted, or skied out.	Well-groomed with tiller and/or other implements. Groomed frequently, and when groomed surface becomes degraded or buried.	
	Obstacles (Max. Height) Caused by use, lack of grooming, melt or surface/subsurface protrusions)		Dips, bumps, or ruts to 12" common and may be tightly spaced. Surface obstacles may occasionally require off-trail bypass.	Generally smooth, dips bumps, or ruts to 8" uncommon and widely spaced. Surface obstructions not present.	Consistently smooth. Small, rolling bumps, dips and ruts. Surface obstructions not present.	
Design Grade	Target Grade (> 90% of trail)		< 15%	0% - 10%	0% - 8%	
	Short Pitch Maximum (Up to 200' lengths)		25%	20%	12%	
	Maximum Pitch Density		< 10% of trail	< 5% of trail	< 5% of trail	
Design Cross Slope	Target Cross Slope		< 10%	< 5%	< 5%	
	Maximum Cross Slope		15%	10%	5%	
Design Clearing	Height (Above normal maximum snow level)		6'-8' or height of grooming machinery, if used.	> 8' or height of grooming machinery	10'	
	Width	4'-6' (or minimum width of grooming equipment, if larger). Light vegetation may encroach into clearing area.	>1' outside of groomed edge. Light vegetation may encroach slightly into clearing area.	>2' outside of groomed edge. Widen clearing at turns or if increased sight distance is needed.		
Design Turns	Radius (Use climbing turn versus switchbacks)	8'-10' if Cat-groomed. OR; minimum based on turning limits of grooming machine.	15' - 20' (Provide sufficient radius for grooming equipment).	> 25'		

Chugach State Park Trail Management Plan, 2009

Designed Use <b>Skijoring</b>		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Groomed Width		Typically not designed or actively managed for skate skiing, although use may be allowed	Typically not designed or actively managed for skate skiing, although use may be allowed	8' - 14' May be wider to accommodate width of grooming equipment.	12' - 18' May be wider to accommodate width of grooming equipment.	16' - 24'
Design Grooming and Surface	Type			May receive occasional machine grooming for snow compaction and track setting.	Smooth compaction using implements designed for creating skate lanes.	Smooth compaction using implements designed for creating skate lanes.
	Protrusions Obstacles (Maximum Height)			No protrusions	No protrusions	No protrusions
				8" Uncommon (no obstacles if machine groomed)	No obstacles	No obstacles
Design Grade	Target Grade			<10%	<8%	6-8%
	Short Pitch Maximum			<20%	15%	12%
	Maximum Pitch Density			<10% of trail	<5% of trail	<5% of trail overall; up to 8% for short stretches (50' max.)
Design Cross Slope	Target Cross Slope			<5%	<5%	<5%
	Maximum Cross Slope (For up to 50')			15%	12% Minimum cross-slope (crowned or one side) should be 2% to promote drainage.	8% Minimum cross-slope (crowned or one side) should be 2% to promote drainage.
Design Clearing	Height (Above normal maximum snow level)			8' Or height of grooming equipment.	8' - 10' from top of anticipated snowpack or height of grooming equipment.	At least 10' from top of anticipated snowpack or height of grooming equipment.
	Width	>1' outside groomed edge.	Minimum of 1' outside groomed edge.	Minimum 2' outside groomed edge.		
	Shoulder Clearance	0" - 12"	0" - 24"	0" - 24"		
Design Turn	Radius	50' or the minimum needed to accommodate grooming equipment.	75' or the minimum needed to accommodate grooming equipment.	75' or the minimum needed to accommodate grooming equipment.		

Nancy Lakes State Recreation Area Management Plan, Appendix C, 2013

# APPENDIX 1

## Trail Maps



## GIRDWOOD SUMMER TRAILS

All listed trails are managed and non-motorized use only; mileage is one way.  
Trails shown on the map that are not listed here may be indistinct and hard to find.  
Be alert as you hike and bike--bears and moose love our valley too!

**Abe's Trail** (1.5 miles) Trail begins at junction with Beaver Pond Trail 0.5 miles from Beaver Pond Trailhead on Crow Creek Road. Rises through the forest to tree line.

**Alyeska Multi-Use Pathway** (4 miles) Paved path from Hotel Alyeska to Seward Hwy. Paved trail spur from Hightower to school. Connects to Girdwood-to-Indian Bike Path near Alaska Railroad depot.

**Alyeska Resort Hiking and Biking Trails** Trails built and maintained by Alyeska Resort. See [www.alyeskaresort.com](http://www.alyeskaresort.com) for map and details.

**Beaver Pond Trail** (2.5 miles) Trailhead is located on Crow Creek Road. May also be accessed from the Girdwood-to-Indian Bike Path; watch for sign.

**California Creek Trail** (0.75 mile) Trail follows creek through old growth forest. Use Beaver Pond Trailhead on Crow Creek Road and keep right.

**Girdwood-to-Indian Bike Path** (13.3 miles) Paved, multi-use path parallels Seward Hwy in Chugach State Park. Includes views of Turnagain Arm, information stations, benches, and rest stops. Connects to Alyeska Multiuse Pathway uphill from Alaska Railroad depot.

**Iditarod National Historical Trail** (6 miles) Girdwood valley portion of this famous trail follows Glacier Creek to Winner Creek area. Watch for Iditarod trail markers. In the upper valley, trail crosses Crow Creek Road several times and a spur leads to hand tram.

**Mountain Bike Flow Trails:** Girdwood Mountain Bike Alliance is building flow trails within the Multi-Use Nordic Loop. More info at [www.bikegirdwood.org](http://www.bikegirdwood.org)

**Multi-Use Nordic Loop** (5K) Multi-use trail for biking and walking. Access at end of Arlberg Ave. Expect construction during summer and fall 2011. More information at [www.skigirdwood.org](http://www.skigirdwood.org).

**Winner Creek Trail** (3 miles) An access trail to the Iditarod, this Forest Service trail leads to the Winner Creek Gorge. The first 0.7 mile, starting from behind the tram building at Hotel Alyeska, is a highly developed boardwalk trail. Continue 1.5 miles to the Winner Creek Gorge bridge, another 0.2 miles to a hand tram across Glacier Creek, and another 1 mile to the Winner Gorge Trailhead at MP 2.9 Crow Creek Rd. Check trailhead signs for hand tram status.

**Upper Winner Creek Trail** (9 miles) Beautiful, but less developed, Forest Service trail over Berry Pass, ending at bridge across Rosehip Creek. Start on Winner Creek Trail; follow signs to Upper Winner Creek. This trail crosses large avalanche run-outs and snowpack may be present throughout the summer, especially at higher elevations.

**Upper Virgin Creek Trail** (.2 mile) Trail begins at the end of Timberline Road. Short hike to Virgin Creek Falls. Very limited parking at trailhead, please be respectful of private land when parking and using this trail.

**Winner Creek Extension Trail** (0.6 mile) Connector trail to Winner Creek Trailhead. Access is off Verbier Way. Park at Moose Meadow parking lot, walk toward Hotel Alyeska 0.1 mile, then cross street at crosswalk to Verbier Way.

Map produced by Girdwood Trails Committee

[www.muni.org/Departments/parks/Pages/GWTrailsCommittee.aspx](http://www.muni.org/Departments/parks/Pages/GWTrailsCommittee.aspx)

Donations may be made to Girdwood Trails Committee in care of

Girdwood, Inc. PO Box 1102, Girdwood, AK 99587.

Data courtesy of National Park Service's River, Trails, and Conservation Program



# Girdwood Winter Trail Map

## Legend

- Groomed Nordic Trails
- Ungroomed Nordic Trails
- Snowcat Trail
- Paved Pathway
- Indistinct Route
- P Parking
- Main Roads
- Railroad
- Nat'l F/State Pk Bdry

1 mile

\*Map Updated May 2011



## GIRDWOOD WINTER TRAILS

All trails are non-motorized only. Listed mileage is one way.  
Trails shown on the winter map that are not listed here may be indistinct and hard to find. Check <http://www.cnfaic.org/index.php> for up-to-date avalanche information.

**Alyeska Multi-Use Pathway** (4 miles) Paved, lighted path from Hotel Alyeska to Seward Highway.

**Beaver Pond Trail** (2.75 miles) Trail begins at Beaver Pond Trailhead. Beware of avalanche danger; trail may be closed for avalanche mitigation work on the Seward Highway by the Department of Transportation.

**Girdwood-to-Indian Bike Path** (13 miles) Most of the trail is closed in winter due to avalanche danger.

**Iditarod National Historical Trail** (6 miles) Girdwood valley portion of this famous trail follows Glacier Creek to Winner Creek area. Watch for Iditarod trail markers. In the upper valley, trail crosses Crow Creek Rd. several times and a spur leads to hand tram.

**Moose Meadow Trail** (3K) Groomed, multi-use trail that connects to wider trail system. Access from parking area at Moose Meadow Trailhead.

**Nordic Loop** (5K) Winter Nordic ski trail. Parking and access at Moose Meadow parking lot. Connects with the winter multi-use trails and Snowcat Trail.

**Snowcat Trail** (4 miles) Trail constructed for commercial snowcat ski operation. Crosses Winner Creek 1/2 mile south of Winner Creek Gorge via a bridge and climbs above tree line. Beware of commercial traffic.

**Stumpy's Winter Trail** (2.25 miles) Trail meanders through series of eight meadows to Winner Creek Gorge. Also connects to Snowcat Trail and Nordic Loop. If parking at Moose Meadow Trailhead, ski to northwest side of Moose Meadow and watch for groomed spur that leads downhill. Alternatively, park at Arlberg parking lot and ski down into the meadows to join Stumpy's Winter Trail.

**Winner Creek Trail** (2.3 miles) An access trail to the Iditarod, this Forest Service trail leads to the Winner Creek Gorge. The first 0.7 mile starts from behind the tram building at Hotel Alyeska. Continue 1.5 miles to the Winner Creek Gorge bridge, another 0.2 miles to a hand tram across Glacier Creek, and another 1 mile to the Winner Gorge Trailhead at MP 2.9 Crow Creek Road. Check trailhead signs for hand tram status.

Map produced by Girdwood Trails Committee  
[www.muni.org/Departments/parks/Pages/GWTrailsCommittee.aspx](http://www.muni.org/Departments/parks/Pages/GWTrailsCommittee.aspx)  
Donations may be made to Girdwood Trails Committee in care of  
Girdwood, Inc., PO Box 1102, Girdwood, AK 99587  
Data courtesy of National Park Service's River, Trails, and Conservation Program



## APPENDIX 2

# List and Descriptions of Girdwood Trails



## Girdwood's Trails: Listed by Trail Class\*, Designed Use, and Easement Status

Class 1 Trails	Designed Use	Easement	Page #
California Creek Trail	Hike	Portions	52
Eagle Glacier Trail	Hike	No	55
Joe Danich Trail Upper/Lower	Hike	No	59
Max's Mountain Trail	Hike	No	60
Ragged Top Trail	Hike	No	65
Snowcat Trail (summer use)	Hike	No	68
Stumpy's Summer Trail	Hike	No	69
Virgin Creek Trail Lower	Hike	No	73
Wagon Trail	Hike	No	75

Class 2 Trails	Designed Use	Easement	Page #
Abe's Trail	Hike	Yes	46
Crow Pass Trail	Hike	Yes	53
North Face Trail	Hike	Private Land	64
Stumpy's Winter Trail	Ski**	No	70
Winner Creek Trail (winter use)	Ski**	Yes	77
Winner Creek Trail Upper	Hike	Yes	79

\* Many trails are more than one class. The designation in this chart is for the trail's primary class.

\*\* All multi-use trails in Girdwood are designated for snowshoeing.

<b>Class 3 Trails</b>	<b>Designed Use</b>	<b>Easement</b>	<b>Page #</b>
Athabaskan Environmental Physics Trail	Hike	No	49
Beaver Pond Trail	Bike	Yes	50
Deb's Way	Hike	No	54
Earnagain	Bike	Yes	56
Iditarod Trail from Alyeska Hwy to Crow Pass	Hike	No	58
Mt. Alyeska Biking Trails	Bike	Private Land	62
Shortcut from Bike Path to Davos Road	Hike	No	66
Small House	Bike	Yes	67
Tiny Creek Trail	Hike	No	71
Two Cents	Bike	Yes	72
Virgin Creek Falls Trail Upper	Hike	Portions	74
Winner Creek Extension Trail	Hike	Yes	76
Winner Creek Trail (Zug's Slide to Crow Cr Rd) (summer)	Hike	Yes	77

<b>Class 4 Trails</b>	<b>Designed Use</b>	<b>Easement</b>	<b>Page #</b>
Iditarod Trail from School to Forest Service Office	Hike	Portions	58
Moose Meadows Multi-Use Trails	Ski**	No	61
Nordic 5K Loop	Ski only	Yes	63
Snow Cat Trail (winter use)	Ski**	No	68
Winner Creek Trail (Hotel to Zug's Slide) (summer use)	Hike	Yes	77

<b>Class 5 Trails</b>	<b>Designed Use</b>	<b>Easement</b>	<b>Page #</b>
Alyeska Highway Pedestrian Safety Corridor	Bike	Yes	47
Arlberg Bike Path	Bike	Yes	48
Bird-to-Gird Bike Path	Bike	Yes	51
Hightower/Egloff Multi-Use Trail	Bike	Yes	57

\*\* All multi-use trails in Girdwood are designated for snowshoeing.

## ABE'S TRAIL

Abe's Trail is accessed .5 mile along the Beaver Pond Trail from the Crow Creek Road Bridge trailhead. A sign post on the west side of the Beaver Pond Trail directs hikers to Abe's Trail. The trail climbs in the heavily wooded hemlock forest, crossing a couple of creek drainages. The overall pitch of the trail is not too steep although there are some steeper sections before tree line. Girdwood Trails Committee's trail work ends before tree line. Once out of tree line, the trail becomes less distinct and has more drainage crossings. The trail can be followed farther up the valley traversing above California Creek. It is possible to connect with California Creek Trail to create a loop.

<b>Landowner:</b>	Heritage Land Bank, Chugach State Park
<b>Easement Status:</b>	Easement granted to GBOS for MOA property, 2012-037296-0 Land Use Permit #32093 (2018-2022)
<b>Trail Start:</b>	Off of Beaver Pond Trail
<b>Trail End:</b>	Tree line or beyond
<b>Trail Length:</b>	1 mile to end of MOA managed land. Additional .5 miles to tree line on well defined trail.
<b>Designed Use Objectives:</b>	Trail type: terra Trail class: 2 Designed use: hiking, summer only
<b>Design Parameters:</b>	Tread width: 6"- 18" Clearing width: 24"- 48" Target grade: 5%-18% Short pitch max: 35% Cross slope: 5%-20%
<b>Trail Management:</b>	Managed use: hiking Prohibited use: all motorized use
<b>Maintenance Frequency:</b>	Tread repair: Brushing: Tree Removal: Condition survey:

### Special Considerations/Remarks:

- After one mile, trail is no longer on MOA land.
- GTC is seeking Interagency Land Management Agreement to improve upper part of the trail.
- This trail also accesses a route to Penguin Ridge via state land.

# ALYESKA HIGHWAY PEDESTRIAN SAFETY CORRIDOR

The Alyeska Highway Bike Path is lighted and paved and is the primary connector for pedestrians and cyclists for North/South travel extending from the Girdwood Station Mall at the mouth of the valley to the “T” intersection with Arlberg Avenue. Other bike paths connect at Bird/Gird trail, Hightower/Egloff intersection, and at Arlberg intersection.

**Landowner:** MOA Girdwood Service Area

**Easement Status:** Yes, easement in place

**Trail Start:** Girdwood Station Mall

**Trail End:** T intersection with Arlberg Avenue and Arlberg bike path

**Trail Length:** 3 miles

**Designed Use Objectives:** Trail type: terra  
Trail class: 5  
Designed use: biking

**Design Parameters:** Tread width: 6’ - 8’  
Clearing width: 6’ - 10’  
Target grade: 2%-5%  
Short pitch max: 8%  
Cross slope: 2%-3%

**Trail Management:** Managed use: biking, pedestrian  
Prohibited use: all motorized use, pack & saddle

**Maintenance Frequency:** Tread repair:  
Brushing:  
Tree Removal:  
Condition survey:

## Special Considerations/Remarks:

- This route is the first pedestrian safety corridor in the state. It was created in response to several fatal pedestrians/vehicle accidents and became the model for many other communities.
- The path was expanded and repaired in 2016 after many years of effort by the community to have this vital safe transportation corridor safe for all users.

## ARLBERG BIKE PATH

Arlberg Road Bike Path trail is lighted and paved access from the “T” intersection of Alyeska Highway and Arlberg Avenue to the Hotel Alyeska. Construction of an extension of Arlberg Avenue in 2016 included continuation of this path to the end of the new road construction at the 5K Nordic Loop.

The trail runs along the west side of Arlberg to the Moose Meadows multi-use trails. The wooded edge of Moose Meadows serves as a scenic border. The trail through the greenbelt provides bicycling, walking and cross-country skiing opportunities. This trail gives trail users a panoramic view of the north and west sides of Girdwood Valley.

This trail also connects with the Winner Creek Trail, Winner Creek Extension Trail off Verbier Way, and provides access to numerous trails in Moose Meadows in winter.

<b>Landowner:</b>	Heritage Land Bank
<b>Easement Status:</b>	Yes, easement in place
<b>Trail Start:</b>	Intersection of Alyeska Highway and Arlberg Avenue
<b>Trail End:</b>	At the end of the Arlberg road at the Arlberg parking lot
<b>Trail Length:</b>	1.5 miles
<b>Designed Use Objectives:</b>	Trail type: terra Trail class: 5 Designed use: biking
<b>Design Parameters:</b>	Tread width: 6' - 8' Clearing width: 6' - 10' Target grade: 2%-5% Short pitch max: 8% Cross slope: 2%-3%
<b>Trail Management:</b>	Managed use: biking, pedestrian Prohibited use: all motorized use, pack & saddle
<b>Maintenance Frequency:</b>	Tread repair: Brushing: Tree Removal: Condition survey:

### Special Considerations/Remarks:

- Parking area at the end of the path provides limited trailhead parking for Nordic 5K Loop and other trail access at this end of the valley.

# ATHABASCAN ENVIRONMENTAL PHYSICS TRAIL

The Athabaskan Environmental Physics Trail accesses the forest behind the Girdwood K-8 School from the NW corner of the bus loop. A 90' boardwalk bridge spans the beaver pond. From the bridge crossing, the trail winds through the forest behind the school, crossing small bridges and accessing interpretive signs describing features of the forest and trail.

<b>Landowner:</b>	Anchorage School District
<b>Easement Status:</b>	No easement in place
<b>Trail Start:</b>	NW Corner of Bus loop at bridge crossing beaver pond
<b>Trail End:</b>	NE Corner of school yard
<b>Trail Length:</b>	.25 miles
<b>Designed Use Objectives:</b>	Trail type: terra Trail class: 3 Designed use: hiking
<b>Design Parameters:</b>	Tread width: 12"- 24" Clearing width: 3' - 5' Target grade: 3%-12% Short pitch max: 25% Cross slope: 5%-10%
<b>Trail Management:</b>	Managed use: hiking Prohibited use: all motorized use, pack & saddle Other use: interpretive education
<b>Maintenance Frequency:</b>	Tread repair: Brushing: Tree Removal: Condition survey:

## Special Considerations/Remarks:

- Original work on trail and signs was completed by volunteers and students with assistance from a Toyota grant and local fundraising.
- The trail was bisected by a water line and access road in 2013.
- Interpretive signs are in need of restoration.
- For Girdwood Trails Committee to work on the trail, a Memorandum of Agreement or Memorandum of Understanding between Girdwood Trails (MOA) and the Anchorage School District is needed.

# BEAVER POND TRAIL

This trail begins at the California Creek Bridge on Crow Creek Road and runs along the base of the mountains on the west side of Girdwood Valley, ending at a south trailhead. This south trailhead comes out on the Bird-to-Gird Bike Path and is located behind a small power station, one mile from the Girdwood Railroad Depot.

Two miles from the north trailhead, the trail splits into two routes. The summer route, which heads uphill, avoids marsh and wetlands. The winter route, which leads downhill, avoids avalanche-prone areas and is preferred once the marsh has frozen.

Several connector trails join the route intermittently as it winds behind the homes in neighborhoods off Alyeska Highway. The Beaver Pond Trail can be connected with the Lower Iditarod Trail to make a loop around the lower Girdwood Valley.

- Landowner:** Heritage Land Bank, Chugach State Park
- Easement Status:** Easement granted to GBOS for HLB property, 2012-037296-0 (50' wide)
- Trail Start:** Crow Creek Rd at California Creek, Land Use Permit #32093 (2018-2022)
- Trail End:** Mile 1 on Gird-to-Bird bike path
- Trail Length:** 3.25 miles
- Designed Use Objectives:** Trail type: terra and snow  
Trail class: 3  
Designed use: mountain biking
- Design Parameters:** Tread width: 18"-36"  
Clearing width: 5' - 6'  
Target grade: 3%-10%  
Short pitch max: 15%  
Cross slope: 3%-8%
- Trail Management:** Managed use: multi-use  
Prohibited use: all motorized use, pack & saddle  
Other use: athletic events, races, team practice
- Maintenance Frequency:** Tread repair:  
Brushing: 2X per year  
Tree Removal:  
Condition survey:

### Special Considerations/Remarks:

- Memorandum of Understanding/Agreement needed with Alaska State Parks for trail work on south 1/4 mile of trail.
- 3.3 acres set aside for north trailhead, straddling California Creek.
- Narrow gauge grooming began in the winter of 2021.

## BIRD-TO-GIRD BIKE PATH

The Bird-to-Gird Bike Path is a paved route that connects Girdwood to the community of Indian to the west along Turnagain Arm. The trail begins near the Forest Service building and ends at the baseball fields in Indian. There are many scenic stops, interpretive kiosks, and picnic areas along the way including Bird Point, a developed rest area. The trail was developed after the Seward Highway was relocated in the 1990s. As the Seward Highway is further developed between Anchorage and Girdwood, additional trail segments will be added to further connect the trail system. This trail is not managed by Girdwood Trails Committee, but the beginning of the trail provides access to the south end of the Beaver Pond Trail.

**Landowner:** Chugach State Park

**Easement Status:** Yes, easement in place

**Trail Start:** Top of the hill near the US Forest Service Glacier Ranger District Office  
**Trail End:** Indian Ball Fields

**Trail Length:** 10 miles

**Designed Use Objectives:** Trail type: terra  
Trail class: 5  
Designed use: biking

**Design Parameters:** Tread width: 6' - 8'  
Clearing width: 6' - 10'  
Target grade: 2%-5%  
Short pitch max: 8%  
Cross slope: 2%-3%

**Trail Management:** Managed use: biking, pedestrian  
Prohibited use: all motorized use, pack & saddle

**Maintenance Frequency:** Tread repair:  
Brushing:  
Tree Removal:  
Condition survey:

### Special Considerations/Remarks:

- Most of this trail is in an avalanche hazard area. During the winter, an avalanche could occur at any time and trail users should be aware and prepared for avalanches. The trail is closed during avalanche mitigation work by the Department of Transportation. There is a sign at the beginning of the trail, with lights that flash when the trail is closed.

# CALIFORNIA CREEK TRAIL

California Creek Trail branches off of the Beaver Pond Trail, ¼ mile from the car pullout area on Crow Creek Road at the California Creek Bridge. There is a post marking the beginning of California Creek Trail with a map and GPS emergency locator signage. California Creek Trail is a Class 1 primitive trail and is less distinct than Beaver Pond Trail, which is a Class 3 trail.

California Creek Trail climbs the ridge directly above California Creek into Chugach State Park. The trail maintains a consistently steep grade with some drainage crossings and steep grades. It is possible to connect California Creek Trail and Abe’s Trail to create a loop.

**Landowner:** Heritage Land Bank, Chugach State Park

**Easement Status:** Easement granted to GBOS for HLB property, 2012-037296-0

**Trail Start:** California Creek Bridge, Land Use Permit #32093 (2018-2022)

**Trail End:** Chugach State Park

**Trail Length:**

**Designed Use Objectives:** Trail type: terra  
Trail class: 1  
Designed use: hiking

**Design Parameters:** Tread width: 6”- 18”  
Clearing width: 24”- 48”  
Target grade: 5%-18%  
Short pitch max: 35%  
Cross slope: 5%-20%

**Trail Management:** Managed use:  
Prohibited use: all motorized use, pack & saddle

**Maintenance Frequency:** Tread repair:  
Brushing:  
Tree Removal:  
Condition survey: annual

## Special Considerations/Remarks:

- Historic gabion wall for power generation during mining operations just below the trail.
- Girdwood Trails Committee has 50’ easement for California Creek Trail from where it diverts from Abe’s Trail to the Chugach State Park land boundary.

# CROW PASS TRAIL

Crow Pass Trail starts at the end of Crow Creek Road (MP 6, elevation 1,000). The trail climbs a steady uphill grade and exits tree line after zig-zagging up in the first 1/2 mile. At MP 1.4 a spur trail to the left leads to mining equipment remains and the Staser memorial. The right fork continues uphill to Crow Pass, crossing shale rock fall areas. A public use cabin is located 3/4 mile before the pass, on Crystal Lake. The pass is at 3,500' elevation. The trail continues down into the Eagle Glacier drainage, crossing Eagle River, and ending at the Eagle River Nature Center. This trail is a section of the Iditarod National Historic Trail.

**Landowner:** USFS (Chugach National Forest, Glacier Ranger District)

**Easement Status:** Yes, easement in place

**Trail Start:** MP 6 Crow Creek Road

**Trail End:** FS Boundary with Chugach State Park at MP 3.73; trail continues to Eagle River Nature Center (23 miles total distance)

**Trail Length:** 3.73 miles

**Designed Use Objectives:** Trail type: terra  
Trail class: 2  
Designed use: hiking

**Design Parameters:** Tread width: 24"  
Clearing width: 6'; 20' in alders  
Target grade: 12%  
Short pitch max: 25%  
Cross slope: 5%-20%

**Trail Management:** Managed use: hiking  
Prohibited use: all motorized use, pack & saddle  
Other use: Crow Pass Crossing trail race, last weekend in July

**Maintenance Frequency:** Tread repair: once every 5 years  
Brushing: annual (only first mile needs brushing, rest is above brush)  
Tree removal: as soon as possible  
Condition survey: once every 5 years

## Special Considerations/Remarks:

- Winter use is discouraged due to avalanche hazards.
- Public Use Cabin at MP 3 on Crystal Lake, by reservation, not rented in winter due to avalanche hazards on trail.
- Switchbacks above mine ruins need restoration.
- Shale "official" trail has areas of difficult footing.
- Arsenic in old mine ruins area.

## DEB'S WAY

Deb's Way is a neighborhood connector route that runs from Mount Hood Drive behind the houses on Tahoe Road up to the cul de sac at the bottom of Aspen Mountain Road.

**Landowner:** MOA—most of trail is AWWU Easement. Mt. Hood end is DOT/Airport.

**Easement Status:** No easement in place

**Trail Start:** Mt Hood Drive

**Trail End:** Aspen Mountain Rd

**Trail Length:** ½ mile

**Designed Use Objectives:** Trail type: Utility easement  
Trail class: 3  
Designed use:

**Design Parameters:** Tread width:  
Clearing width:  
Target grade:  
Short pitch max:  
Cross slope:

**Trail Management:** Managed use:  
Prohibited use: all motorized use, pack & saddle

**Maintenance Frequency:** Tread repair:  
Brushing:  
Tree Removal:  
Condition survey:

### Special Considerations/Remarks:

- Girdwood Trails Committee has no authority to work on this trail. There are no design parameters, and none can be established without agreement.
- Recommend pursuing easement with DOT Airports.
- This small social trail is not on Appendix 1 winter or summer maps.

## EAGLE GLACIER ACCESS

This route begins at a small pullout at MP 5.1 Crow Creek Road. Starting in subalpine grasses and alders this route climbs quickly to a ridge off Goat Mountain's south flank, then follows the ridge line onto Eagle Glacier to the Nordic Training Center. Trail brushing is very sporadic, generally accomplished by trail users. Trail gains approximately 4,000' in elevation. Cairns mark the route by the cliff.

**Landowner:** USFS (Chugach National Forest, Glacier Ranger District)

**Easement Status:** No easement in place

**Trail Start:** MP 5.1 Crow Creek Road

**Trail End:** Eagle Glacier/Nordic Training Center

**Trail Length:** 3.85 miles

**Designed Use Objectives:** Trail type: terra  
Trail class: 1  
Designed use: hiking

**Design Parameters:** Tread width:  
Clearing width:  
Target grade:  
Short pitch max:  
Cross slope:

**Trail Management:** Managed use: hiking  
Prohibited use: all motorized use, pack & saddle, bike, all winter use  
Other use: provides alternate access for athletes using Nordic Training Center if helicopter is on weather hold.

**Maintenance Frequency:** N/A

### Special Considerations/Remarks:

- Winter use is discouraged due to extreme avalanche hazards.
- No trailhead signage is recommended for this route so that unprepared hikers do not venture out onto this route.

## EARNAGAIN

Earnagain is a multi-use trail that serves as an uproute for bikers accessing downhill trails. It is Girdwood Mountain Bike Alliance's only multi-purpose, two-directional trail.

<b>Landowner:</b>	Heritage Land Bank
<b>Easement Status:</b>	25' easement pending
<b>Trail Start:</b>	Snow stake on 5K Loop, 1 mile from the 5K trailhead, at the top of the intermediate loop.
<b>Trail End:</b>	Top of Two Cents
<b>Trail Length:</b>	.3 miles
<b>Designed Use Objectives:</b>	Trail type: terra Trail class: 3 Designed use: summer mountain biking
<b>Design Parameters:</b>	Tread width: 6'-8' Clearing width: 14' Target grade: 5% Short pitch max: 20% Cross slope: 2%-5%
<b>Trail Management:</b>	Managed use: multi-use Prohibited use: all motorized use, pack & saddle
<b>Maintenance Frequency:</b>	Tread repair: As needed Brushing: As needed Tree removal: As needed Condition survey: Annual, in the spring

### Special Considerations/Remarks:

- GMBA plans to extend Earnagain from Two Cents down to the Snow Cat Trail. It will be a two directional, multi-use connector trail between the 5K Loop and the Snow Cat Trail, providing access to multiple mountain bike downhill trails.
- Earnagain is summer use only, as it is accessed off the Nordic 5 K, which is ski only in winter.

# HIGHTOWER/EGLOFF MULTI-USE TRAIL

This bike path is lighted and paved. The path runs from the Community Center and parks and playground to the Girdwood K-8 School.

**Landowner:** Heritage Land Bank

**Easement Status:** Intra-governmental permit for a public use easement is granted to MOA Project Management & Engineering

**Trail Start:** Girdwood Community Center/Library

**Trail End:** Girdwood K-8 School

**Trail Length:** .5 mile

**Designed Use Objectives:** Trail type: terra  
Trail class: 5  
Designed use: biking

**Design Parameters:** Tread width: 6' – 8'  
Clearing width: 6' – 10'  
Target grade: 2%-5%  
Short pitch max: 8%  
Cross slope: 2%-3%

**Trail Management:** Managed use: biking and pedestrian  
Prohibited use: all motorized use, pack & saddle

**Maintenance Frequency:** Tread repair: As needed  
Brushing:  
Tree Removal:  
Condition survey:

## Special Considerations/Remarks:

- The safety of pedestrian and bike traffic is a major concern of the Girdwood Trails Committee and the Girdwood community. A pedestrian-activated crosswalk signal was added to the intersection in 2020.
- Alternative safe, summer trail to cross highway is on west side of Glacier Creek bridge. Trail goes under the bridge from either side.

# IDITAROD NATIONAL HISTORIC TRAIL (INHT)

Beginning near the Alaska Railroad, the Iditarod National Historic Trail generally follows Glacier Creek up valley, skirting the Industrial Park, and passing under the Alyeska Highway at the Glacier Creek Bridge. It uses the paved bike path on Hightower, then leaves the bike path on the AWWU road, and finally returns to a forest trail in several hundred feet. An interpretive trail, created by the students at Girdwood School, connects the trail to ASD property near the AWWU and trail junction. The trail stays on the east side of Crow Creek Road and then crosses at MP 1.6 (small parking area located here) traveling back and forth over the road a couple of times, connecting with the Winner Creek Trail at the Winner Creek Gorge Trailhead. The trail continues along the west side of the road to MP 4, and then is located on Crow Creek Road through the residential area up to Crow Pass Trailhead. The trail passes through cottonwood/spruce forests, avalanche slide areas, and poorly drained areas.

<b>Landowner:</b>	Heritage Land Bank MP 0-MP 5
<b>Easement Status:</b>	MP 0-MP 5 has HLB easement, ADL#24059; no easement MP5-MP9
<b>Trail Start:</b>	Across the railroad tracks from the end of West Street
<b>Trail End:</b>	Crow Pass Trailhead
<b>Trail Length:</b>	9 miles
<b>Designed Use Objectives:</b>	Trail type: terra and snow Trail class: class 4 MP 0-MP 3 (Alyeska Hwy underpass); class 3 MP 3-MP 9 Designed use: hiking
<b>Design Parameters:</b>	Tread width: 8' (class 4-5), 3' remainder Clearing width: 6'; 20' in alders Target grade: 10% Short pitch max: 15% Cross slope: 3%-7%
<b>Trail Management:</b>	Managed use: hiking, biking, cross-country skiing Prohibited use: all motorized use, pack & saddle
<b>Maintenance Frequency:</b>	Tread repair: annual Brushing: 2x/year on class 4; 1-3 years on class 3 Tree removal: within a year Condition survey: once every 5 years

## Special Considerations/Remarks:

- A trail along the Alaska Railroad tracks is needed to provide safe access to trail from Bird-to-Gird Path and the Alyeska Highway Bike Path.
- Trail is on Anchorage School District land for a short distance near the school.
- Trail from MP0-MP3 was significantly upgraded from 2018-2020.
- A new bridge and a memorial bench in honor of long time Trails Committee volunteer Dwaine Schuldt were installed at California Creek in 2019.
- Narrow gauge grooming on the Lower Iditarod began in the winter of 2021.

## JOE DANICH TRAIL, UPPER AND LOWER

The Joe Danich Trails run from Glacier Creek Bridge on Alyeska Highway to the railroad trestle at the south end of the valley. The first 1/4 mile is used by residents as a shortcut to the Girdwood Townsite from nearby neighborhoods. Although at times the trail comes close to Glacier Creek, for the most part it stays on the ridge above, running near the meadows behind the neighborhoods off of Timberline Drive. The trail intersects with the Lower Virgin Creek Trail, the point of demarcation of the “upper” and “lower” trails. The lower Joe Danich Trail runs along the east bank of Glacier Creek, through tall cottonwood trees and grassy bogs. The trail ends just south of the railroad trestle. There is no legal trailhead on this end of the trail.

The Joe Danich Upper and Lower Trails are both currently Class 1; however, their usefulness as connectors throughout the Townsite and to access the mouth of the valley encourages the Trails Committee to work toward development of these trails to Class 2 status.

<b>Landowner:</b>	DOT, Heritage Land Bank, Alaska Railroad
<b>Easement Status:</b>	No easement in place
<b>Trail Start:</b>	No designated trailhead on North end. Currently, trail starts by going under the Alyeska Highway Glacier Creek bridge
<b>Trail End:</b>	No designated trailhead on South end; current access includes AK RR trestle trespass or wading the creek.
<b>Trail Length:</b>	2.5 miles
<b>Designed Use Objectives:</b>	Trail type: terra Trail class: 1 Designed use: hiking
<b>Design Parameters:</b>	Tread width: 6”-18” Clearing width: 24”-48” Target grade: 5%-18% Short pitch max: 35% Cross slope: 5%-20%
<b>Trail Management:</b>	Managed use: hiking Prohibited use: all motorized use, pack & saddle
<b>Maintenance Frequency:</b>	Trail lacks easement, work is infrequent

### Special Considerations/Remarks:

- This trail has great potential for Timberline area neighborhoods. Future goal for Trails Committee is to get legal easement to the land and improve trail from Joe Danich to Lower Virgin Creek to create connector route.
- Suggested improvement to trailhead access is to reroute north access along utility/DOT easement along south side of Alyeska Highway, creating high and dry access from Timberline Drive/Alyeska Highway. With improvements, this trail could be appropriate for biking and for skiing.

## MAX'S MOUNTAIN TRAIL

Max's Trail is the primary route for ascent of Max's Mountain. The route is popular with backcountry skiers and snowboarders who descend the south-facing slope. It is also a popular summer hike for those comfortable with steady, steep uphill on a less defined trail. Getting off-trail can result in bushwhacking in alders and devil's club and tricky maneuvering over cliff bands both above and below tree line. Trail begins at the Virgin Creek Falls Trailhead, at the end of Timberline Road. At the Y to the Virgin Creek Falls, Max's route diverts to the left, heading uphill sharply. Several benches are gained, eventually getting out of tree line. Above tree line, the trail crosses high alpine meadow terrain, climbing over the cliff bands and topping out at the weather station at Max's peak.

<b>Landowner:</b>	Privately owned segment, HLB, and DNR
<b>Easement Status:</b>	Privately owned segment dedicated by plat (2004), no easement on HLB land.
<b>Trail Start:</b>	End of Timberline Road
<b>Trail End:</b>	Weather station at Max's Peak
<b>Trail Length:</b>	2 miles
<b>Designed Use Objectives:</b>	Trail type: terra and snow Trail class: 1 Designed use: hiking
<b>Design Parameters:</b>	Tread width: 0"-12" Clearing width: $\geq 24$ " Target grade: 5%-25% Short pitch max: 40% Cross slope: natural slide slope
<b>Trail Management:</b>	Managed use: hiking Prohibited use: all motorized use, pack & saddle
<b>Maintenance Frequency:</b>	N/A

### Special Considerations/Remarks:

- This trail is not currently listed on Girdwood Trails Map, and it is not recommended to add it to the trail map.
- Overall goal is to have this trail remain primitive.
- If trail gets higher volume of use, design parameters will have to be re-evaluated.
- This trail accesses rim hike to Center Ridge and Alyeska in-bounds.

## MOOSE MEADOW MULTI-USE TRAILS

Moose Meadow Multi-Use Trails are winter access only because the area is too marshy to be accessible in the summer months. Moose Meadow falls within the boundary created by the Girdwood airport to the west, Arlberg Avenue to east, by Alyeska Resort property to the north, and Aspen Road to the south. Once enough snow has fallen and the marsh is frozen, classic and skate trails for nordic skiing are groomed in the flat meadows. Connector trails link Stumpy's Winter Trail to the Moose Meadow Trails.

<b>Landowner:</b>	HLB dedicated park, managed by Girdwood Parks & Recreation
<b>Easement Status:</b>	None necessary
<b>Trail Start:</b>	Arlberg Road/Moose Meadows & Alyeska Playing Field Parking Area
<b>Trail End:</b>	Arlberg Road/Moose Meadows & Alyeska Playing Field Parking Area
<b>Trail Length:</b>	1 mile
<b>Designed Use Objectives:</b>	Trail type: snow Trail class: 4 (depends on snow pack) Designed use: winter multi-use - classic and skate skiing, snowshoeing, winter biking, hiking, skijoring, dog mushing
<b>Design Parameters:</b>	Tread width: 18' Clearing width: 18' Target grade: flat Short pitch max: flat Cross slope: N/A
<b>Trail Management:</b>	Managed use: winter multi-use: classic and skate skiing, snowshoeing, winter biking, hiking, skijoring, dog mushing Prohibited use: all motorized use, pack & saddle Other use: Commercial dog sled tours, winter athletic competitions, community events.
<b>Maintenance Frequency:</b>	Grooming twice per week
<b>Special Considerations/Remarks:</b>	<ul style="list-style-type: none"><li>• Parking area is too small for current demand for parking. Redesign of the Moose Meadows and Alyeska Playing field parking area is planned for the near future. Expect realignment of trail access and possible change in parking location.</li></ul>

## MT. ALYESKA BIKE TRAILS

Alyeska Resort has lift-served downhill bike trails for summer use on the ski terrain. Tickets may be purchased at the ticket office, and bike rentals are available at the Day Lodge.

**Landowner:** Alyeska Resort

**Easement Status:** No easement necessary

**Trail Start:** Lift Access from the Bear Cub Quad and Ted's Express.

**Trail End:** Daylodge parking lot

**Trail Length:** Various

**Designed Use Objectives:** Trail type: downhill mountain bike trails  
Trail class: 2-3  
Designed use: lift-accessed downhill mountain bike

**Design Parameters:** Tread width: 2'  
Clearing width: 6'  
Target grade: 8%-15%  
Short pitch max: 20%  
Cross slope: 20%

**Trail Management:** Managed use: lift-accessed downhill mountain bike  
Prohibited use: any use other than lift accessed downhill mountain biking when lifts are operating.  
Other use: athletic events

**Maintenance Frequency:** Tread repair: throughout summer  
Brushing: throughout summer  
Tree removal: throughout summer  
Condition survey: throughout summer

### Special Considerations/Remarks:

- These trails are within Alyeska Resort's permit area and are managed by Alyeska Resort.
- All trails are available to ticketed riders.

## NORDIC 5K LOOP

The Nordic 5K Loop was developed in order to meet the need for a nordic-specific venue. The Nordic 5K Loop is groomed for classic and skate skiing in the winter months. The terrain is hilly and drainage is excellent, allowing the ski grooming to hold up well to considerable use. Trails are marked as one-way in winter.

In the summer, the trail is popular with hikers, bikers, and runners; the trail is open to all for multi-use. This trail is the summer bike access to the Winner Creek Trail, as it avoids the first 7/10 mile of the Winner Creek Trail, which is not open to bike riding.

**Landowner:** Heritage Land Bank

**Easement Status:** Easement granted to Girdwood Nordic Ski Club for HLB property, 2009

**Trail Start:** End of Arlberg Road

**Trail End:** End of Arlberg Road

**Trail Length:** 3.1 miles

**Designed Use Objectives:** Trail type: snow and terra  
Trail class: 4  
Designed use: Nordic skiing

**Design Parameters:** Tread width: 16'  
Clearing width: 28'  
Target grade: variable  
Short pitch max: 10%  
Cross slope: 2%-3%

**Trail Management:** Managed use: Nordic classic and skate skiing in winter; multi-use in summer.  
Prohibited use:  
    Winter: any non-nordic ski use. No bikes, dogs, snowshoes, unauthorized motorized use.  
    Summer: unauthorized motorized use, pack & saddle  
Other use: athletic events summer and winter.

**Maintenance Frequency:** Tread repair: annual  
Brushing: annual  
Tree removal: as needed  
Condition survey: as needed

### Special Considerations/Remarks:

- Extension of Arlberg Road was completed in fall 2016. Layout includes a small parking lot and a potential trailhead. This parking lot and trailhead could also become an access point for Winner Creek Trail.
- This trail provides summer bike access to Winner Creek Trail, as first 7/10 mile is not open to bike traffic.
- This trail provides summer bike access to the Girdwood mountain bike trails.
- Girdwood Nordic Ski Club has a 20-year easement for trail.

## NORTH FACE TRAIL

The North Face Trail is a summer route for hikers to access the upper aerial tramway terminal from Hotel Alyeska at the base. Although the route is designed to ease the pitch of the trail, the route is consistently steep overall. Trail access is just past the Winner Creek Trailhead at the base of Alyeska Resort's Chair 7. The access is well marked, and the trail begins as a gentle, cleared mountain road. The route becomes steeper and becomes a single-track trail after the first major incline. The trail climbs rapidly to achieve 2,000' elevation gain.

<b>Landowner:</b>	Alyeska Resort
<b>Easement Status:</b>	No easement necessary
<b>Trail Start:</b>	Adjacent to Winner Creek Trailhead at the base of the Alyeska Aerial Tramway
<b>Trail End:</b>	Upper Mountain Terminal, Alyeska Aerial Tramway
<b>Trail Length:</b>	2.25 miles
<b>Designed Use Objectives:</b>	Trail type: terra Trail class: 2 Designed use: hiking only
<b>Design Parameters:</b>	Tread width: 24" Clearing width: 6' Target grade: 12% Short pitch max: 17% Cross slope:
<b>Trail Management:</b>	Managed use: summer hiking Prohibited use: any other use Other use: athletic events
<b>Maintenance Frequency:</b>	Tread repair: throughout the summer Brushing: twice per summer Tree removal: N/A Condition survey: summer-long

### Special Considerations/Remarks:

- This trail is typically closed to hiking from November 1-May 30. Snow pack dictates specific opening and closing dates of the trail.
- Trail is on Alyeska leased property permit area under agreement with the US Forest Service. Agreement allows Alyeska Resort to open and close trail based on their operational discretion.

## RAGGED TOP TRAIL

Beginning at the Beaver Pond Trail and crossing California Creek (no bridge in place currently), this primitive trail climbs steeply up Ragged Top. There is a flat area on the bank above the creek crossing. This social, primitive trail climbs the ridge until reaching alpine meadows. At that point, hikers usually choose their own paths to reach the summit.

**Landowner:** HLB, USFS

**Easement Status:** No easement in place

**Trail Start:** Crow Creek Road along north side of California Creek

**Trail End:** Ridge/top of Ragged Top

**Trail Length:** 2 miles/4 miles

**Designed Use Objectives:** Trail type: terra  
Trail class: 1  
Designed use: hiking

**Design Parameters:** None. This is a primitive social trail with no plans for additional development.  
Tread width:  
Clearing width:  
Target grade:  
Short pitch max:  
Cross slope:

**Trail Management:** Managed use: hiking  
Prohibited use: all motorized use, pack & saddle

**Maintenance Frequency:** Rarely

### **Special Considerations/Remarks:**

- The planned Girdwood cemetery is at start of this trail, with trail access through cemetery land.
- If funding is found for the cemetery trail, the first issue will be creating a bridge crossing California Creek. Cooperation is intended with cemetery planning/development efforts.

## SHORTCUT FROM BIKE PATH TO DAVOS ROAD

This neighborhood connector is a shortcut to connect the neighborhoods by the airport to the Girdwood Townsite.

**Landowner:** Municipality of Anchorage – trail is easement for AWWU

**Easement Status:** No easement in place

**Trail Start:** Bike path by Glacier Creek bridge

**Trail End:** Davos Road by Glacier Creek

**Trail Length:** 1/8 mile

**Designed Use Objectives:** Trail type: terra and snow  
Trail class: 3  
Designed use: pedestrian

**Design Parameters:** Tread width: 12”- 24”  
Clearing width: 7’- 8’  
Target grade: 3%-12%  
Short pitch max: 25%  
Cross slope: 5%-10%

**Trail Management:** Managed use:  
Prohibited use: all motorized use, pack & saddle

**Maintenance Frequency:** Tread repair:  
Brushing:  
Tree Removal:  
Condition survey:

### **Special Considerations/Remarks:**

- High volume of pedestrian traffic.
- Well used trail of high value to community.
- School and park connector for children causes heightened concern for safety.
- This small social trail is not on Appendix 1 winter or summer maps.

## SMALL HOUSE

Small House is a purpose-built, beginner-friendly mountain bike trail. It contains berms and a few small jumps.

<b>Landowner:</b>	Heritage Land Bank
<b>Easement Status:</b>	25' easement pending
<b>Trail Start:</b>	Off of the 5K Loop, on west side of up-route, .5 miles from the 5K trailhead
<b>Trail End:</b>	Top of the last hill on the 5K Loop
<b>Trail Length:</b>	.5 mile
<b>Designed Use Objectives:</b>	Trail type: terra Trail class: 3 Designed use: summer mountain biking
<b>Design Parameters:</b>	Tread width: 4'-6' Clearing width: 12' Target grade: 5% Short pitch max: 8% Cross slope: 2%-5%
<b>Trail Management:</b>	Managed use: biking Prohibited use: any use besides mountain biking
<b>Maintenance Frequency:</b>	Tread repair: As needed Brushing: As needed Tree Removal: As needed Condition survey: Spring

### Special Considerations/Remarks:

- Small House is summer use only, as it is accessed off the Nordic 5 K, which is ski only in winter.
- This trail was the first trail built by the Girdwood Mountain Bike Alliance, in 2018.
- Small House was extended in 2020 to make a better exit onto the 5K.

# SNOW CAT TRAIL

The Snow Cat Trail begins near the lower building of the Alyeska Aerial Tramway and winds through relatively gentle rolling hills until it crosses the snow cat bridge over Winner Creek. After the bridge, the Snow Cat Trail becomes steeper and climbs to the lower Winner Creek drainage. In winter, the trail is consistently maintained by snow cat operations and the trail tops out at the public use cabin. Winter trail users should be aware of snow cat operations in the area and stand clear of the trail for the snow cat and snow machines. In summer, the trail bed provides tricky footing between fallen trees and drainages. Hikers can follow an indistinct trail to the cabin, which overlooks Girdwood and the Turnagain Arm.

- Landowner:** HLB and DNR revocable permit to Chugach Powder Guides
- Easement Status:** No easement
- Trail Start:** By lower tram station  
**Trail End:** CPG Powder Cabin public use cabin
- Trail Length:** 4 miles
- Designed Use Objectives:** Trail type: snow and terra  
Trail class: 4 in winter, 1 in summer  
Designed use: winter access to snow cat terrain
- Design Parameters:** Tread width: 16'  
Clearing width: 28'  
Target grade: variable  
Short pitch max: 10%  
Cross slope: 2%-3%
- Trail Management:** Managed use: hiking, skiing, biking  
Prohibited use: all motorized use except CPG snow cats, CPG snow machines, and other authorized grooming equipment, pack & saddle
- Maintenance Frequency:** Tread repair: Annual  
Brushing: Annual  
Tree removal: As needed  
Condition survey: As needed
- Special Considerations/Remarks:**
- This trail has been identified for upgrading to provide additional skiing and other winter use. Cat road has high potential for winter use if trail surface is improved.
  - Trail is not included on summer trail map and is not recommended to be included until trail surface has been improved.

## STUMPY'S SUMMER TRAIL

Stumpy's Summer Trail is an historic trail situated in a pristine area of the valley, providing a unique wilderness experience. To find the trailhead, cross the two bridges by Our Lady of the Snows Chapel and continue straight up the hill on the waterline easement. At the top of the hill, the trail enters the forest to the right. The trail winds through the hemlock and spruce forest on the ridge above Glacier Creek for a mile where it becomes an indistinct route through five wet meadows separated by narrow bands of hemlock. In the third meadow (Island Meadow), it joins Stumpy's Winter Trail and continues on to Winner Creek Gorge. In winter this is an ungroomed trail. The meadows are too wet for use other than in winter.

**Landowner:** Heritage Land Bank, Department of Transportation (Airport)

**Easement Status:** No easement in place

**Trail Start:** Waterline easement by Our Lady of the Snows Church

**Trail End:** Winner Creek Gorge

**Trail Length:** 2 miles

**Designed Use Objectives:** Trail type: terra and snow  
Trail class: 1  
Designed use: hiking, cross country skiing

**Design Parameters:** Tread width: 12"- 24"  
Clearing width:  
Target grade:  
Short pitch max:  
Cross slope:

**Trail Management:** Managed use: hiking, cross country skiing  
Prohibited use: all motorized use, pack & saddle

**Maintenance Frequency:** Tread repair: N/A  
Brushing: As needed  
Tree removal: As needed  
Condition survey: As needed

**Special Considerations/Remarks:**

## STUMPY'S WINTER TRAIL

Stumpy's Winter Trail begins at the Moose Meadow parking area, crosses the meadow and descends a steep hill (Horror Hill) to the bridges behind Our Lady of the Snows Chapel. The trail ends at the Winner Creek Gorge Bridge. The route travels through a series of eight distinct meadows and short sections of woods as it gently climbs up to the ridge above Glacier Creek. The trail leaves the meadows and enters the forest 1/4 mile from the Winner Creek Gorge and follows the top of the ridge above Glacier Creek the rest of the way to Winner Creek Gorge Bridge.

The first four meadows are part of the groomed multi-use trail system and link with the snow cat trail and the Girdwood Nordic Ski Club 5k trail. The last four meadows and the woods are un-groomed trail. When this route is linked with the Winner Creek Trail or the Snow Cat Trail, it provides an approximately five-mile loop. The meadows are too wet for use other than in winter.

<b>Landowner:</b>	Heritage Land Bank
<b>Easement Status:</b>	No easement in place
<b>Trail Start:</b>	Moose Meadows Parking Lot
<b>Trail End:</b>	Winner Creek Gorge
<b>Trail Length:</b>	2.5 miles
<b>Designed Use Objectives:</b>	Trail type: snow Trail class: 2 Designed use: cross-country skiing
<b>Design Parameters:</b>	Tread width: 12" Clearing width: 10' Target grade: 15% Short pitch max: 20% Cross slope: 10%
<b>Trail Management:</b>	Managed use: cross-country ski Prohibited use: bikes, motorized use, pack & saddle Other use: snowshoe, skijoring
<b>Maintenance Frequency:</b>	Tread repair: Brushing: every 5 years Tree removal: Condition survey: every 5 years
<b>Special Considerations/Remarks:</b>	<ul style="list-style-type: none"><li>• Bikes not recommended due to soft trail tread.</li><li>• Needs easement through HLB.</li></ul>

## TINY CREEK TRAIL

Tiny Creek Trail is highly used connector provides a short cut to businesses, post office, homes, and the school for non-motorized trail users. It runs from the New Girdwood Townsite along California Creek to the Girdwood K-8 school and then joins Crow Creek Road at approximately MP 1. The trail splits just behind the telephone building in the New Girdwood Townsite. At the split, one trail crosses a bridge over California Creek and climbs a steep hill to Crow Creek Road at approximately MP 0.5. The other trail stays along the banks of California Creek Trail, through alders behind the Creekside apartments, and enters the school grounds near the parking lot. The trail continues along the west side of the school grounds at the Bus Turnaround area, crossing a bridge and following the power line easement up to Crow Creek Road at approximately MP 1.

<b>Landowner:</b>	Anchorage School District/Chugach Electric Association
<b>Easement Status:</b>	No easement in place
<b>Trail Start:</b>	New Girdwood Townsite at Hightower and Lindblad corner. Building on the northwest corner across from Chair 5 restaurant is telephone utility building.
<b>Trail End:</b>	Crow Creek Road MP.5 or Crow Creek Road MP 1
<b>Trail Length:</b>	.25 mile to first exit to Crow Creek Rd; .75 mile to second exit to Crow Creek Rd.
<b>Designed Use Objectives:</b>	Trail type: terra Trail class: 3 Designed use: biking
<b>Design Parameters:</b>	Tread width: 4' – 7' Clearing width: 6' – 8' Target grade: 2%-8% Short pitch max: 10% Cross slope: 3%-5%
<b>Trail Management:</b>	Managed use: biking, hiking Prohibited use: all motorized use, pack & saddle
<b>Maintenance Frequency:</b>	Tread repair: Brushing: Tree Removal: Condition survey:

### Special Considerations/Remarks:

- Since Tiny Creek Trail is a key connector to the school from the Townsite, Girdwood Trails Committee has plans to upgrade it to Class 4.
- Trail up to Crow Creek Road at MP .5 is very steep. Switchback has been added to encourage users to a less steep route. Original route is not sustainable as it is eroding. Work is necessary to establish switchback route as primary access.

## TWO CENTS

Two Cents is a blue square difficulty, bike-only trail. The trail contains drops, berms and jumps.

**Landowner:** Heritage Land Bank

**Easement Status:** 25' easement pending

**Trail Start:** Top of Earnagain

**Trail End:** Past the entry to Earnagain at the top of the intermediate loop of Nordic 5K

**Trail Length:** .3 mile

**Designed Use Objectives:** Trail type: terra  
Trail class: 3  
Designed use: summer mountain biking

**Design Parameters:** Tread width: 4' – 6'  
Clearing width: 12'  
Target grade: 8%  
Short pitch max: 15%  
Cross slope: 2%-5%

**Trail Management:** Managed use: biking  
Prohibited use: any use besides mountain biking

**Maintenance Frequency:** Tread repair: As needed  
Brushing: As needed  
Tree Removal: As needed  
Condition survey: Spring

### Special Considerations/Remarks:

- Two Cents is summer use only, as it is accessed off the Nordic 5 K, which is ski only in winter.

## VIRGIN CREEK TRAIL, LOWER

The Virgin Creek Trail Lower begins at the cul de sac at the end of Virgin Creek Drive and follows a low ridge and drainage of Virgin Creek toward the Glacier Creek drainage through dense coastal rain forest. It then turns south to intersect with the Joe Danich Trail Lower.

The Virgin Creek Trail Lower is currently a Class 1 Trail, but it is an excellent potential route for connecting to other trails and to the old and new town sites. The Trails Committee has selected it for eventual upgrade to Class 2.

**Landowner:** Heritage Land Bank

**Easement Status:** No easement in place

**Trail Start:** Virgin Creek Drive

**Trail End:** Intersection with Joe Danich Trail

**Trail Length:** 0.6 miles

**Designed Use Objectives:** Trail type: terra  
Trail class: 1  
Designed use: hiking

**Design Parameters:** Tread width: 6"-18"  
Clearing width: 24"-48"  
Target grade: 5%-18%  
Short pitch max: 35%  
Cross slope: 5%-20%

**Trail Management:** Managed use: hiking, biking, cross country skiing  
Prohibited use: all motorized use, pack & saddle

**Maintenance Frequency:** Tread repair:  
Brushing:  
Tree Removal:  
Condition survey:

### Special Considerations/Remarks:

- Trails Committee goal is to link with Danich Trails to create a neighborhood loop.
- Easement on private property needs further investigation and formal approval.

# VIRGIN CREEK FALLS UPPER TRAIL

The Virgin Creek Falls Trail begins at the cul de sac at the end of Timberline Road. A trailhead marker establishes the start of the trail from the roadside. The short ¼ mile trail to Virgin Creek Falls climbs along the north side of Virgin Creek, gaining a small bluff. Hikers going to the Virgin Creek Falls descend to a small beach at the Virgin Creek Falls. For information on extension of this trail up Max’s Mtn, see separate listing for Max’s Mountain.

<b>Landowner:</b>	Privately owned, Heritage Land Bank
<b>Easement Status:</b>	Privately owned segment dedicated by plat (2004), no easement on HLB land.
<b>Trail Start:</b>	End of Timberline Road
<b>Trail End:</b>	Virgin Creek Falls
<b>Trail Length:</b>	.25 miles
<b>Designed Use Objectives:</b>	Trail type: terra Trail class: 3 Designed use: hiking
<b>Design Parameters:</b>	Tread width: 18” Clearing width: 24”-48” Target grade: 5%-18% Short pitch max: 35% Cross slope: 5%-20%
<b>Trail Management:</b>	Managed use: hiking, backcountry skiing access Prohibited use: biking, all motorized use, pack & saddle
<b>Maintenance Frequency:</b>	Tread repair: As needed Brushing: Tree removal: As needed Condition survey:

## Special Considerations/Remarks:

- Easement on private property held by Greatland Trust.
- High level of foot traffic has caused extreme erosion. Trail rehabilitation began in 2020.
- Lack of parking is a concern for both the Trails Committee and the immediate neighborhood.

## WAGON TRAIL

The Wagon Trail runs from approximately MP 89 of the Seward Highway, extending from the southeast corner of Girdwood Valley to the cul de sac on Virgin Creek Drive. The southern trailhead is adjacent to the gravel pit next to the railroad tracks. The trail winds from the southeastern corner of Girdwood Valley along the eastern edge of the valley next to the base of the mountains, cutting through dense hemlock/spruce coastal rain forest. This area was used by the railroad to log for railroad ties, and a railroad construction camp was located on the first hill above the tracks. This trail connects with the Lower Virgin Creek Trail and the Joe Danich Trails.

**Landowner:** Heritage LandBank, DNR, Alaska Railroad

**Easement Status:** No easement in place

**Trail Start:** No trailhead designed as there is no legal public access at the Seward Hwy.

**Trail End:** No trailhead designed as there is no legal public access at Virgin Creek Road.

**Trail Length:** 1.5 miles

**Designed Use Objectives:** Trail type: terra  
Trail class: 1  
Designed use: hiking

**Design Parameters:** TBD once trail access is resolved.  
Tread width:  
Clearing width:  
Target grade:  
Short pitch max:  
Cross slope:

**Trail Management:** Managed use: hiking  
Prohibited use: all motorized use, pack & saddle

**Maintenance Frequency:** Infrequent. TBD once trail access is resolved.

### Special Considerations/Remarks:

- Permission has been received in the past for the Girdwood Trails Committee to place a bridge on HLB land below Virgin Creek Road. On the south end, there is no access as the trail currently ends at the Alaska Railroad tracks.
- Recreational use of area near RR tracks is increasing. This use will need legal access across Alaska Railroad tracks and coordination of efforts to gain access across railroad.
- Trails Committee goal is to create a loop with a bridge across Virgin Creek and connection to Lower Joe Danich Trail.

## WINNER CREEK EXTENSION TRAIL

The Winner Creek Extension Trail connects the Alyeska Resort base area to the Winner Creek trailhead, providing an alternative route to the paved multi-use path beside Arlberg Road. The trail also can be used to travel between Hotel Alyeska and Moose Meadow parking lot.

Access is from midway along the northeastern side of Verbier Road, where a rocky path ascends the slope to cross the clearing for the water main. The well-constructed trail climbs and descends with sweeps rather than switchbacks to provide steep but non-technical mountain bike access. It passes through temperate rainforest, generally contouring the hillside with occasional views of the Arlberg Road below.

<b>Landowner:</b>	Heritage Land Bank, Alyeska Resort
<b>Easement Status:</b>	Municipality of Anchorage Parks and Recreation (2009), Alyeska Resort
<b>Trail Start:</b>	Verbier Road
<b>Trail End:</b>	Arlberg Road underpass by Alyeska Hotel
<b>Trail Length:</b>	0.4 miles
<b>Designed Use Objectives:</b>	Trail type: terra Trail class: 3 Designed use: biking
<b>Design Parameters:</b>	Tread width: 48" Clearing width: 20' Target grade: 10-15% Short pitch max: 30% Cross slope: 5%-40%
<b>Trail Management:</b>	Managed use: biking, hiking Prohibited use: all motorized use, pack & saddle
<b>Maintenance Frequency:</b>	Tread repair: As needed Brushing: Tree removal: As needed Condition survey:

### Special Considerations/Remarks:

- When the Hotel was built, this trail was relocated from the earlier Winner Creek access route higher on hillside.
- Current trail was constructed in 2008 at a cost of ~\$65,000, funded by Alyeska Resort.

## WINNER CREEK TRAIL

The valley's most popular trail, Winner Creek Trail can be accessed from two separate trailheads—one at MP 2.9 Crow Creek Road, the other just beyond the base terminal of the Alyeska Resort's tramway. This trail traverses through spruce-hemlock forests, and is part of the Iditarod National Historic Trail (INHT).

In the summer, Winner Creek Trail is a Class 4 trail between the Alyeska side trailhead and Zug's Slide, approximately 2/3 mile. This portion has boardwalks alternating with gravel-filled trail. Beyond Zug's Slide to the Crow Creek Road Trailhead, the trail is Trail Class 3 with gravel and dirt trail tread and narrow boardwalks. Approximately 1.5 miles from the trailhead at Alyeska Resort, Upper Winner Creek Trail intersects the main trail and forks off to the right. Winner Creek Trail forks left, following Winner Creek downstream past the snowcat bridge, over the Winner Creek Gorge bridge, and over the hill to the hand tram across Glacier Creek.

From the north side the hand tram crossing, the trail ascends one mile to the Winner Creek Gorge Trailhead on Crow Creek Road. There are a couple of options and alternate destinations on this side of the Glacier Creek. About .5 miles from the hand tram crossing, there is a small social trail to an area known as Chutes and Ladders. Another option is to take the spur trail at the top of the switchbacks about 3/4 mile from the hand tram crossing. This trail leads to Crow Creek Mine.

<b>Landowner:</b>	Heritage Land Bank; Girdwood Parks & Recreation maintains the hand tram through intra-government agreement.
<b>Easement Status:</b>	USFS has easement from Heritage Land Bank and maintains the trail through inter-government agreement, ADL 228890-L, ADL 230887.
<b>Trail Start:</b>	Adjacent to Alyeska Resort's aerial tram terminal
<b>Trail End:</b>	Winner Creek Gorge Trailhead
<b>Trail Length:</b>	3.5 miles
<b>Designed Use Objectives:</b>	Trail type: terra and snow Trail class: 4, 3; class 2 in winter Designed use: hiking
<b>Design Parameters:</b>	Tread width: 3'(class 3) -6' (class 4) Clearing width: 6' (class 3) - 8' (class 4) Target grade: <10% (class 3) - <12% (class 4) Short pitch max: 25% (class 3) - 15% (class 4) Cross slope: 10% (class 3) - 3% (class 4)
<b>Trail Management:</b>	Managed use: hiking Prohibited use: all motorized use, pack & saddle
<b>Maintenance Frequency:</b>	Tread repair: annual Brushing: annual Tree removal: as soon as possible Condition survey: every 5 years

### **Special Considerations/Remarks:**

- No designated trailhead near Alyeska Resort's land; a trailhead is needed at the end of the Arlberg extension project for the Nordic Club's race trails, the snowcat trail and Winner Creek Trail.
- The Forest Service has trail maintenance responsibilities for trail tread, but not for the hand tram.
- The Forest Service does not issue permits for commercial use of this trail due to easement stipulations, however, MOA/HLB does issue permits for use.
- Hand tram is closed November–April due to freezing weather.
- Hand Tram has a maintenance schedule held by Girdwood Parks and Recreation.

## WINNER CREEK TRAIL UPPER

This trail provides access to the Upper Winner Creek area. Starting at MP 1.5 Winner Creek Trail, this trail heads east, upstream, to summit at Berry Pass (el ~2000) and then continues down to the Rosehip Creek Bridge, a tributary of the Twenty-Mile River. The trail fords several drainages and traverses rock fall areas. This route is popular with pack-rafters who float out on the Twenty-Mile River. Although planned, there is currently no trail constructed beyond the Rosehip Creek Bridge out to MP 82 of the Seward Highway, a distance of at least 12 miles. This trail is a section of the Iditarod National Historic Trail (INHT).

**Landowner:** USFS (Chugach National Forest, Glacier Ranger District)

**Easement Status:** Easement in place, ADL 228890-L, ADL 230887

**Trail Start:** MP 1.5 Winner Creek Trail

**Trail End:** Rosehip Creek Bridge

**Trail Length:** 9.1 miles

**Designed Use Objectives:** Trail type: terra  
Trail class: 2  
Designed use: hiking

**Design Parameters:** Tread width: 24"  
Clearing width: 6' (20' in alders)  
Target grade: 18%  
Short pitch max: 35%  
Cross slope: 5%-20%

**Trail Management:** Managed use: hiking  
Prohibited use: all motorized use, pack & saddle

**Maintenance Frequency:** Tread repair: every 5 years  
Brushing: every 5 years  
Tree removal: within a year  
Condition survey: every 5 years

### Special Considerations/Remarks:

- Winter use is discouraged due to avalanche hazards and avalanche control by Alyeska Resort.
- This trail is on an easement across state land for several miles before it climbs out of the valley and onto US National Forest lands.

## APPENDIX 3

# Yearly Timeline for Trails Work and Administration

### Winter

- Girdwood Parks and Recreation proposes trail work plans to Girdwood Trails Committee
- Girdwood Trails Committee sets priorities for the coming year based on short, mid- and long-term goals

### Spring

- Girdwood Trails Committee approves funding of trails projects for the summer (March)
- Anchorage Park Foundation grant (due March in odd years)
- Kenai Mountains Turnagain Arm Heritage Area grant (flexible scheduling)

### Summer

- Land and Water Conservation Fund grant (due July)

### Fall

- Recreational Trails Program grant (due September/October)

### Year-round

- Girdwood Parks and Recreation and the Girdwood Trails Committee monitor funding opportunities and apply for grants as appropriate based on trail priorities.

## APPENDIX 4

# List of Trail Term Definitions

The following is a list of trail term definitions that are used throughout this plan. In part, they parallel terminology used by the U.S. Forest Service, Alaska State Parks, the U.S. Fish and Wildlife Service, the National Park Service, and the Bureau of Land Management. An additional glossary of trail terms is available at: <http://www.americantrails.org/glossary.html>

**Americans with Disabilities Act (ADA):** A federal law prohibiting discrimination against people with disabilities. The law requires public entities and public accommodations to provide accessible accommodations for people with disabilities.

**All-Terrain Vehicle (ATV):** See Off-Highway Vehicle (OHV).

**Accessible:** A term used to describe a site, building, facility, or trail that complies with the Americans with Disabilities Act (ADA) Accessibility Guidelines and can be approached, entered, and used by people with disabilities.

**Anchor:** An object, usually vertical, such as a tree or stone that defines the sides of a trail and helps to keep users in the center of the tread. Also an object used to hold another in place.

**Armoring:** Reinforcing a tread surface with a resilient material such as rock, stone, or concrete.

**Backslope:** The angle of a cut just upslope of the tread, ideally approximating the natural angle of repose of the excavated material.

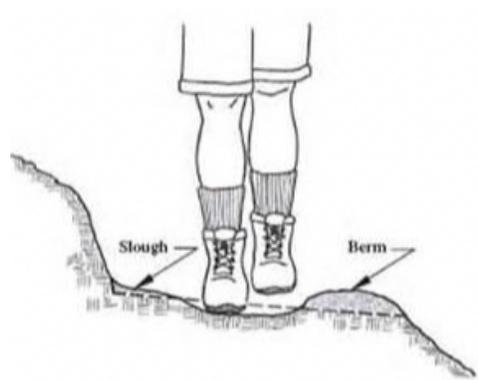
**Bench (Full, Partial) Cut:** The excavation cut into a slope to provide support for the trail tread surface. “Full” refers to the bench being constructed entirely on an excavated surface. “Partial” refers to the bench being constructed in part on compacted fill.

**Berm:** A small ridge of material accumulated along the outer (critical) edge of the tread from a combination of compaction, erosion, and displacement occurring along the centerline of the tread surface. The berm is undesirable in that it channels water along the tread surface. It is often slated for removal during maintenance.

**Best Trail Management Practices (BTMPs):** A series of management components developed to reflect the current “state-of-the-art” practices for effective and efficient trails management.

**Bike Trail Berm:** A berm or bermed corner is built up higher on the outside of the corner than on the inside.

**Braided Trail:** Problem areas along a trail where multiple parallel paths develop, usually around steep, wet, or otherwise degraded areas.



**Boat (or Vessel):** A device that is used or designed to be used for movement of people or goods in or on the water, whether manually or mechanically propelled, but does not include personal flotation devices, or other floats such as inner tubes, air mattresses, or surf boards. (11 AAC 20.990)

**Check (or Check Dam):** A device similar to a waterbar, except that it serves as a small in-tread crib or gravel retainer on steep slopes that exceed most sustainability grades. Set perpendicular to the tread.

**Climbing Turn:** A wide, ascending curve that gradually reverses the direction of the trail while gaining elevation. Used in place of Switchbacks on side slopes of less than 22% when possible.

**Clinometer:** A small, hand-held device used to measure grade (or slope) in terms of degrees or percent. In trails and roads, grade or slope is referred to in percent (%).

**Compaction:** The compression of aggregate, soil, or fill material by tamping or trail traffic.

**Contour Trail** (see also Curvilinear Trail): A concept whereby the trail is designed to rise and/or descend gradually along natural contours. The alignment crosses the contours at a shallow angle so that the natural drainage patterns are easily maintained during the construction process.

**Control Point:** A specific point, area, or feature that is important in trail layout. Positive Control Points are places you want the trail to go to or near (such as trailheads, scenic points, good water crossings, other trails, etc.). Negative Control Points are places you want to stay away from (such as hazards, sensitive habitat, private property, etc.).

**Crib (or Crib Wall):** A retaining device used to support the trail tread or backslope, typically composed of wood or rock.

**Critical Edge:** The outside (downslope) edge of the tread, most pronounced on a bench cut.

**Culvert:** A pipe or box-like structure of wood, metal, plastic, concrete, or rock that conveys a water course under a tread.

**Curvilinear (Trail) Layout** (see Contour Trail) **Cyclometer:** See Milewheel

**Design Parameters:** Technical guidelines for trail survey, design, construction, maintenance, and assessment that are based on Designed Use and Trail Class.

**Designed Use:** The Managed Use of a trail requires the most demanding design, construction, and maintenance parameters and that determines which design, construction, and maintenance parameters will apply to a trail. While there may be many Managed Uses on a trail, there is only **one** Designed Use per trail or trail segment. For example, if a trail has a Managed Use of both Hiker and Mountain Bike (MTB), then MTB would be the Designed Use since it requires more stringent trail design, construction, and maintenance parameters.

**Difficulty Level:** The degree of challenge that a trail presents to an average user's physical ability and skill, based on trail condition and route location factors such as alignment, steepness of grades, gain and loss of elevation, and amount and kind of natural barriers that must be crossed.

**Drop:** The trail falls away sharply so that a biker has to carry enough speed to allow both wheels to hit the landing at the same time.

**DTS:** Durable Tread Surface

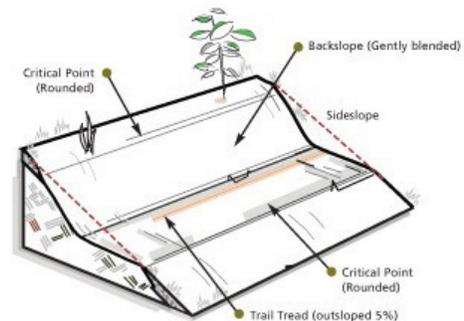
**Easement:** An interest in land of specified dimensions owned by another that entitles its holder to a specific limited use.

**Fall-line:** The path water flows down a slope under most circumstances. Trails that approximate the fall-line are prone to erosion and this alignment should be avoided.

**Flow Trail:** Flow trails create a terrain-induced roller coaster experience for bikers, with little pedaling and braking necessary. Typical features include banked turns, rolling terrain, various types of jumps, and consistent and predictable surfaces. Conspicuously absent are abrupt corners or unforeseen obstacles.

**Full Bench (Construction) Cut:** A trail structure used to create a tread along a Contour Trail, whereby the tread is built entirely on an excavated surface (no fill), which is less subject to compaction, erosion, and surface slumping. It is the preferred method of bench construction on trails construction on side slopes >30%. See also Partial Bench Cut.

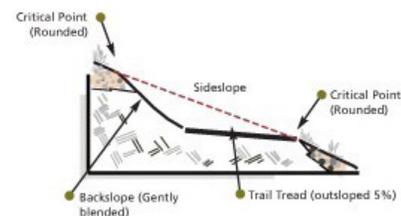
Full Bench Trail



**Gateway:** Where a trail is clearly constrained on two or three sides. The tighter the “squeeze”, the stronger the gateway—a sense of entrance, such as between large rocks, trees at the edge of a meadow, etc.

**GeoBlock:** A trademarked name of structural geogrid material (see Porous Pavement Panel).

**Geogrid:** See Porous Pavement Panel.



**Geotextile (Geofabric, Filter Fabric):** A pervious, woven or non-woven, petrochemical fabric that provides a stable base and separation layer used in a variety of applications including aggregate capping.

**Grade:** Relative steepness (rise and fall) of the trail as compared to a flat horizontal plane. Trail steepness is measured in grade as a percentage.

**Grade Control:** Fundamental part of Sustainable Trail construction whereby strict trail grade restrictions are placed in the design parameters, primarily to minimize erosion due to natural forces and trail users.

**Grade Reversals (or Grade Dip):** A short change from positive (climbing) grade to negative (descending) grade for approximately 6 to 12 feet designed into the trail alignment to shed water. Grade reversals are an important component in Contour Trail construction. See also Rolling Grade Dip.

**Green Infrastructure:** An interconnected network of green space (hubs + corridors) that conserves natural ecosystem values and functions. It provides associated benefits to human populations.

**Half Rule:** A trail's grade should not exceed half the grade of the sideslope. If the grade is steeper than half the grade of the sideslope, it is considered a Fall-line trail.

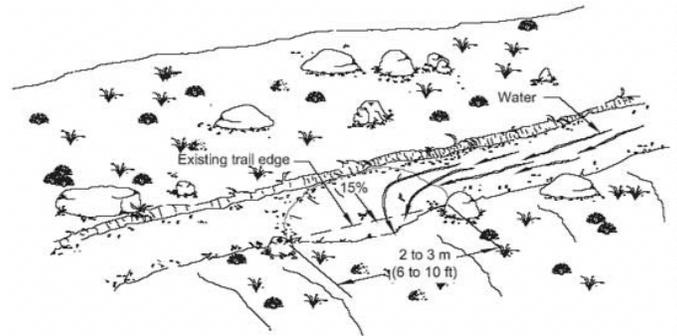
**Hardening:** Any number of methods of strengthening a tread surface in response to degradation or to better accommodate a particular type of use. Examples include: aggregate capping, boardwalk or puncheon construction, turnpiking, or the use of porous pavement panels.

**HLB:** Heritage Land Bank, the real estate management arm of the MOA

**IGA: Integrated Water Control:** Instituting water management into basic trail design, usually during construction. Primary components include Grade Reversals and Outslope.

**Inslope:** The inward cant of the tread surface, where the outside (critical) edge of the trail is higher than the inside edge. Most commonly used on the upper leg of a switchback or to direct water into an inside ditch. Common in wetter climates. Also the subject of a maintenance action when reshaping tread to a designed specified outslope.

**Knicks:** A semi-circular, shaved down section of trail, 6-10 feet in length, and canted to the outside with exaggerated outslope. Most commonly employed as a maintenance action on existing low gradient trail sections. A nick is smooth and subtle, often an unnoticeable feature to users.



**Logging Out:** Clearing a trail of fallen trees.

**Managed Trail:** A trail that has some type or level of actively managed use. To qualify as a managed trail, one or more of the following must apply: 1) The trail is depicted on a map distributed for public use; 2) The trail is maintained on a regular schedule (up to several years interval) for public use purposes; 3) The trail is, or was, constructed for public use; 4) The trail is abandoned or closed to public use but is used for administrative purposes; or 5) The trail is signed or marked for public use.

**Managed Use:** The type of use that is actively managed and appropriate on a trail considering its design and management intent. There may be more than one managed use per trail or trail segment. For example, a shared-use trail's managed uses could include hiker, bicycle, wheelchair, cross-country ski, pack and saddle.

**Maximum Trail Grade:** A defined value for the steepest allowed section of trail grade that is longer than approximately 10 feet, but less than 50 feet in length. Maximum trail grade is determined by evaluating local environmental conditions such as soil, hydrology, and trail use characteristics.

**Milewheel:** Typically a hand-held or pushed wheel that measures linear distance along the ground. Also known as a Cyclometer.

**Mineral Soil:** A combination of sand, silt, clay, and gravel that is typically found as the undisturbed layer of soil below the surface layer of organic material and debris. Local mineral soil is the most common medium for tread construction.

**MOA:** Municipality of Anchorage

**MTB:** Mountain Bike

**Multi-Use Trail:** A trail that is designed to accommodate multiple user groups.

**Obstacles (Natural):** Objects that add challenge by impeding travel. They include: rocks, roots, logs, holes, ledges, drop-offs, etc.

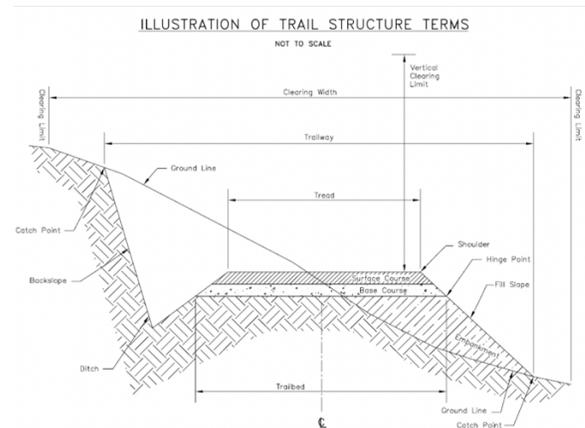
**Off-Highway Vehicle (OHV):** A motorized mechanical device used for carrying persons or objects over land or water, including automobiles, motorcycles, snowmachines, all-terrain vehicles, and motorized boats. May also be referred to as All Terrain Vehicle (ATV) or Off Road Vehicle (ORV).

**Organic Soils:** A soil that is made up of decomposed leaves, wood, needles, roots, bark, and other organic material in various stages of decay. A “true” organic soil has an organic surface layer at least 20” thick. The term is also used to refer to the upper most layer of dark surface soil that has a high organic material content. Organic soils have a propensity of readily absorbing and holding water and are poorly suited as a trail-tread material.

**Outslope:** The outward cant of the tread surface, where the outside (critical) edge of the trail is lower than the inside edge. Outslope promotes sheet flow drainage across the trail preventing flow along the tread and is one of the primary components of integrated water control. An outslope of 5% +/-2% is the typical design specification.

**Paddle Boat:** A manually propelled, non-motorized device that is used or designed to be used for movement of people or goods in or on the water such as kayaks, canoes, and rowboats, but does not include personal flotation devices, or other floats such as inner tubes, air mattresses, or surfboards.

**Partial Bench Cut:** A trail structure used to support the tread along a contour trail, whereby the tread is partially supported by an excavated bench cut into a side slope and partially supported by a fill section of compacted excavated material. Not recommended on side slopes greater than 30% because the filled portion is susceptible to slope failure and/or may require higher levels of maintenance. Categorized as half-bench or 3/4 Bench depending on amount of tread on the excavation cut. Diagram at right shows a partial bench cross section. See also Full Bench Cut.



**Porous Pavement Panel:** A permeable, rigid, multi-pocketed structural geogrid, typically plastic, that is used to harden areas of saturated or unstable soils without the use of gravel infill, bridges, or boardwalks. e.g. Geo-Block and Geogrid

**Puncheon:** A log or timber structure built directly on the ground or on sills, used for crossing degraded or boggy areas. (See photo at right.)

**Retaining Wall (Revetment):** See Crib.

**Right-of-Way:** A legally reserved area for public passage.

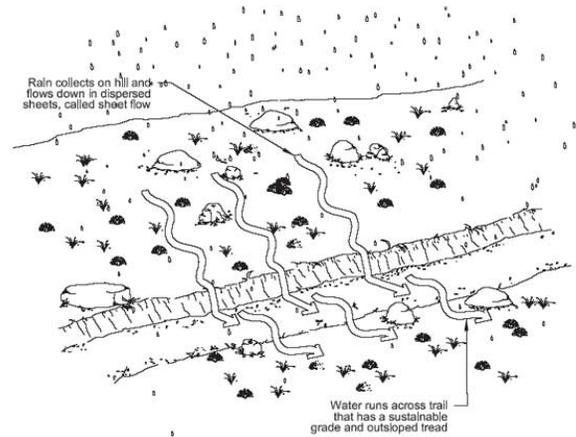


**Rolldown:** The trail drops significantly, but a biker is able to roll down the trail with both wheels firmly on the ground.

**Rolling Grade Dip:** A trail structure that utilizes a ramp-like excavation, a flat-bottomed drain, and a built up compacted soil dam to direct water off the tread. Typically utilized as a maintenance structure on existing trails.

**Shared-Use Trail:** A trail that is designed to accommodate multiple user groups.

**Sheeting (Sheet Flow):** The natural flow of water downward across the landscape. Controlled grade and integrated water control designed in sustainable trail design seeks to maintain sheet flow over and across constructed trails to prevent concentrated water flow along the tread that would focus and accelerate erosion. (See drawing at right.)



**Short Pitch Maximum:** See Maximum Trail Grade.

**Sideslope:** See Slope.

**Sill:** The perpendicular timber or foundation upon which boardwalk, planking, or bridge stringers rest.

**Singletrack Trail:** A narrow trail typically requiring passage by users in a single file. Commonly used to describe all-terrain (mountain) bicycle trails.

**Slope:** Refers to the relative steepness of the natural terrain. Slope can be calculated by determining the vertical rise over a given horizontal distance, but it is more often directly read from a slope measurement instrument called a Clinometer. Slope can be expressed in degrees, but for trail use, it is more commonly expressed as a percentage. For example, a 10% slope has 10 feet of rise over 100 feet of horizontal distance. A 10 foot rise over a 10 foot distance would be a 100% slope, which is equivalent to a 45° angle.

**Slough:** Tread material, backslope material, or other debris that has moved due to gravity or erosion, usually into or out of the tread. See illustration at “Berm”.

**Snowmachine (snow vehicle or snowmobile):** A motorized vehicle of 850 pounds or less, primarily designed to travel over snow or ice, and supported, in part, by skis, belts, cleats, or low-pressure tires.

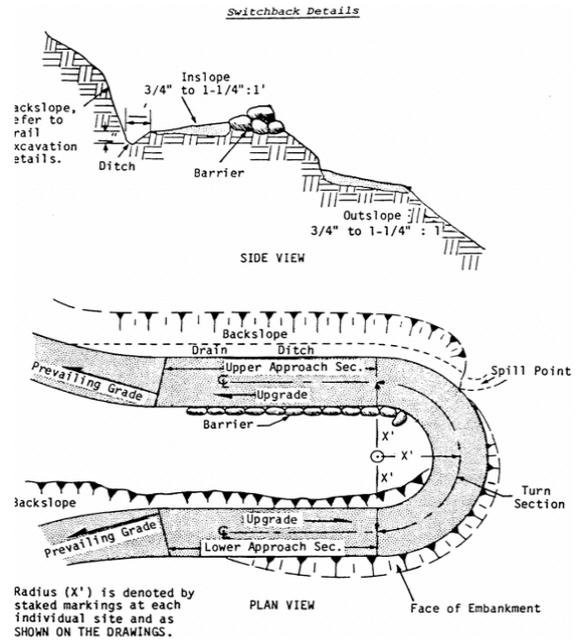
**Snow Trails:** Trails that have a surface consisting predominantly of snow or ice that are designed and managed to accommodate use on that surface during the winter season.

**Social Trail** – An unplanned, usually unmaintained trail alignment that develops informally as a result of public route pioneering, overuse, or degraded trail avoidance.

**Sustainable Trail:** A trail that conforms to its terrain and environment, is capable of handling its intended use without serious resource degradation, and requires minimal maintenance.

**Swamping:** Technical term referring to the physical removal of slash or downed trees on a trail. A swamper usually works in cooperation with a sawyer removing slash and lugging fuel and oil.

**Switchback:** A sharp turn in the tread alignment, often 180 degrees, used to gain elevation on steep side slopes (typically required on slopes above 22%). Switchbacks are a highly technical trail structure and should be avoided in favor of Climbing Turns located on slopes below 22% when possible. See illustration at right.



**Table Top:** A jump a biker can safely ride over with both wheels firmly on the ground, and/or practice jumping before trying more difficult maneuvers.

**Technical Trail Features (TTF):** Objects that have been introduced to the trail to add technical challenge. Examples include: rocks, logs, elevated bridges, jumps, and drop-offs.

**TMO:** Trail Management Objectives

**Ten-Percent Average Grade Guideline:** Average trail grade refers to the overall average grade of a trail alignment between two major control points—typically the trail head and destination point—but may apply to other trail segments depending upon the terrain the trail crosses. An average trail grade of 10 percent or less is conservatively considered sustainable, but true “sustainability” is dependent on a number of factors.

**Terra (Standard) Trails:** Trails that have a tread surface consisting predominantly of native soil or rock that are designed and managed to accommodate use on that surface. A terra trail may also have sections of board- walk, or other hardened tread.

**Trail:** A linear route managed for human-powered, stock, boats, or OHV forms of transportation or for historic or commercial values.

**Trail Class:** The prescribed scale of trail development, representing the intended design and management standards of the trail.

**Trail Corridor:** The total cleared area on both sides of a trail.

**Trail Hardening:** A technique to modify the surface characteristics of a tread. Usually applied in wet or boggy ground or to enhance ADA characteristics. This ranges from aggregate capping to boardwalk or planking to turnpike construction to the use of porous pavement.

**Trail Management Objective (TMO):** Documentation of the intended purpose and management strategies of a trail based on its designed use, design parameters, and special considerations.

**Trail Opening:** Identifies the date a particular trail will be opened to the public after a closure.

**Trail Segment:** A specific section of a trail with identified starting and ending points. May be used to describe a general area of a trail such as in a TMO or a short specific section of trail with a distinct set of physical characteristics, such as in a trail condition assessment.

**Trail Standards:** Trail maintenance specifications that define the level of quality and service the trail manager will provide for the trail user.

**Trail Structures:** Any component of a trail that has been purposely constructed. This would include developed treadway, bench cuts, switchbacks, retaining walls, drainage devices, culverts, bridges, hand railings, boardwalks, and trail signs and posts.

**Trail Type:** A category that reflects the predominant trail surface and general mode of travel accommodated by a trail. There are three trail types: terra (standard), water, and snow trails.

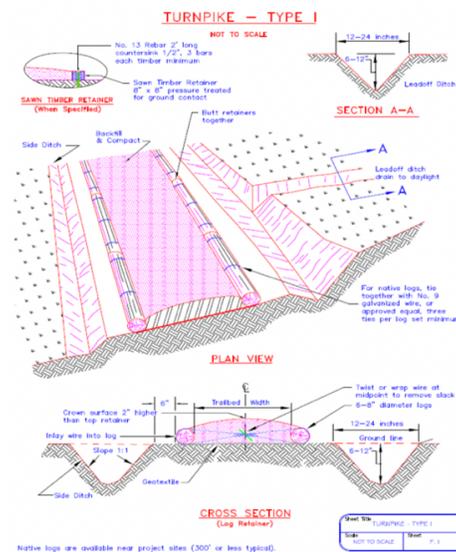
**Tread:** The wear surface of the trail upon which a user travels. The tread, or treadway, is the most fundamental component of a trail.

**Tread Creep:** Areas along a contour trail where the tread is sliding downslope due to compaction, slope failure, or fill failure of a partial bench cut. May be caused by trailside features such as trees, bushes, roots, or another projection that forces traffic onto the critical edge, compacting it downslope.

**Tread Watershed:** A trail segment defined by the trail tread between a local high point (crest) and the next local low tread point (dip) plus the land area above the trail that drains onto this segment.

**Turnpike:** An elevated tread feature constructed of mineral material excavated from adjacent ditches. May have log, timber, or rock curbing. Typically used for crossing degraded or boggy areas. May also be partially backfilled with imported mineral soil or capped aggregate. (See right.)

**Vehicle:** A mechanical device used for carrying persons or objects over land, water, or through the air, including automobiles, motorcycles, bicycles, snow-machines, all-terrain vehicles, motorized boats, and aircraft. Vehicle does not include non-motorized sail- boats, canoes, kayaks, rafts, sailboards, hang gliders, gliders, or parasails.



**Waterbar:** A trail structure typically constructed of wood, rock, or reinforced rubber and soil that is set at an angle across tread to direct water off the treadway. Generally being phased out in favor of Grade Reversals and Outslope integrated into new construction, and Outslope and Rolling Grade Dips retrofit into existing construction. (See left.)

**Water Trail:** Trails that have a surface consisting predominantly of water that are designed and managed to accommodate use on that surface, and which may include land-based portages.

# APPENDIX 5

## Trail Management Objectives (TMO)

TMO's are the method used by the US Forest Service to describe the planned status and maintenance of each trail. The Girdwood Trails Committee has adopted a modified version of the USFS TMO. Below is the TMO for Girdwood trails.

### Trail Management Objectives

MOA Park District:

Trail Name:

Trail Beginning Terminus:

Trail Ending Terminus:

Trail Inventory Length:  Miles

Trail Number:

Beg. Milepost:

End. Milepost:

Trail Mileage Source:  Wheel  GPS  Map  Unknown

#### TMO Trail Section

<input style="width: 20px; height: 20px;" type="text"/>	Section Beg. Terminus: <input style="width: 80%;" type="text"/>	Beg. Milepost: <input style="width: 60%;" type="text"/>
Sec.#	Section End. Terminus: <input style="width: 80%;" type="text"/>	End. Milepost: <input style="width: 60%;" type="text"/>

#### Designed Use Objectives

(Check one)

**Trail Type**

Standard Terra Trail

Snow Trail

Water Trail

(Check one)

**Trail Class**

1 (Primitive/Undeveloped)

2 (Simple/Minor Development)

3 (Developed/Improved)

4 (Highly Developed)

5 (Fully Developed)

**Difficulty Rating**

(For designed use of mountain bike and cross-country ski only. Check one.)

Easiest (white circle)

Easy (green circle)

Intermediate (blue square)

Difficult (black diamond)

Most Difficult (dbl. diamond)

**Elev. Gain / Loss**

Gain (ft.)

Loss (ft.)

**Level of Use**

Low (0-10 / day)

Moderate (10-100 / day)

High (100+ / day)

Est.  Actual  Counter

**Designed Use**

(Check one)

Hiker / Pedestrian

Mountain Bike

Bicycle

Cross-Country Ski (Skate)

Cross-Country Ski (Classic)

Skijoring

Dog Sledding

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Design Parameters**

(Fill in all that apply)

Tread Width (inches)

Target Grade (%)

Short Pitch Maximum (%) (up to 200' lengths)

Target Cross-Slope (%)

Clearing Width (feet)

Clearing Height (feet)

Switchback Radius (feet)

\_\_\_\_\_

**Target Frequency Per Year**

(Fill in all that apply)

Trail Opening

Tread Repair

Drainage Cleanout

Logging Out

Brushing

Snow Trail Grooming

Condition Survey

\_\_\_\_\_

Page  of



# Trail Management Objectives

Trail Name:  Trail Number:

## Travel Management Strategies

### Managed Use

(Fill in all that apply)

	From Date (mm/dd)	To Date (mm/dd)
<input type="checkbox"/> Hiker / Pedestrian	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Mountain Bike	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Bicycle	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Cross-Country Ski (Skate)	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Cross-Country Ski (Classic)	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Skijoring	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Dog Sledding	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> _____	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> _____	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> _____	<input type="text"/>	<input type="text"/>

### Prohibited Use

(Check if applicable)

	From Date (mm/dd)	To Date (mm/dd)
<input type="checkbox"/> All Motorized Use	<input type="text"/>	<input type="text"/>
(Or, fill in all that apply)		
<input type="checkbox"/> Hiker / Pedestrian	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Mountain Bike	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Road Bike	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Cross-Country Ski (Skate)	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Cross-Country Ski (Classic)	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Skijoring	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Dog Sledding	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> _____	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> _____	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> _____	<input type="text"/>	<input type="text"/>

### Other Use

(Optional: Check any that apply)

	Accept	Discourage	Eliminate
<input type="checkbox"/> Hiker / Pedestrian	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Mountain Bike	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Road Bike	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Cross-Country Ski (Skate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Cross-Country Ski (Classic)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Snowshoe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Skijoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Dog Sledding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Wheelchair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Special Considerations

(Check any that apply. Provide specifics and reference information below.)

<input type="checkbox"/>	Shared System (shared with other system road or trail)
<input type="checkbox"/>	Accessible per Current Agency Guidelines
<input type="checkbox"/>	Mechanized Tools or Equipment Prohibited
<input type="checkbox"/>	Threatened & Endangered/Sensitive Species Present
<input type="checkbox"/>	Heritage Resource Present
<input type="checkbox"/>	Easement: Existing _____ Needed _____
<input type="checkbox"/>	Existing Permit or Agreement: Trail-Specific _____ Area _____

### Remarks / Reference Information

(Use continuation sheet if needed.)

Name

Signature

Title

Date

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## APPENDIX 6

# Adopted Planning Documents that Affect Girdwood Trails

*Alyeska Resort Master Plan, 2009*

*Anchorage Park, Greenbelt and Facility Recreation Plan, Vol. 3: Turnagain Arm, 1985*

*Assessment of Ecological & Socio-Economic Conditions and Trends for the Chugach National Forest, 2014*

*Chugach State Park Management Plan, 2016*

*Chugach State Park Trail Management Plan, 2016*

*Commercial Areas and Transportation Master Plan, Girdwood, Alaska, 2001*

*Girdwood Area Plan, 1995, currently under review*

*Girdwood Iditarod Trail Route Study, 1997*

*Girdwood South Townsite Master Plan, 2009, amended 2014*

*MOA Areawide Trails Plan, 1997*

*MOA Title 21, Chapter 9 Girdwood Land Use Plan, 2005, amended with MOA. Assembly approval on an ongoing basis*

## APPENDIX 7

# Interagency Agreements

Documents outlining the agreements for trail work such as Interagency Land Management Agreement, Memorandum of Understanding, and contracts made through Alaska Trail Volunteers and other organizations are available at the Girdwood Parks and Recreation Office.

### **Established Partnerships with Government Organizations:**

- USFS, Glacier Ranger District
- Alaska Department of Natural Resources
- Alaska State Parks, Chugach State Park
- Municipality of Anchorage, Heritage Land Bank
- Girdwood Board of Supervisors

### **Grant Organizations:**

- Anchorage Park Foundation
- American Hiking Society
- Kenai Mountain–Turnagain Arm National Heritage Area Land and Water Conservation Fund
- Recreational Trails Fund

### **Volunteer Organizations:**

- Student Conservation Association (SCA)
- Youth Employment in Parks (YEP)
- Alaska Trails Volunteers (Adopt-A-Trail)
- Girdwood Mountain Bike Alliance
- Girdwood Nordic Ski Club

### **Other:**

- Various service organizations assist with work on Girdwood Trails under the supervision of the Girdwood Parks and Recreation office.