

Introduction



The Girdwood Trails Committee’s primary goal is to create a highly functional, interconnected, multi-use trail system that meets current and future needs of the community. The Girdwood Valley Trails Management Plan is a companion document to the Girdwood Trails Plan (2024). While the Girdwood Trails Plan includes the community’s vision, goals, and aspirational future trails, the Management Plan provides a framework to guide sustainable trail development and best management practices for those trails.

This Management Plan addresses the benefits and challenges of building trails in the Girdwood Valley, the principles and policies that are critical to building sustainable trails, and individual trail goals and descriptions.

The Girdwood Valley Trail Management Plan is a living document, one that can be altered as community priorities and trail systems shift over time. Changes to the text require a vote of approval by the Trails Committee. The Management Plan should be considered a companion to not only the Trails Plan, but also to the Girdwood Comprehensive Plan (2025) and other planning documents for the Girdwood community.

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

Thank you to all Girdwood community members who contributed their time and expertise to this document.

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CHAPTER 1

Girdwood and Its Trails



Why Trails Are Important to Girdwood

Trails are a critical component of everyday life in Girdwood. The community's 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.

History of the Community and Its Trails

Early History

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. Miners and other workers developed a supply trail, now famous as the Iditarod Trail, which went from the ice-free port of Seward through Girdwood and over Crow Pass to the gold mining districts of Western Alaska.

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. By 1954 Girdwood citizens were connected by road to Anchorage and the Kenai Peninsula.

Ski Town

Outdoor recreation activities became an important part of Girdwood life in 1956 when the Girdwood Community Club formed the nonprofit Alyeska Ski Corporation. A poma lift and day lodge facility were in use on Mt. Alyeska by 1959, and the first chair lift was installed in 1960. Skiing and tourism grew throughout the 1960's as skiers flocked to Girdwood to enjoy the town's abundant snowfall and winter recreation opportunities. In 1967 Alaska Airlines bought the Resort and then sold it to Seibu Corporation in 1980. Seibu invested heavily in Alyeska, installing new chair lifts, the aerial tramway, mountaintop restaurants, and 307-room Hotel Alyeska. John Bryne III purchased Alyeska Resort in 2006 and further improved the Resort, installing new ski lifts, downhill mountain biking trails, and a hiking trail up the North Face of Mt. Alyeska. Alyeska changed hands again in 2018, when Canadian hospitality company Pomeroy Lodging purchased the Resort. Pomeroy built the Alyeska Nordic Spa and has plans to expand the base area around the Hotel Alyeska with housing, conference center and recreation facilities.

Nationally Significant Trails and the Girdwood Hand Tram

- *Iditarod National Historic Trail (INHT)*

The Iditarod Trail was designated a National Historic Trail when the National Recreation Trails Act was amended in 1978 to include trails of national significance. The Iditarod Trail was one of four trails included with the passage of the Act. There are now 21 National Historic Trails. The well-known Iditarod sled dog race from Anchorage to Nome uses portions of the Iditarod National Historic Trail.

In Girdwood, both the Municipality of Anchorage and the US Forest Service manage parts of the INHT. The INHT in Girdwood was the object of a trail route study undertaken by the National Park Service in conjunction with the Girdwood Trails Committee. Trail locations, widths, and surfacing were laid out in the Girdwood-Iditarod Trail Route Study. The Study was adopted by the Anchorage Assembly on May 20, 1997, and it serves as the guiding vision for this trail in Girdwood. As Girdwood continues to grow, the need to establish a protected alignment of this trail has become more apparent.

- *Indian-to-Girdwood Multi-Use National Recreation Trail*

The Indian-to-Girdwood Multi-Use National Recreation Trail, familiarly known as the Bird-to-Gird Trail, is Girdwood's second national trail. It is a paved, multi-use pathway that follows the old alignment of the Seward Highway from Girdwood to its neighboring communities of Bird and Indian. It is managed by Chugach State Park. Eventually the Gird-to-Bird Trail will connect to the INHT.

- *Girdwood Hand Tram*

The Girdwood Hand Tram allowed hikers on the Winner Creek Trail to cross Glacier Creek. The tram was located in the Four Corners area, where miners originally built a bridge to access the upper Girdwood Valley. The tram was built entirely by volunteers donating countless hours of hard labor. From 1999-2001, they prepared the site, constructed the timber frame terminals, lined the cable across the creek and installed the tramcar. The Girdwood Hand Tram was financed through grants, donations, and contributions of time, labor and materials, including more than 60 helicopter trips. The Hand Tram became one of the biggest trail draws in the Girdwood Valley for visitors and locals alike, but had to be closed in 2019 due to a fatal accident. Girdwood Parks and Recreation and the US Forest Service are working on a plan to replace the Hand Tram with a suspension bridge. The Trails Committee retains a drawing of the Hand Tram in its logo.

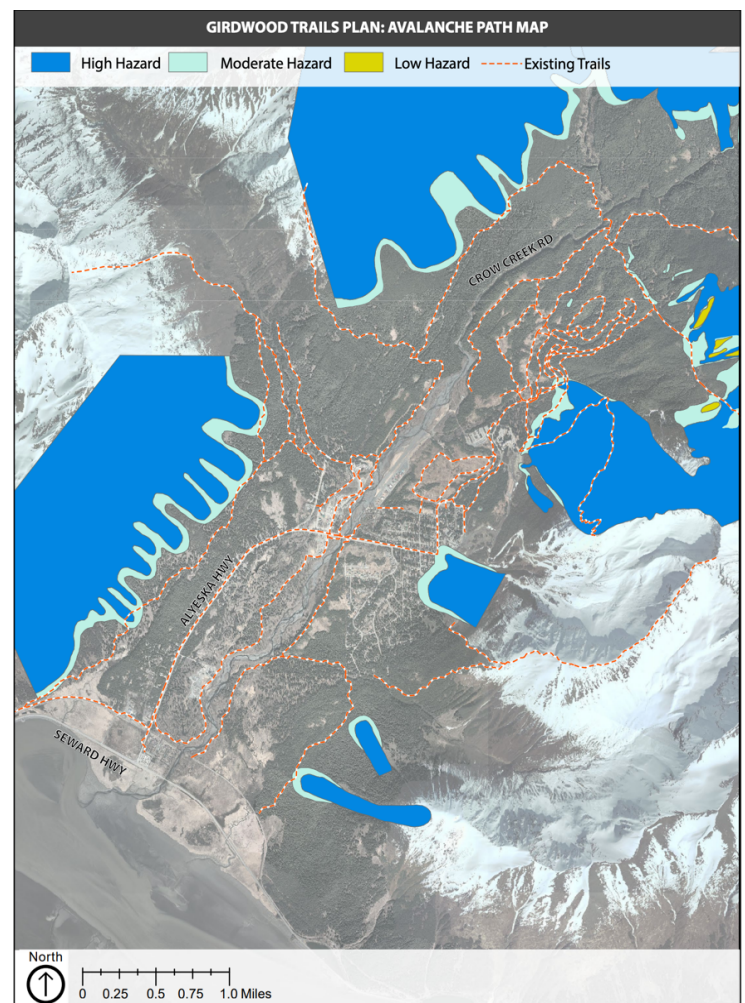
Physical Features

(Section adapted from *Girdwood Area Plan 1995*, *Girdwood Trails Plan 2024*, and *Girdwood Comprehensive Plan 2025*)

Geology and Topography

The Girdwood Valley generally runs along a northeast/southwest line and is about 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. Topographic features throughout the valley consist of open meadows, cliff bands, prominent knolls, gullies, ridges, and glacial bowls.

The alignment of the trails and their condition are directly influenced by the geology and topography of the valley. 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.



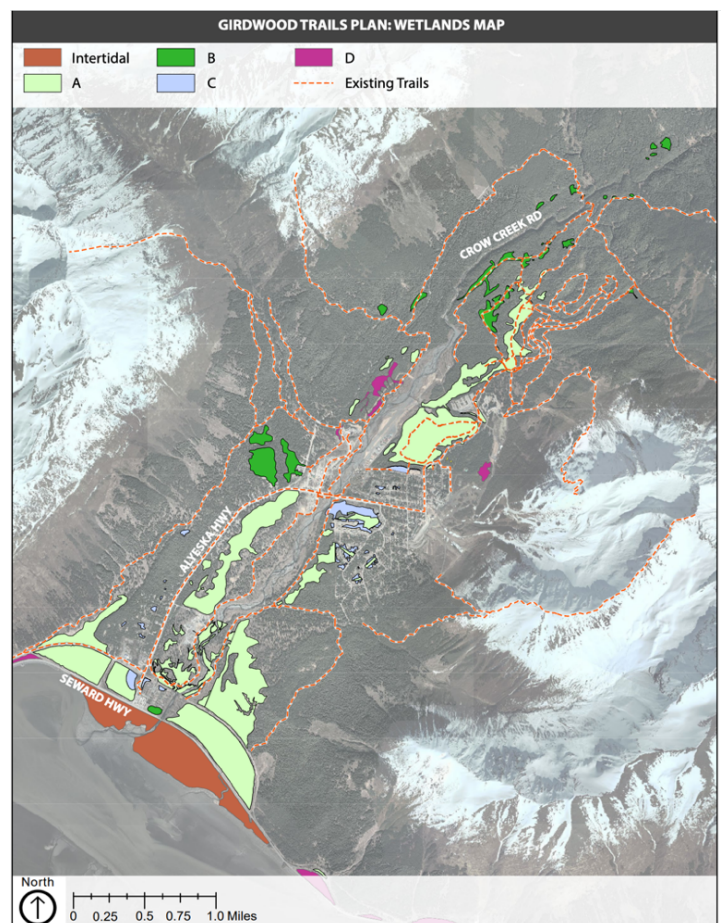
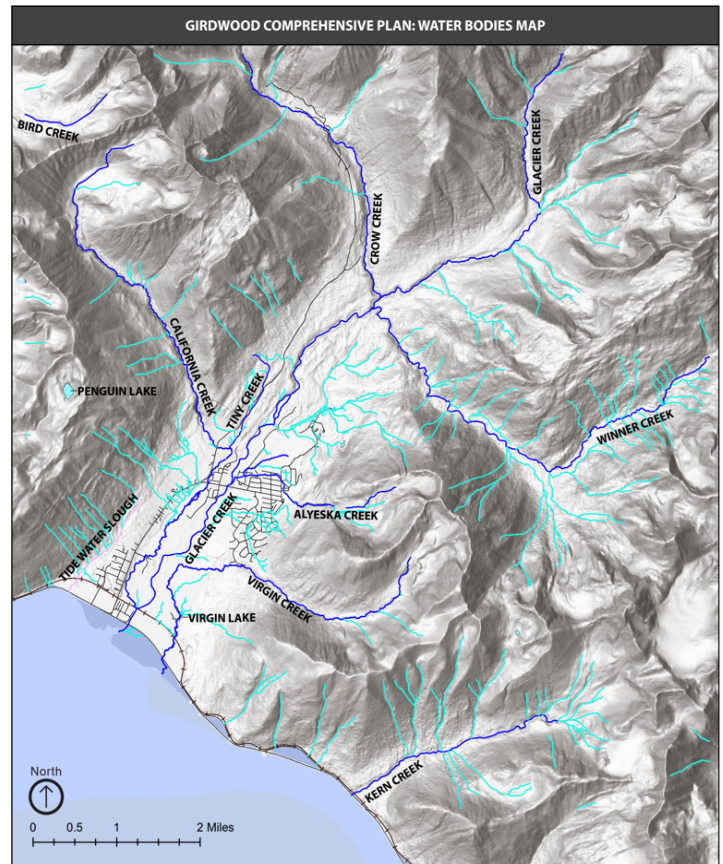
Hydrology

The major melt-water stream is Glacier Creek, which begins at the termini of several glaciers east of 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 wetlands is 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.

These numerous creeks and wetlands make trail building in the valley both expensive and environmentally challenging. Bridges, culverts, and boardwalks are needed to safely cross streams and to protect the wetlands. These kinds of infrastructure can add significantly to the cost of building and maintaining trails.



The numerous streams and wetlands are important fish spawning and rearing areas. All five species of salmon, steelhead, and Dolly Varden have been observed in Girdwood Valley waters. To protect the Valley's fish resources, trails need to be located far enough from streams so that trail erosion does not add sediment to the stream, which can destroy fish habitat. Any culverts should be sized and placed to allow for fish passage.

Soils

According to the U.S. Geological Survey, Girdwood was heavily glaciated during the Pleistocene period. 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. 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.

The commonly found deposits of unconsolidated material that form the basic soil units are alluvial, colluvial, glaciomarine, and estuarine deposits. 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. 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.

The soils of Girdwood Valley make trail building both difficult and expensive. Materials that make up the glaciomarine and estuarine soil units have a high water-holding capacity and are poor areas to align trails as integrated water management is ~~is~~ **very** challenging because of the flat topography. Trail alignments need to avoid these areas whenever possible.

Vegetation

Girdwood Valley is located at the northern edge of the Pacific coastal rainforest zone. 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.

When building trails in the coastal rainforest, it is important to design the trail so that any old growth timber is protected and to prevent blowdowns caused by trees left exposed to more wind than their roots systems can support. Another consideration for trails in a coastal rainforest is that plant growth is lush and rapid. Trails need to be brushed on a consistent basis to keep the trails navigable and to limit trail user's exposure to cow parsnip, which can cause skin rashes and blistering.

Climate

Temperature and Precipitation

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.

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 valley typically range from 15 to 25 degrees. 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.

Girdwood's average annual precipitation is 67 inches. 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

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. It produced a set of 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.

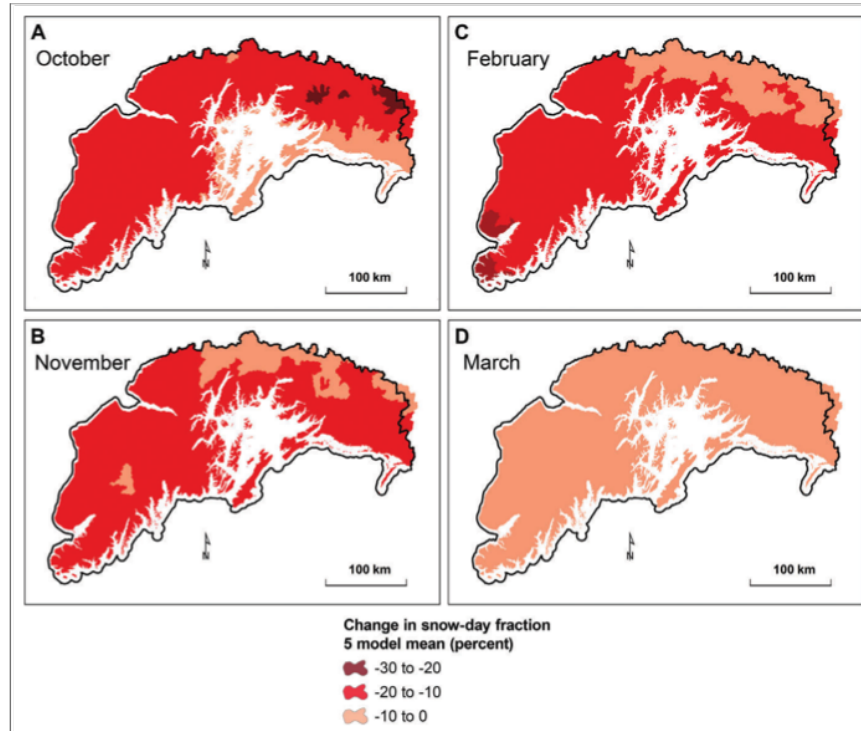
Due to the probable changes in winter snowpack, stream flows are likely to change across the valley with slightly increased volume everywhere and larger late spring flows in streams originating in the upper valley.

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

Girdwood Valley Trail Management Areas



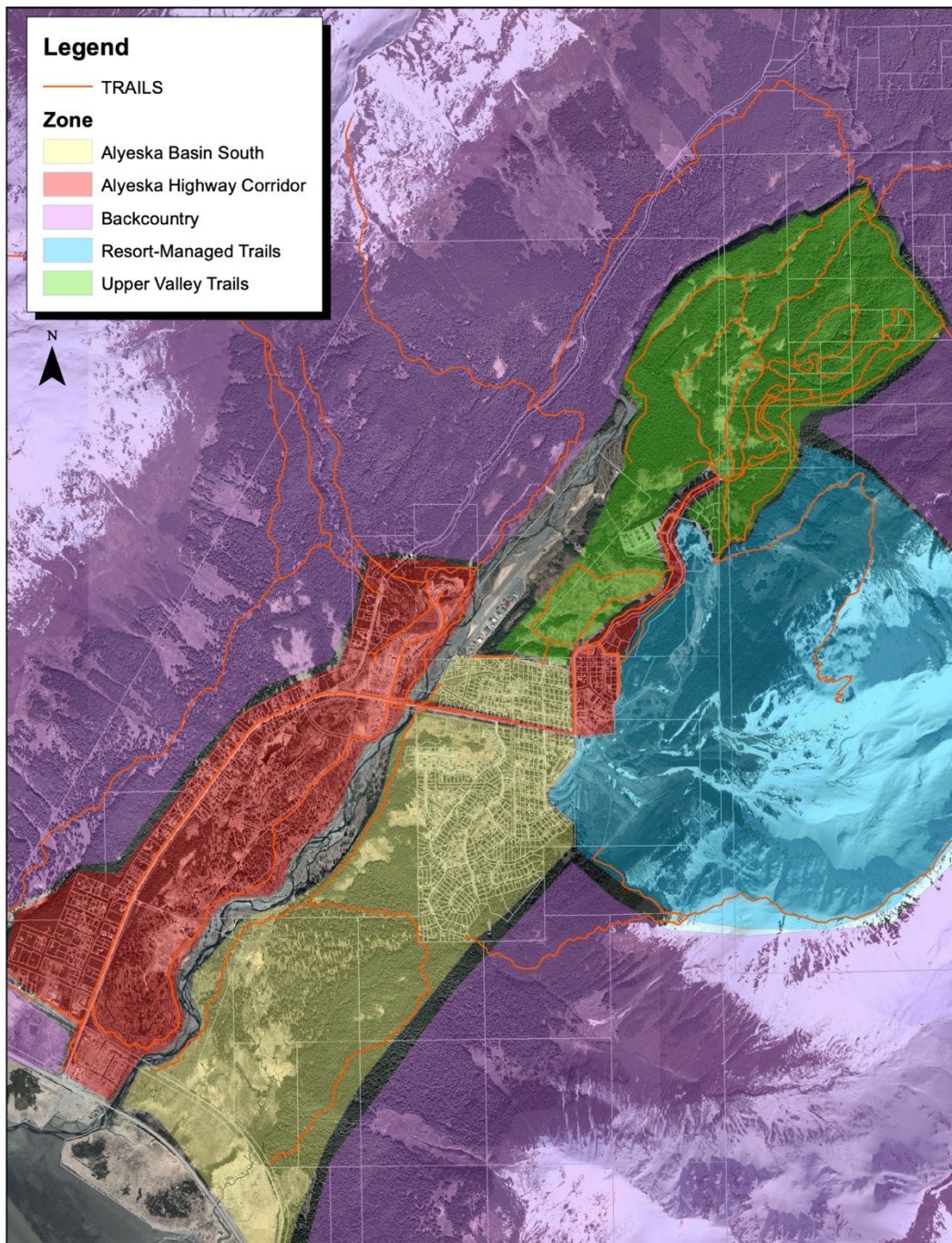
Girdwood Valley has over 30 recognized trails that run for more than 100 miles, extending from the valley floor to the high alpine terrain. The majority of the trails are along the valley floor and the lower slopes of the mountains that confine the valley. Direction of travel on most trails is loosely along a north/south line. The 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.

Management Areas

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

- **Upper Valley Trails:** Upper Valley trails have the most concentrated use of any trails in the valley with the highest diversity of user groups. Trails range from wide groomed tracks to barely discernible routes. Residents and visitors hike, bike, Nordic ski, backcountry ski, and snowshoe on these trails. There is a mix of both summer and winter trails; however, most of the winter trails traverse wetlands and their use is prohibited when the ground is not frozen.
- **Resort-Managed Trails:** Alyeska Resort manages and maintains trails that are on the Resort's private property. These trails are open to the public while fees apply for lift access. A trailhead for the Winner Creek Trail is located adjacent to Hotel Alyeska.
- **Alyeska Basin South Trails:** The majority of the trails in this area are routes that have evolved through social use. Their alignments are generally across flat ground with numerous streams, wetlands, and flood plains.

- **Alyeska Highway Corridor Trails:** This area contains all of the paved multi-use trails in the valley. 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. Combined, these trails provide important links throughout the community.
- **Backcountry Trails:** This area contains the more remote, primitive trails. These trails are mostly along historic transportation routes. Several trailheads are found along Crow Creek Road. Trails in this corridor face significant pressure from potential development of the Crow Creek neighborhood developments, including the new Holtan Hills subdivision.



Credit: Girdwood Trails Plan, p. 23

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 hiking and biking trails in the summer and alpine ski runs in the winter.

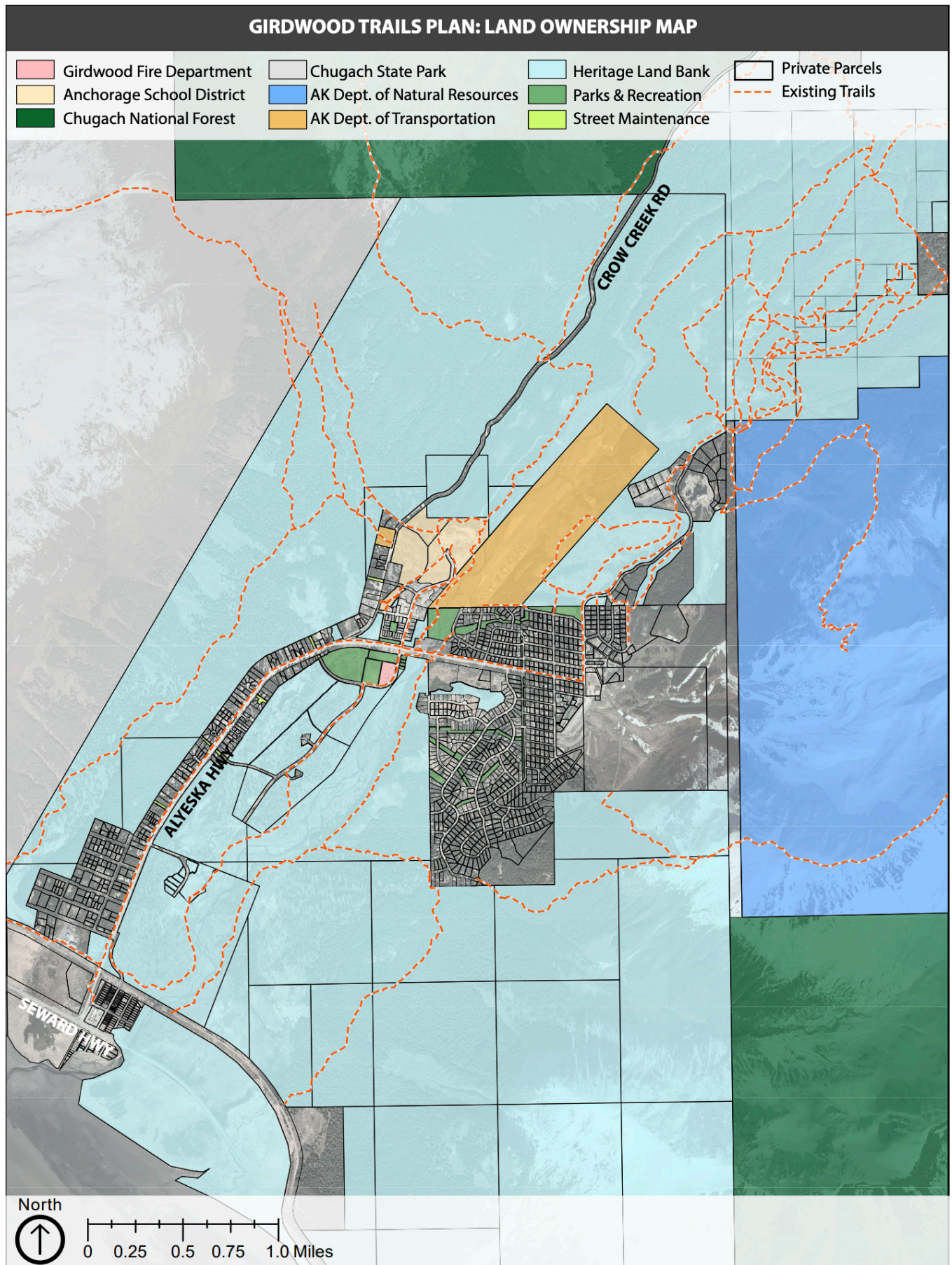
Public landowners hold most of the valley's land. The Municipality of Anchorage's Heritage Land Bank (HLB) is a major landowner as is the US Forest Service. The State of Alaska owns land through various agencies with Chugach State Park on the west side of the valley, Alaska Department of Transportation's airport along Glacier Creek and Alaska Department of Natural Resources land on the east 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 only local approval, such as from Trails Committee, Girdwood Parks & Recreation, or 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 the State Park's Girdwood Valley trail decisions. The Girdwood Trails Committee holds a renewable, five-year permit from Alaska Department of Natural Resources for a portion of the Beaver Pond Trail. See Appendix 7.

For trails owned by the Chugach National Forest, the District Ranger approves, with input from the Girdwood Trails Committee, all the US Forest Service's 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. See Appendix 7.

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.



Private Parcels

Existing Trails

Credit: Girdwood Trails Plan, p. 25

Trail Managers

Trail managers are government agencies or non-profit organizations responsible for developing, constructing, and maintaining trails. The current trail managers in Girdwood Valley are the US Forest Service, Chugach State Park, the Girdwood Nordic Ski Club, Chugach Powder Guides, Bikewood, and Girdwood Trails Committee.

- The US Forest Service manages Winner Creek Trail and the Iditarod Trail.
- Chugach State Park manages the Bird-to-Gird Trail.
- The Nordic Ski Club constructed and manages the Nordic 5K Loop.
- Chugach Powder Guides, which constructed the Snow Cat Trail, is responsible for grooming and maintaining the Snow Cat Trail and its bridge over Winner Creek for access to Sunnyside Mountain.
- Bikewood constructed and maintains the bike trails in the Nordic 5K loop area.
- Girdwood Trails Committee is responsible for all other trails on HLB land.

Non-profit organizations that wish to manage trails on HLB land must obtain an easement from the Municipality of Anchorage's Heritage Land Bank (HLB). 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 planned trail, the organization constructs the trail, then applies for the easement. This process is described in detail in Chapter 3.

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. If the entity is no longer able to maintain the trail easement, the Girdwood Trails Committee and HLB will address the issue.

CHAPTER 3

Trail Principles



The Girdwood Valley Trails Management Plan uses established principles to plan, design, construct, and manage trails. Careful planning helps create a varied and integrated trail system for a broad spectrum of users. Wise management reduces long-term costs through the use of these principles for trail construction and maintenance. When followed, these principles help secure these trails for future generations.

Trail User's Experience

Multiple user groups recreate in the Girdwood Valley: hikers, bikers, skiers, snowshoers, moms with strollers, and tourists with little outdoor experience to name a few. All of these people have different reasons for using Girdwood's trail system. How people interact with a particular trail is called the Trail User's Experience.

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 think a trail has lost its primitive quality if a downed tree is cleared from the path. A group of mountain bikers wanting a high-speed technical downhill is looking for a much different TUE than a cross-country hiker enjoying the silence broken only by a chickadee.

The key to creating a positive TUE for diverse user groups is variety. The Girdwood trail system strives to provide multiple trail options, featuring differing surfaces, settings, grades, etc. Trails that are enjoyable, safe, and appropriately challenging for the intended user group 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	Trail provides a 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	Trail takes users away from the daily grind, and helps reduce stress.
Solitude	Trail provides solitude, isolation, and independence. It allows users the space to get away from the urban environment and other people.
Challenge	Trail provides a venue for users to improve physical abilities, test endurance and gain a sense of accomplishment.
Risk	Trail provides a sense of adventure. 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	Trail allows users to feel secure, physically and mentally, in an outdoor setting.
Fun	Trail provides users with amusing or enjoyable experiences.
Exercise	Trail provides a venue for health and fitness. For some users this is a primary goal, for others a bonus, for some an obstacle.
Socializing	Trail provides a shared experience and a time/space for conversations. It enables users to enjoy the closeness of friends and family or allows users to meet new people with similar interests.

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

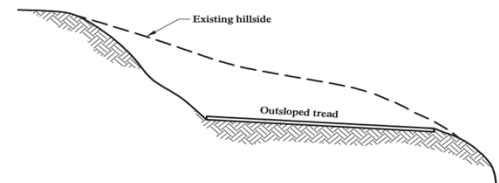
Sustainable Trails Principles

Adapted from the Alaska Trail Stewards Handbook, 2023.

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.

For a more in-depth discussion of trail principles, read the US Forest Service Trail Construction and Maintenance Notebook online (FS-1262 | February 2025).

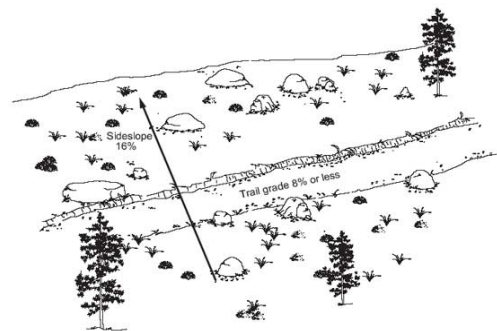
Full bench construction: When a trail traverses a side-hill, full bench construction provides the most compact tread surface possible, encourages sheet flow, does not trap water on the trail, and eliminates the potential for tread slump failure.



USFS Trail Construction and Maintenance Notebook

Contour curvilinear alignment: 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.

Controlled grade: Through careful planning, design and trail layout, controlled grade – at an average of 8-10%, can help limit erosion of the tread surface. The percent grade of the trail should also not exceed half of the grade of the side-slope (otherwise known as the half-rule). The drawing illustrates the half-rule: the side slope is 16% while the trail grade is 8%.



USFS Trail Construction and Maintenance Notebook

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 bank-side 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.

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.

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.

Clearing: Clearing widths and heights should conform to the trail class and design parameter specifications assigned to a particular trail or trail segment. Additional clearing may be prescribed to remove falling hazard trees adjacent to developed areas or to improve views.

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.

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 such as wetlands, highly visible hillsides, significant vegetation areas, threatened and endangered species habitat, highly erodible soils, unstable slopes, and ridge lines. 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. Connectivity between drainage ditches and streams should be minimized to reduce sediment delivery potential.

Seasonal Trails: 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.

There are remarkable winter-only trails through wetlands and meadows, providing trail experiences on frozen surfaces. These routes are not sustainable or accessible during the summer months. In addition, other routes that utilize elevation and topography to access more remote areas of the Valley are not accessible in the winter due to avalanche hazards. Finally, there are trails that are managed for ski-only during the winter that are utilized as multi-use during the summer months. In short, the Girdwood trail system varies greatly in seasonal routes and uses. Trail design and management practices should consider all seasonal and environmental conditions for the safety of trail users and to protect the environment the trail traverses.

CHAPTER 4

Trail Planning and Process



The residents of Girdwood highly value their trails. 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%). At the 2019 Imagine! Girdwood public meeting, the top outdoor recreation priority for respondents was new four-foot wide trails for hiking/running, mountain biking, and classic Nordic skiing. This data strongly suggests a desire for an expanded, year-round Girdwood Valley trail network.

In 2019, Heritage Land Bank directed Girdwood to develop a master plan for its trail system. The Girdwood Trails Committee, with hundreds of community members, created its vision of a trail system. In 2024, the Anchorage Assembly approved the Girdwood Trails Plan. The plan provides a clear direction to the Girdwood community and Heritage Land Bank for any future trail construction. This valley-wide trail vision will ensure that the Valley's diverse user-group needs are addressed in a cohesive manner, with access and parking integrated into the plan.

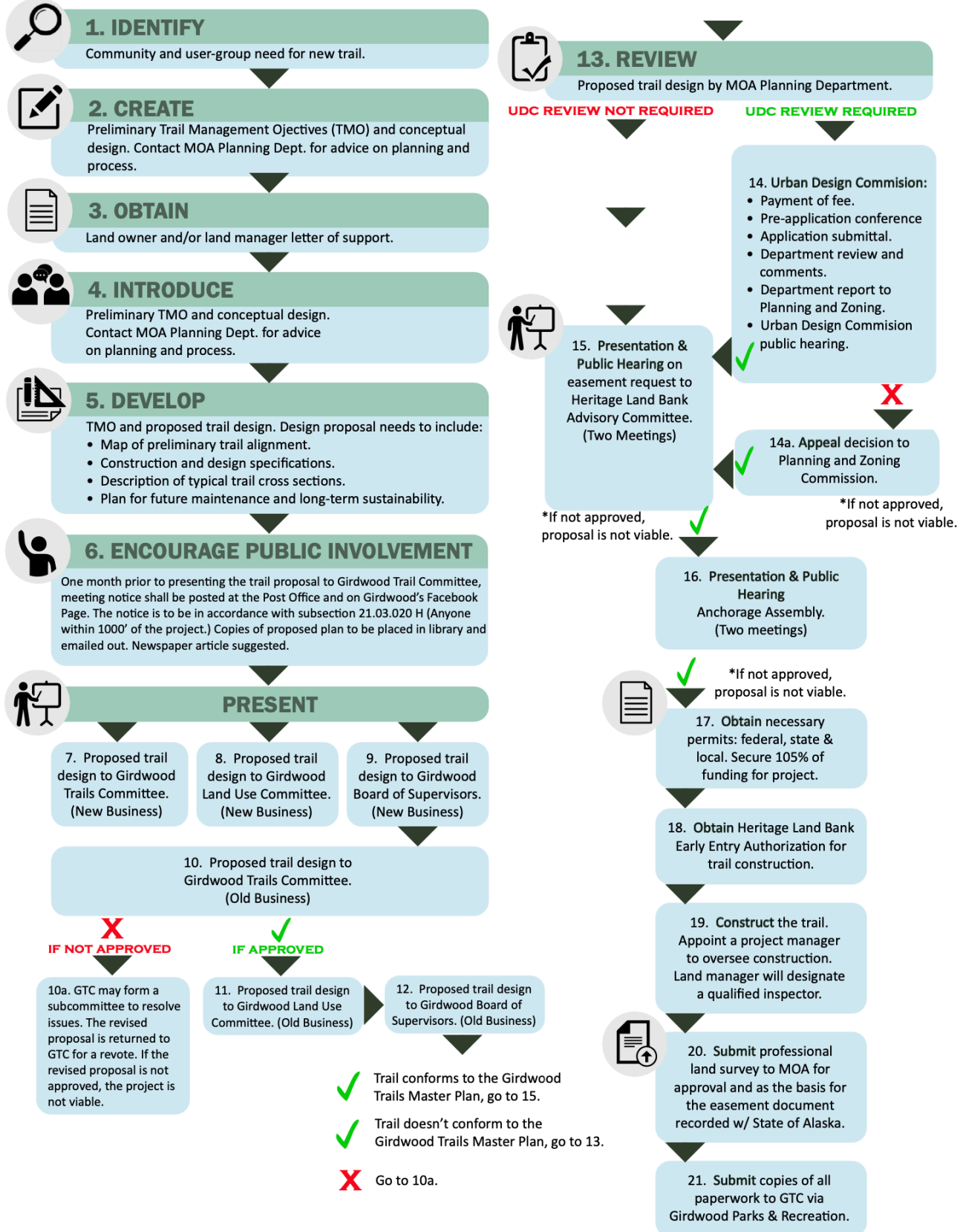
While the Girdwood Trails Plan provides a blueprint for the trails network that the community envisions for the valley, it does not grant permission to build a trail within the Plan without further review by Girdwood and Anchorage. The review process is extensive and explained below.

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. Since the Heritage Land Bank (HLB) owns most of the land in Girdwood that is available for trails, the trail building process begins by earning HLB approval for trail construction.

This outline describes the process needed for HLB approval and the subsequent paperwork:

PROPOSAL PROCESS FOR NEW TRAILS IN GIRDWOOD



Girdwood Trails Plan, 2024

The process begins when a user group identifies a need for a new trail. The user group creates an initial conceptual design for the new trail using the Trail Management Objective form (see next section). This form, developed by the US Forest Service, identifies the trail type, trail class, the designed use, and the construction parameters.

The land owner or land manager 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, and the user group and the Trails Committee have assurance from the landowner that they can proceed.

At this point, the user group introduces the new trail concept to the Girdwood Trails Committee (GTC) with Trail Management Objective form and the letter of support. This meeting is for GTC to give some initial feedback that will provide guidance to the user group as its members create a more detailed plan for the new trail.

Using ideas gathered from GTC and through community discussions, the group develops a detailed trail design. The trail should be designed using sustainability principles (see Sustainable Trails Principles section in Chapter 3). 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.

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.

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). Trails that are included in the Girdwood Trails Plan will be exempted as they have previously been reviewed as part of the Trail Plan approval process. Most of the bridge projects and several of the trailhead projects listed in the Trails Master Plan will require additional UDC review.

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. 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. Girdwood ordinarily has one representative on this commission, so it is wise to contact our representative about this new trail before any formal meetings. If HLB approval is granted, then two meetings are held with the Anchorage Assembly.

If the Anchorage Assembly grants 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.

Trail Management Objective Form

Trails Management Objective (TMO) forms are required by Girdwood Trails Committee to ensure that the objectives for a trail are consistent with the Girdwood Trail Plan and the Girdwood Trails Management Plan. Proposals for new trails will need to include the trail's TMO in the initial presentation to the Trails Committee. TMO forms can be obtained from Girdwood Parks and Recreation office.

Trail Management Objectives								
MOA Park District: _____								
Trail Name: _____		Trail Number: _____						
Trail Beginning Terminus: _____		Begin Milepost: _____						
Trail Ending Terminus: _____		End Milepost: _____						
Trail Inventory Length: _____ Miles	Trail Mileage Source: ☐ Wheel ☐ GPS ☐ Map ☐ Unknown							
TMO Trail Section								
☐ Section Begin Terminus: _____	Begin Milepost: _____							
☐ Section End Terminus: _____	End Milepost: _____							
Designed Use Objectives								
<table border="1"> <tr> <td> Trail Type (Check one) ☐ Standard Terra Trail ☐ Snow Trail ☐ Water Trail </td> <td> 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) </td> <td> Elev. Gain / Loss Gain (ft.) _____ Loss (ft.) _____ </td> </tr> <tr> <td> Trail Class (Check one) ☐ 1 (Primitive/Undeveloped) ☐ 2 (Simple/Minor Development) ☐ 3 (Developed/Improved) ☐ 4 (Highly Developed) ☐ 5 (Fully Developed) </td> <td colspan="2"> Level of Use ☐ Low (0-10 / day) ☐ Moderate (10-100 / day) ☐ High (100+ / day) </td> </tr> </table>			Trail Type (Check one) ☐ Standard Terra Trail ☐ Snow Trail ☐ Water Trail	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.) _____	Trail Class (Check one) ☐ 1 (Primitive/Undeveloped) ☐ 2 (Simple/Minor Development) ☐ 3 (Developed/Improved) ☐ 4 (Highly Developed) ☐ 5 (Fully Developed)	Level of Use ☐ Low (0-10 / day) ☐ Moderate (10-100 / day) ☐ High (100+ / day)	
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Designed Use (Check one) ☐ Hiker / Pedestrian ☐ Mountain Bike ☐ Bicycle ☐ Cross-Country Ski (Skate) ☐ Cross-Country Ski (Classic) ☐ Skiing ☐ 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) ☐ Hiker / Pedestrian ☐ Mountain Bike ☐ Bicycle ☐ Cross-Country Ski (Skate) ☐ Cross-Country Ski (Classic) ☐ Skiing ☐ Dog Sledding	From Date (mm/dd) 	To Date (mm/dd)
Prohibited Use (Check if applicable) ☐ All Motorized Use (Or, fill in all that apply) ☐ Hiker / Pedestrian ☐ Mountain Bike ☐ Road Bike ☐ Cross-Country Ski (Skate) ☐ Cross-Country Ski (Classic) ☐ Skiing ☐ Dog Sledding	From Date (mm/dd) 	To Date (mm/dd)
Other Use (Optional: Check any that apply) ☐ Hiker / Pedestrian ☐ Mountain Bike ☐ Road Bike ☐ Cross-Country Ski (Skate) ☐ Cross-Country Ski (Classic) ☐ Snowshoe ☐ Skiing ☐ Dog Sledding ☐ Wheelchair	Accept ☐	Discourage ☐
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: _____

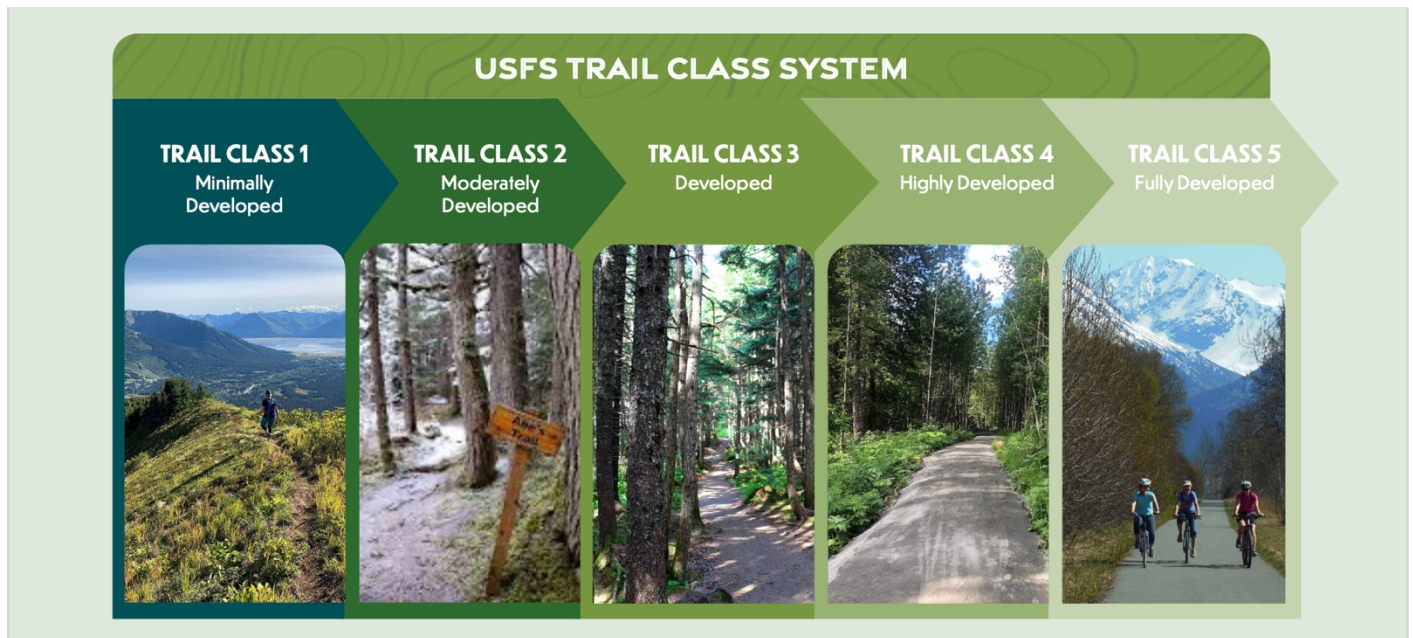
Page _____ of _____

Sample Girdwood TMO form

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

Girdwood currently has no designated water trails. However, Glacier Creek has become a popular pack-raft float, and stand-up paddleboards (SUPs) are another type of watercraft that is becoming more popular. Water trails may be added to the plan when Girdwood has the ability to manage these routes.

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



Girdwood Trails Plan, 2024

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 five designed uses found on Girdwood trails are:

- Hiker/Pedestrian
- Mountain Bike
- Bicycle
- XC Ski (Skate)
- XC Ski (Classic/Diagonal)

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.

The Designed Use Parameters for Girdwood's five designed uses can be found in Appendix 3. Dog sled, skijoring, and non-motorized watercraft trail parameters have also been included for reference.

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

Prohibited Use: 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.

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

Motorized vehicles such as ATVs, dirt bikes, and snow machines are prohibited trail uses in the Municipality of Anchorage, including Girdwood.

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

Target Frequency: This section of the TMO describes the status and maintenance goals of each trail. The Girdwood trail system requires brushing, grooming, and general trail work on a regular basis. The level of maintenance is determined by the trail class and managed use.

Trail maintenance relies heavily on a small, seasonal Girdwood Parks and Recreation staff, partner organizations, and community volunteers. As trail use increases and more trails are constructed, it will be crucial to provide adequate funding and resources to support trail maintenance and management.

Trail Access and Parking

Every managed trail in Girdwood Valley should have an identifiable trailhead that can be easily located on a map and by the user. Trailheads should be indicated by a post with trail name and location map. The Girdwood Trails Plan identifies specific trailhead locations.

Each trailhead should have an adjacent area for sufficient parking, although this may not be possible at all trailheads due to land ownership issues. Parking to access Girdwood Valley's trails is becoming more challenging every year. Even at trailheads where parking has been recently updated, current use has already outgrown the existing capacity. Access during winter is further complicated by snow storage needs. The Girdwood Trails Plan identifies specific parking area goals.



Signage

Trail signage serves a wide variety of purposes: it provides descriptive information about the trail to users and enables them to identify ground locations from maps, gives emergency and trail hazard information, helps users find trail amenities such as toilets and trash cans, and educates trail users through interpretive signage.

Signage standards will vary by trail classification and managed use. All trails should be named and their names posted at the trailhead. Wayfinding and emergency information should be posted at the trailhead and other trail posts for emergency and rescue situations. For Class 1 and 2 trails, additional trail signage should 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.



Trail signage: Do you need approval?

Girdwood Trails Committee Managed Trails		Trails Managed by Other Trail Managers
No Approval Needed	Approval Needed	The US Forest Service, Chugach State Park, Girdwood Nordic Ski Club, Bikewood and Chugach Powder Guides are in charge of all signage within the easement of their managed trails.
- Trail Hazard Signs - Wildlife Warnings - Trail Work - Trail Amenities, such as - trash - restrooms - dog waste stations	- Trail Information - Trails Rules - Trail Etiquette - Trail Maps - Interpretive signage - Way-finding and Emergency Info	

Community or other groups may post temporary signs for local events such as school programs or permitted events. These signs must be removed by the group after the event.

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 and the public's access is protected. In turn, the property rights of private landowners need to be respected by trail users.

It is the goal of the Girdwood Trails Committee that every established trail in the Girdwood Valley has legal protection, such as:

1. Easement managed by the underlying land management authority
2. Intra-governmental agreement or permit
3. A dedicated Municipal Park

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. The responsibility of paying for the realignment is decided on a case-by-case basis.