

FRISCO NORDIC CENTER Master Development Plan



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Chapter 1

Introduction



Chapter 1.

Introduction

This *2019 Frisco Nordic Center Master Development Plan* (MDP) provides a detailed assessment of existing facilities and operations at the Frisco Nordic Center (Nordic Center), as well as a comprehensive overview of planned elements within the Nordic Center’s Special Use Permit (SUP) area. It is important to note that the Nordic Center is located on the greater Peninsula Recreation Area, which includes both National Forest System (NFS) and Town of Frisco managed lands. As the Nordic Center is operated under a 40-year ski area SUP, this MDP is required by Forest Service permit requirements and specifically references the Nordic Center; however, planning included in this document looks at the Peninsula Recreation Area holistically and, in some cases, uses the terms Nordic Center and Peninsula Recreation Area interchangeably.

The MDP discusses planned year-round activities, including both winter and summer components slated for implementation within approximately the next ten years. Forest Service acceptance of this MDP would be consistent with the permit requirements of the Nordic Center but does not constitute approval of any of projects contained within this document. Approval of the projects contained within this document by the Dillon Ranger District of the White River National Forest (WRNF) is required prior to implementation and cannot occur without detailed analysis consistent with the provisions of the National Environmental Policy Act of 1970 (NEPA). This MDP is designed to be dynamic and may be amended periodically to reflect new developments in facilities and recreation.

This MDP is consistent with the *White River National Forest Land and Resource Management Plan – 2002 Revision* (2002 Forest Plan), which provides the following direction for the preparation and utilization of ski area MDPs:

“A Master Development Plan is part of each ski area’s special use permit. MDPs are prepared by the permit holder and accepted by the Forest Service. They describe the improvements and facilities that are authorized at each resort and are the guiding document used to describe the expected future condition for the resort. These plans encompass all the areas authorized for use by the special use permit including areas that are, at present, undeveloped. Areas allocated are managed to avoid deterioration of site conditions that may detract from planned uses.”¹

In addition to its consistency with the 2002 Forest Plan, this MDP is consistent with the Ski Area Recreational Opportunity Enhancement Act of 2011 (SAROE) and subsequent Forest Service guidance, which permit additional seasonal and year-round activities and facilities on NFS lands if they are consistent with the setting and specifically support snow sports as a primary driver for recreation and revenue at the recreational centers like the Nordic Center. Although the Nordic Center is not an alpine ski area, it is managed by the Forest Service under a ski area SUP; therefore, acts like SAROE are applicable.

¹ USDA Forest Service. 2002. *White River National Forest Land and Resource Management Plan, 2002 Revision*. p. 3-81

A. LOCATION

The Nordic Center is located on the eastern end of the Town of Frisco, Colorado directly adjacent to Lake Dillon. It is approximately 73 miles west of the City of Denver, 3 miles south of the Interstate 70 (I-70) corridor, and is near several alpine ski areas within Summit County (Copper Mountain Resort, Keystone Resort, Arapahoe Basin Ski Area, and Breckenridge Ski Resort). The Nordic Center is accessed by Colorado State Highway 9. Refer to *Figure 1* for a map of the vicinity.

The Nordic Center is contained within Township 5S, Range 77W, Sections 19, 30 and 31; and Township 5S, Range 78W, Sections 24, 25, 36 and 38. The elevation of the area ranges from approximately 9,015 feet above mean sea level (amsl) at its lowest point to 9,350 feet amsl at its highest point.

B. LAND OWNERSHIP

The Nordic Center is situated within the Peninsula Recreation Area, which is composed of approximately 190 acres of private lands owned by both the Town of Frisco and Denver Water, and approximately 585 acres of NFS lands administered by the Dillon Ranger District of the WRNF under a SUP. In total, the Peninsula Recreation area encompasses approximately 775 acres, all of which can be operated on by the Town of Frisco; 585 acres of which comprise the Nordic Center SUP boundary.

For thirty years the Nordic Center was operated by the Dayton family as a concessionaire to the Town of Frisco; during the winter of 2016/17, the Town of Frisco assumed operation of the Nordic Center and remains the operator to the present day.

Figure 4 depicts existing conditions and portrays the Nordic Center's SUP boundary.

C. CURRENT OPERATIONS SUMMARY

Over the past five seasons, the Nordic Center has averaged 51,000 visitors each winter. Due to the vast amount of non-paid recreation opportunities at the Nordic Center and greater Peninsula Recreation Area during the summer months, actual summer visitation is not known at this time; however, it is comparable to winter visitation trends. As the Nordic Center offers a wide variety of recreational activities, it contributes considerably to the economic growth of the Town of Frisco and provides an excellent public health amenity for both residents and guests of the area.

The Nordic Center is not only a spectacular recreational amenity to residents of Summit County but is also well suited for people visiting the area. This is especially true during the winter season, when visitors arrive from all over the world to ski at any of the destination alpine ski areas in Summit County. Oftentimes, visitors decide to spend a portion of their trip participating in winter activities other than alpine skiing, many of which are offered at the Nordic Center.



1. Winter

Recreational activities currently available at the Nordic Center and within the greater Peninsula Recreation Area during the winter season include Nordic skiing, snowshoeing, snow tubing, sledding, and sleigh/wagon rides.

In total (private lands included), there are approximately 24 kilometers (14.9 miles) of winter trails operated by the Nordic Center. Approximately 12 kilometers (7.5 miles) of the trail system currently exist on NFS lands within the Nordic Center's SUP area; the other approximately 11 kilometers (7.4 miles) exist on lands that are privately owned by either the Town of Frisco or Denver Water.

Approximately 8 kilometers (5 miles) of the trail system are routed on improved Forest Service roads (specifically Crown Point Road and RJ's Vista), campground roads, and other service roads. While these roads are generally of an adequate width and provide a good trail base, they are mostly linear roads and are not ideal for the varied and interesting trail experience desired by most Nordic users. The remaining approximately 15 kilometers (9.3 miles) of the trail system are situated on old logging roads/trails that are not well aligned or sustainable and do not provide an adequate trail base necessary for Nordic skiing. Due to the alignments of the roads that the trails were initially constructed on, the existing trail system mostly consists of linear, interconnected trails. This linear trail design creates many trail junctions and intersections, which often complicates pathfinding and increases grooming time, which poses challenges for users and operators alike.

2. Summer

Recreational activities currently available at the Nordic Center and within the greater Peninsula Recreation Area during the summer season include road and mountain biking (as well as opportunities for biking on soft surface roadways/Nordic trails), hiking and trail running, baseball and other field sports, skate park-related activities and BMX biking, disc golf; and camping and boating within a 96-site campground that is operated by a concessionaire for the Forest Service (this campground is located entirely on NFS land).

Most summer trails overlap with existing trails established for winter use. The exceptions are the Perimeter trail, Switchback trail and a few short connector trails. There are several trails that have fall line grades and should be rerouted to improve sustainability, such as *Reichl's*, *Buzzsaw* to Crown Point Road, sections on *Jody's* and several other connector trails.

With the exception of the *Perimeter* trail, there is just over a mile of existing single-track trails within the Nordic Center's operational area that do not overlap with existing winter-use trails.

Use of the summer trail system includes but is not limited to mountain biking, running, and hiking.

D. BACKGROUND

The Nordic Center itself is owned by the Town of Frisco, although the NFS lands on which it operates are administered by the Dillon Ranger District of the WRNF under a SUP with the Town of Frisco.

The Nordic Center's SUP requires the development of an MDP, which identifies management direction and opportunities for future management of the Nordic Center's operations on NFS lands.

1. Chronology of Development

A brief chronology of the Nordic Center's development:

- » 1984 Nordic Center starts running out of a mobile home
- » 1986 Sleigh Ride operation begins
- » 1990 Town of Frisco purchases "South Frisco Bay" through the Homestake Land Exchange with the Forest Service – property is zoned "Parks and Recreation"
- » 1992 Nordic Center main building is constructed
- » 1993 First vote for a golf course – 54% vote "no" (625 total voters)
- » 1994 Town of Frisco adopts Master Plan for 35 acres within the future Peninsula Recreation Area
- » 1995 Ball field, Multi-Purpose Center, Sleigh Ride Camp and Corral constructed
- » 1996 Vote for a municipal ice arena – 62% vote "no"
- » 1996 Frisco Peninsula Recreation Area Steering Committee forms – held nine public meetings and spent four months compiling a list of recommendations, including:
 - Improve Nordic trails
 - Construct mountain biking and hiking trails
 - Construct warming huts
 - Picnic areas
 - Golf course
 - Entrance feature
- » 1997 Disc Golf Course constructed
- » 2000 Frisco Skate Park constructed
- » 2001 Town of Frisco Parks and Recreation Master Plan identifies six priorities for the Peninsula Recreation Area:
 - Sledding/Tubing Hill
 - Ski jump
 - Nordic village
 - Golf course
 - Multi-Purpose Ice/Performing Arts/Convention Center
 - Amphitheater



- » 2002 Peninsula Recreation Area Land Use Plan established – incorporates the six priorities listed above and preserves existing Peninsula Recreation Area uses and activities
- » 2002 Second vote for a golf course – 66% vote “no”
- » 2006 Colorado Mountain College vote – 55% vote “no”
- » 2007 Land Use Plan established – maintains area’s existing recreational amenities and proposes additional amenities for the Peninsula Recreation Area
- » 2009 Peninsula Recreation Area Design Plan (prepared by DHM Design) proposes concepts for additional amenities, including:
 - Day lodge
 - Additional parking
 - BMX/mountain bike skills course
 - Outdoor skating rink
 - Expansion of sledding hill or addition of a tubing hill
- » 2010 Tubing Hill and Day Lodge open
- » 2011 Bike Park opens
- » 2015 Equestrian Center petition for the Peninsula Recreation Area to Council – Council votes “no”
- » 2015 Community Survey identifies ten priorities:
 - Summer hiking trail improvements
 - Outdoor amphitheater
 - Summer mountain biking trail improvements
 - Boardwalk connection between Marina and Peninsula Recreation Area
 - Recreation center facility
 - Winter trail improvements
 - Nordic Center improvements
 - Dog park
 - Nature center
 - Outdoor climbing boulders
- » 2016 Town of Frisco assumes operation of the Nordic Center
- » 2016 PRA Council discussions provide key input for the vision for the PRA:
 - The PRA and the Marina define Frisco as a unique mountain town
 - Activities and features in the PRA should maintain character with the mountain environment
 - Future plans for the PRA should avoid the evolution into a commercial character “Fun Park”
 - The Town is committed to primarily providing amenities for local community members and also recognizes the opportunities presented by the tremendous amount of non-local visitation received by Summit County
 - Facilities are a combination of revenue and non-revenue to produce an aggregate break-even for the area as a whole
 - Council prefers to save for new amenities, or fund them internally, as opposed to borrowing or bonding funds; this element represents prudent fiscal management, but may limit the opportunities which can be developed

- There is an interest in diversifying the Frisco Adventure Park so that is not perceived as just a tubing hill
- The role of the PRA is centered upon community recreation, health, and fitness
- Projects which may enhance continuity between the PRA and the main areas of town are optimal

E. ABSTRACT OF PLANNED MASTER DEVELOPMENT PLAN

This MDP is divided into five chapters, with Chapter 1 providing an introduction to the document. Chapter 2 describes the design criteria used for planning specific to the Nordic Center. Chapter 3 provides a site inventory of the Nordic Center, including topography, slope analysis, and information relating to the SUP boundary and surrounding land ownership. Chapter 4 describes existing facilities for both winter and summer, and evaluates the current balance of operations, facilities, and infrastructure. This includes terrain, guest services, snowmaking, and parking. This chapter also provides the baseline conditions which drive the upgrade plan. The final chapter (Chapter 5) details proposed upgrades and improvements to the experience at the Nordic Center and throughout the Peninsula Recreation Area.

Newly-planned projects presented in Chapter 5 – Upgrade Plan of this MDP include the following:

- » A conceptual Nordic ski trail network approximately 37.3 kilometers (23.2 miles) in length, including existing trails, new trail construction, trail re-routes, and strategic connectors
- » A conceptual mountain biking and multi-use trail network approximately 26.2 miles in length, including existing trails, new trail construction, trail re-routes, and strategic connectors suitable for varying ability levels
- » Summer and multi-season guest services projects, including multi-purpose gathering sites, trail bridges, warming huts, and toilets
- » Non-trail winter and multi-season activities (e.g., boulder play area, biathlon range, and ice pond)

F. PAST PLANNING AND ENVIRONMENTAL DOCUMENTATION

Since its inception, the Nordic Center has undergone several iterations of planning and numerous environmental analyses for site-specific project proposals. The following list provides a summary of these planning and analysis phases:

- » 2002 Peninsula Recreation Area Land Use Plan
- » 2004 Frisco Nordic Center Trails and Facilities Environmental Assessment
- » 2007 Peninsula Recreation Area Land Use Plan
- » 2007 Environmental Assessment Dillon Reservoir Forest Health and Fuels Project
- » 2009 Peninsula Recreation Area Design Plan (prepared by DHM Design)
- » 2011 Ophir Mountain Forest Health and Fuels Reduction Project
- » 2017 Design Charette prepared by Norris Design (May 18, 2017)



G. VISION AND DESIGN PHILOSOPHY

Clarifying a vision and design philosophy is an essential component of the planning process, as it helps to establish an overall theme and direction for all projects. Since assuming management of the Nordic Center and Peninsula Recreation Area, the Town of Frisco has provided residents and visitors of Summit County with a quality recreation resource. Through changes in management, re-allocation of resources, and on-going partnership with the Forest Service, the Town of Frisco believes it is in a position to take the Nordic Center and Peninsula Recreation Area to its full potential.

The overarching vision of this MDP is to refine and enhance the experiences available on the peninsula in a way that allows the Town of Frisco to best serve its local community, remaining true to its character as a fixture within and adjacent to the Town of Frisco, while capitalizing on opportunities for increased visitation from tourism already present in the region.

This MDP seeks to proactively address the needs of the Nordic Center and Peninsula Recreation area to accommodate future trends in regional visitation over the next ten to fifteen years. Providing adequate facilities and amenities for increasing visitation, while improving upon existing guest experiences in both summer and winter seasons is the focal point of this plan. Understanding that guests' preferences are constantly changing, this MDP will provide the Town of Frisco and the Forest Service with preparedness and creativity to meet future guest demands.

As an area that has been intensely managed by the Forest Service following the mountain pine beetle epidemic, directly adjacent downtown Frisco, this MDP seeks to capitalize on the unique opportunity that exists for the Nordic Center and Peninsula Recreation Area to be an exemplar of natural resource management and recreation.

H. STATEMENT OF GOALS AND OBJECTIVES

1. Goals

- * *Continue to serve Summit County and the Town of Frisco by improving upon the existing recreational opportunities and experiences available to local residents.*
- * *Improve existing recreational opportunities and cultivate new experiences suitable for the visitor market drawn to Summit County by the world-class reputations of local alpine ski areas.*
- * *Develop activities on NFS and private lands that introduce a wide range of visitors to the WRNF without requiring specialized skill or knowledge.*
- * *Strengthen the year-round economy for the Town of Frisco, including local businesses.*

2. Objectives

- * *Improve the existing Nordic trail network by constructing new trails, trail re-routes, strategic connectors, and dedicated fat bike routes.*
- * *Develop a dedicated mountain biking and multi-use trail network through new trail construction, trail re-routes, and strategic connectors suitable for varying ability levels.*
- * *Provide ancillary summer and multi-season guest services facilities, including multi-purpose gathering sites, trail bridges, warming huts, and toilets to accommodate increasing visitation and better meet visitor expectations.*
- * *Enhance offerings by providing additional non-trail winter and multi-season activities (e.g., boulder play area, biathlon range, and ice pond).*



I. ACCEPTANCE BY THE FOREST SERVICE

This MDP is the result of an iterative and collaborative process between the Nordic Center and Forest Service staff. Forest Service “acceptance” is consistent with the requirements of the Nordic Center SUP and the 2002 Forest Plan. This MDP will also undergo analysis and review by the Town of Frisco and Summit County as necessary to ensure that the goals and objectives presented herein are consistent with those of all other agencies with jurisdiction over the facilities at the Nordic Center.

It is important to note that Forest Service acceptance of this MDP does not indicate approval to proceed with implementation of any of the projects identified herein. None of the projects identified in this MDP have been reviewed or approved in accordance with the requirements of the National Environmental Policy Act (NEPA); all of these projects will require site-specific analyses through the NEPA process before any projects may be approved. This site-specific environmental analysis may result in modification of planned projects. Furthermore, beyond the scope of site-specific NEPA analysis, implementation of the projects identified in this MDP may be dependent upon approval of detailed plans contained in the Nordic Center’s annual operation/ construction plan.

J. PUBLIC/MUNICIPAL REVIEW

Because the area included within the Nordic Center SUP boundary has historically been annexed into Town of Frisco’s town limits, a Land Use Approval review process will be required by the Town of Frisco. This process will involve official notice of public meetings held by Town of Frisco Town Council and will allow ample opportunity for public comments on all aspects of this MDP. This process, which includes a full presentation to the Frisco community will occur immediately after Forest Service “acceptance” of this MDP.

This review process by Town of Frisco will comply with Forest Service requirements to publicly share the vision, goals and objectives of the resort and to seek a mutual understanding of the MDP presented in this document.



Chapter 2

Design Criteria



Chapter 2.

Design Criteria

Establishing design criteria is an important component in master planning. The following is an overview of the basic design criteria upon which the Frisco Nordic Center MDP is based.

A. RECREATION LANDSCAPE

The Nordic Center, and greater Peninsula Recreation Area which the Nordic Center is located within, is a community resource operating in a landscape with significant regional tourism and destination resorts that cater to national/international visitors. In this unique recreation landscape, the Nordic Center and Peninsula Recreation Area must serve its local community while also taking advantage of the regional, national, and international tourism in the area.

1. Community Resource

First and foremost, the Nordic Center and Peninsula Recreation Area is a resource for the residents of Town of Frisco and the surrounding communities in Summit County. It must cater to the local demographic with a variety of well-groomed/maintained trails that support a learning progression for new users, while also meeting the desires of experienced skiers and bikers in the community. As a community-oriented resource, it should be affordable and easily accessible—accommodating work schedules, being connected via public transportation routes, and providing programming that locals find useful. The Nordic Center is in a competitive market for local skiers with the Keystone Nordic Center, the Gold Run Nordic Center, and the Breckenridge Nordic Center, all of which are located nearby within Summit County. The Nordic Center and Peninsula Recreation Area must maintain a variety of activities, programs, and facilities that serve the local population.

2. Regional Tourism

Regional tourism refers to the “drive” market of visitors who live within an easy driving distance and may come to the area for a day or a weekend. For the Nordic Center and Peninsula Recreation Area, the Colorado Front Range (Denver, Boulder, Colorado Springs, and the surrounding areas) are a large regional tourism market. Behaviors of those in the regional tourism market mimic those of both locals and destinations tourists. For cross-country skiing, the Nordic Center is one of the closest to the Front Range and many regular skiers frequently make the drive to Frisco. These skiers are typically interested in similar activities, opportunities, and facilities as residents of Summit County. A race course at Frisco Nordic Center would act as a regional draw for training and events.

Other regional tourists may visit the Nordic Center and Peninsula Recreation Area as part of a visit to the area oriented around the destination resorts or other local attractions. These visitors' interests closely resemble those of the destination visitors, detailed below.

3. Destination Resorts

Most of the winter destination, or "fly-in," visitors to Nordic Center and Peninsula Recreation Area are in the area to visit the nearby alpine skiing destination resorts. The Nordic Center and Peninsula Recreation Area is not a destination resort itself; however, because destination visitors are often spending many days in the area while visiting one of the County's many alpine ski areas, they will choose to spend part or all of a day engaging in non-alpine skiing opportunities like those available at the Nordic Center and Peninsula Recreation Area. These visitors require an easily navigable trail system with lower ability level trails. There is a growing demand for additional, non-skiing activities among destination skiers. Already, the tubing facility associated with the Nordic Center generates visitation from many destination skiers visiting Summit County.

In the summer, destination visitors come to the area for the many outdoor recreation opportunities Summit County has to offer. Hiking or biking at the Nordic Center and Peninsula Recreation Area can be a day or half-day activity for these visitors. These visitors come from an array of ability levels, but regardless of ability level, all need an easy-to-navigate trail system with many additional amenities.

Given the Nordic Center and Peninsula Recreation Area's terrain and size, it would not have the mileage or terrain diversity to become a Nordic skiing or mountain biking destination on its own. However, additional developments and improvements to the trail network that cater to the needs of the destination visitor could allow the Nordic Center and Peninsula Recreation Area to capitalize on this market that is already present in Summit County.

B. GUEST SERVICES FACILITIES

The relationship between planning at the Nordic Center and Peninsula Recreation Area's facilities and the surrounding trail network is critically important. Facility design involves establishing appropriate sizes and locations for the various elements. The complexion and interrelationship of these elements varies considerably depending on the type and scale of recreation opportunities these facilities service; however, fundamental objectives of guest services facilities planning are to integrate the trail network with the facilities to create a cohesive, functional, and easily navigable recreational experience. This must be achieved by addressing base components such as (but not limited to): guest service locations (passes and rentals), skier/rider/hiker circulation, parking/access requirements, and transit drop-offs.

The lodge area facilities have three main functions:

- » Receiving arriving guests (from transportation)
- » Distributing the guests onto the trail systems and activities
- » Providing the necessary guest services (e.g., tickets and rentals)



At the intersection of Crown Point Road and Recreation Way is the hub of the Nordic Center and Peninsula Recreation Area's facilities and activities, which include: the Nordic Center Facility, Nordic skiing, ball fields, the Day Lodge, sleigh rides, and the skate park. This area also functions as the primary access point to the trails, picnic areas, and disc golf course. Properly directing visitors to their intended facility/activity and ensuring sizeable shared facilities (i.e., parking) is very important. However, the design of these facilities and circulation paths should support a unified, cohesive feeling around the Peninsula Recreation Area.

The Nordic Center and Peninsula Recreation Area also serves as a gathering place for many large groups, such as camps, the Summit Nordic Ski Club, and youth mountain biking groups. Facilities must be large enough to accommodate both those groups and additional visitors that are generated by special events.

Guest service facilities are also located within the trail network to offer shelter and restrooms to guests as they hike, bike, or ski. These amenities can be incredibly convenient mid-activity and provide opportunities for additional programming. Viewing decks, yurts, or warming huts would all serve as a destination for trail users and possibly a place to hold events on the Peninsula Recreation Area.

C. TRAIL SYSTEM DESIGN

1. Nordic Trail Design

a. Slope Gradients and Terrain Breakdown

Terrain ability level designations in Nordic skiing are necessarily subjective, depending on technical aspects of the trail, overall difficulty of the trail network, altitude, snow surface, and trail width. However, the average and maximum specific gradient (max grade within a 200-foot span) can generally be used to characterize a trail as beginner, intermediate, or expert. Ability level designations can be based on the average gradient calculated for each trail, in combination with other factors present that may make a trail more difficult. While short sections of a trail can be more or less steep without affecting the overall trail designation, a sustained steeper section may cause the trail to be classified with a higher difficulty rating. It is important to understand that trail gradient is not the only factor in assigning a trail ability designation to a specific trail. As stated above, a variety of factors can cause a trail to be classified under a higher designation.

The following general gradients, reflective of industry norms, are used as the basis to classify the skier difficulty level of the Nordic skiing terrain. As previously mentioned, additional considerations can compound with slope gradient and cause a trail to be classified under a higher skier ability designation.

TABLE 2-1. NORDIC TRAIL DESIGN SPECIFICATIONS BY ABILITY LEVEL

SKIER ABILITY	TERRAIN GRADIENTS	
	AVERAGE GRADIENT	MAX SPECIFIC GRADIENT
● Beginner	0 to 5%	10%
■ Intermediate	5 to 10%	15%
◆ Expert	8 to 12%	20%

The recommended distribution of trail by difficulty designation is highly dependent on the local market, and data on Nordic skier visits and ability level has not been collected comprehensively enough nationwide to make precise recommendations. However, most Nordic ski area operators agree that the bulk of visitors are of “Intermediate” ability, with “Beginners” and “Experts” forming the tail ends of an ability bell curve. It is also important to consider that an “Expert” skier will cover significantly more ground in a visit than a beginner skier, which skews the trail distribution by ability level to the “Expert” end of the curve. Another consideration is the location of the terrain—beginner terrain needs to be immediately accessible from the lodge or trailhead, so the skier does not need to navigate any difficult trails to access that terrain. Expert trails, on the other hand, can be further from the trail network access point.

b. Trail System

A Nordic Center’s trail system should be designed to meet the needs of the entire spectrum of ability levels, as well as its particular market. Each trail should provide an interesting experience within the ability level for which the trail is designed. The trail network should provide trails for the full range of ability levels consistent with each ability level’s respective market demand.

If race courses are a component of the trail system, they should be designed to a difficulty level commensurate with the types of event they will host (i.e., a World Cup-level race course is not required nor desirable for local high school and citizens races). Race courses should also be designed with the venue altitude in mind (i.e., a climb that is skiable at sea level may not be skiable at 9,000 feet elevation). Additionally, alternative recreational trails should be able to bypass the race course so that events do not interfere with normal business operations.

Optimum trail widths depend on the purpose of the trail and the grooming equipment used, but at a minimum, trails should be 16 feet wide to allow for a single skating lane and a single classic track. If a snowcat is being used for grooming, trails will need to be at least 16 feet wide to allow for safe and effective grooming.

For a Nordic Center to attract skiers, grooming, trail variety, and trail length are all important. Those factors are of greater importance to experienced skiers, especially when there are other Nordic centers in the area that compete for business.



2. Mountain Biking Trail Design

a. Trail Terrain and Technicality

Trail ability level designations in mountain biking should be based on the technical challenge of the trail, rather than the physical exertion required to traverse the trail. The technical measures of difficulty are tread width, tread surface, average trail grades, maximum trail grade, natural obstacles, and technical trail features. However, trail rating is not entirely objective and should consider difficulty relative to local trails, exposure, corridor clearance, and turn radius of trail turns and switchbacks. The International Mountain Bicycling Association (IMBA) also encourages trail users' input and personal experience on the trail to rate the trails. The IMBA trail rating system is provided below. As previously mentioned, additional considerations can compound with the factors below to affect the trail's designation.

TABLE 2-2. MOUNTAIN BIKING TRAIL DESIGN SPECIFICATIONS BY ABILITY LEVEL

	EASIEST	EASY ●	MORE DIFFICULT ■	VERY DIFFICULT ◆	EXTREMELY DIFFICULT ◆◆
Trail Width	72" or more	36" or more	24" or more	12" or more	6" or more
Tread Surface	Hardened or surfaced	Firm and stable	Mostly stable with some variability	Widely variable	Widely variable and unpredictable
Average Trail Grade	Less than 5%	5% or less	10% or less	15% or less	20% or more
Maximum Trail Grade	Max 10%	Max 15%	Max 15% or greater	Max 15% or greater	Max 15% or greater
Natural Obstacles and Technical Trail Features (TTF)	None	Unavoidable obstacles 2" tall or less Avoidable obstacles may be present Unavoidable bridges 36" or wider	Unavoidable obstacles 8" tall or less Avoidable obstacles may be present Unavoidable bridges 24" or wider	Unavoidable obstacles 15" tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" or wider TTF's 4' high or less, width of deck is less than ½ the height Short sections may exceed criteria	Unavoidable obstacles 15" tall or greater Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" or narrower TTF's 4' high or greater, width of deck is unpredictable Many sections may exceed criteria

The recommended distribution of trail by difficulty designation is highly dependent on the local market, and data on mountain biker visits and ability level has not been collected comprehensively enough nationwide to make exact recommendations. Generally speaking, mountain bikers are similar to Nordic skiers in that the bulk of visitors are of “Intermediate” ability, with “Beginners” and “Experts” forming the tail ends of a bell curve. Similarly, an “Expert” biker will cover significantly more ground in a visit than a beginner skier, which skews the trail distribution to the “Expert” end of the curve. Beginner trails should be immediately accessible from the primary trail network access point, so the biker does not need to navigate any difficult trails to access that terrain. Expert trails, on the other hand, can be further from the trail network access point.

3. Multi-Use Trail Design

Summer trails are typically designed for multiple user groups—hikers, runners, and bikers. The design standards listed above for mountain biking and Nordic ski trails are intended to provide an optimized experience for these user groups; however, they are capable of accommodating multiple user groups. PRA trail design standards will also accommodate class 1 and 2 eBikes on all trails. Winter fat bike trails (such as the Perimeter trail) are also designed to accommodate eBikes. Typically, only the most challenging mountain biking trails with narrow treads, steep grades, and technical terrain features would be appropriate to restrict uses to be mountain bike only. The designation of bike only would prevent user conflict as these trails are often ridden directionally. All other trails could be constructed in a fashion that supports multiple user groups.

As the difficulty of hiking trails is based on sustained grades, it is expected that all multi-use trails within the Nordic Center and Peninsula Recreation Area trail network would be suitable easy to intermediate hiking.

As horseback riding is not popular on the Nordic Center and Peninsula Recreation Area, trails are not designed to equestrian trail standards. Opportunities for equestrian use do exist on nearby NFS lands.

D. BALANCE OF AMENITIES

The master planning process emphasizes the importance of balancing recreational facility development. The sizes of the various guest service functions are designed to match the trail network and expected visitation. The future development of a recreation area should be designed and coordinated to maintain a balance between accommodating guest needs, the capacity of activities (trails and other amenities such as tubing), and the supporting equipment and facilities (e.g., grooming machines, day lodge services and facilities, utility infrastructure, access, and parking).



E. MULTI-SEASON RECREATION ACTIVITIES

In its existing state, the Nordic Center and Peninsula Recreation Area has abundant opportunities for both winter and summer recreation. The community utilizes the area year-round and Summit County has established itself as a year-round tourism destination. Summer recreational activities (hiking, mountain biking, etc.) are very popular, inclusive activities that motivate many people to visit the area. Nordic skiing and snowshoeing are popular among locals and visitors interested in a different experience. This comprehensive planning process assesses the best approach and program for a suite of multi-season activities and facilities. It incorporates the unique characteristics of the Nordic Center and Peninsula Recreation Area and the surrounding area and guides towards the implementation of new multi-season recreation opportunities.

A strategic approach must be taken to optimize the recreational opportunities across all seasons. This MDP examines the multi-season recreation elements that have the greatest potential for success, the available land for recreation facilities and/or activities, and the operational compatibility with existing or proposed facilities, initial fiscal considerations, and visitation potential. Undertaking such a comprehensive exercise leads to a multi-season recreation program comprised of recreation facilities and/or activities that are suitable for implementation and will align with operational goals and performance expectations.

Providing diverse opportunities to a spectrum of visitors is key to the success of the Nordic Center and Peninsula Recreation Area, which must capitalize on regional and destination tourism markets to reach its full potential as a community resource. Non-downhill skiing and summer recreation activities are, and will increasingly be, attractive to these visitor markets as well as many residents of Summit County. Multi-season recreation activities that diverge from the traditional snow sports that are widely available in Summit County tend to attract a more diverse range of guests (e.g., more balanced gender demographics, older median age, and more families) and provide an opportunity for the Nordic Center and Peninsula Recreation Area to differentiate itself from much larger scale recreation providers of the region.

As a year-round recreation destination, the Nordic Center and Peninsula Recreation Area has the opportunity to both provide and promote interactive, educational, natural resource-based recreation activities for all ages and demographics. Increasingly, there is potential to reach a wide range of ages and demographics, including those not currently being reached, through multi-season recreation activities. Activities such as mountain biking and hiking can appeal to adventurous guests, while activities such as tubing and developed camping/day use sites can appeal to a wider spectrum of users seeking natural-resource based recreation. The Forest Service has acknowledged a demonstrated need to encourage the public, particularly youth, to explore the lands within the National Forests. As an identifiable and accessible portal to NFS lands, in close proximity to one of Summit County's population centers, the Nordic Center and Peninsula Recreation Area has a unique opportunity to meet this need through the provision of a range of recreational opportunities experiences suitable to the diverse public groups that live in and visit the area.

At a macro level, the Nordic Center SUP area is designated within the 2002 Forest Plan to have a Recreation Opportunity Spectrum (ROS) setting of “Rural,” which is described as:

“Predominantly a culturally modified setting where the natural environment has been substantially modified, i.e., structures are readily apparent, pastoral or agricultural or intensively managed, wildland landscapes predominate as viewed from visually sensitive roads and trails. Access is primarily via conventional motorized use on roads. Contact frequency with other users may be moderate to high in developed sites and moderate away from developed sites.”

The Nordic Center SUP boundary is located within Management Area 8.21 – Developed Recreation Complexes. The 2002 Forest Plan Final Environmental Impact Statement provides the following theme for these NFS lands located in Management Area 8.21:

“These areas contain developed recreation sites that provide an array of recreational opportunities and experiences in a forested environment. These types of areas also include the surrounding terrain, resulting in an attractive setting for the developments. Theme Areas are managed to provide a variety of recreation opportunities in multiple-site, highly developed recreation complexes.”

Additional context is provided in the description of Management Area 8.21 and its desired condition:

“Recreation opportunities occur in an intensively managed, highly regulated environment modified to accommodate a high level of interaction among users. There are few, if any, opportunities for solitude. On-site regulation and control are obvious, but harmonize with the natural setting to the extent possible. Multiple information stations and kiosks provide visitors with area information. Directional and regulatory signs are widely used to identify requirements for use of the area. Entrance stations may be present... Recreation facilities are developed and maintained to provide a variety of high quality recreational experiences in a primarily natural setting. The level of development is commensurate with demand and visitor expectations.”

At a site-specific level, this MDP takes the existing setting, combined with the anticipated use of the area, to establish finer-grain prescriptions. The summer activity zones identified in the Chapter 5 of this MDP are based on the existing setting and level of development.

Through the planning process, five distinct zones were considered within the Nordic Center and Peninsula Recreation Area. These zones consider several characteristics similar to the ROS, including:

- » *Access* – the number and function of roads within the area
- » *Remoteness* – how far removed an individual feels from human activity
- » *Naturalness* – the extent and intensity of development and disturbance within the area
- » *Infrastructure* – the amount of and proximity to the built environment

Each of these characteristics is to be considered within the context of the Nordic Center and Peninsula Recreation Area as a developed recreation complex. Existing summer recreation and maintenance occurs throughout the Nordic Center and Peninsula Recreation Area.



The Nordic Center SUP area is characterized by either developed and modified areas or areas in close proximity to development, human population centers, and infrastructure. While the settings that exist within the SUP resemble much of what a guest could see and experience in different locations across the WRNF, the Nordic Center and Peninsula Recreation Area is unique in its proximity to the Town of Frisco and Highway 9. The Scenery Management System (SMS) Scenic Integrity Objective (SIO) of the SUP area is officially designated in the 2002 Forest Plan as *Low* and *Moderate*. The majority of the peninsula is designated as *Low* and the northern tip is *Moderate*. Those designations are defined as:

Low – The valued landscape character “appears moderately altered.” Deviations begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect, and pattern of natural openings, vegetative type changes or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed but compatible or complimentary to the character within.

Moderate – The valued landscape character “appears slightly altered.” Noticeable deviations must remain visually subordinate to the landscape character being viewed.

To harmonize with these characteristics, planned activities within this MDP have been designed to correspond with the characteristics of these SIOs. Throughout implementation of the projects discussed in this MDP, the Town of Frisco will work with the Forest Service to exceed these objectives as practicable.



Chapter 3

Site Inventory



Chapter 3. Site Inventory

A. TOPOGRAPHY AT FRISCO NORDIC CENTER

The topography at the Nordic Center and Peninsula Recreation Area consists of a mix of flat areas that generally span the length of the peninsula and steeper terrain that surrounds these flats areas and typically extends down to the water's edge. Currently, trails exist on most areas of the peninsula, aside from the steep slopes down to the water's edge. Small ridges, separating the steep and flat areas, run north-south on the peninsula and most trails run in that direction as well, either on top of or along the base of the ridges. The terrain is very flat on the eastern side of the peninsula and hillier up to and between the ridges on the western side.

The highest elevation within the Nordic Center and Peninsula Recreation Area trail network is approximately 9,350 feet amsl, which occurs on the existing *Buzzsaw* trail. The lowest elevation of the trail network, at the lakeshore perimeter trail, is approximately 9,015 feet amsl. Thus, total vertical drop of the Nordic Center and Peninsula Recreation Area trail network is approximately 335 feet. The Nordic Center building is at approximately 9,070 feet amsl.



Frisco Day Lodge and Nordic Center

B. SLOPE GRADIENTS AT FRISCO NORDIC CENTER

As discussed in Chapter 2, terrain ability level designations are based on slope gradients and terrain features present within a trail network. Regardless of the slope gradient for a particular trail, if it feeds into a trail that is rated higher in difficulty, its ability level must be rated accordingly. Conversely, if a trail is fed only by trails of a higher ability level than the maximum slope of the trail would dictate, it also must be rated accordingly. Unlike with downhill skiing, Nordic trails and mountain biking trails do not necessarily follow the fall line and can cut across the slope. Further, mountain biking trails typically avoid the fall line to limit erosion.

Slope gradients at the Nordic Center are depicted in *Figure 2*:

0 to 10% (0 to 6 degrees): This gradient is suitable for beginner and intermediate skiing and biking, buildings, and other support facility development. Trails for expert skiers and bikers can include these grades for short sections.

10 to 20% (6 to 11 degrees): This gradient is suitable for expert skiers and bikers. Trails for intermediate skiers and bikers can exceed 10% grade for short sections or will need to cut across the hillside. These slopes can typically support some types of development.

20 to 30% (12 to 17 degrees): At this gradient, trails for expert skiers and bikers should cut across the hillside as well. Trails for expert skiers and mountain bikers can exceed 20% grade for short sections. It is typically too steep for development.

30 to 40% (18 to 23 degrees): All trails will need to cut across the hillside at this gradient.

40% (>24 degrees): These areas are typically too steep for trails for any ability level. Trails can cut across the hillside, but it may be difficult to construct such trails.

As displayed in *Figure 2*, a range of slope gradients are present across the peninsula, capable of accommodating trail construction for all ability levels. As shown in *Figure 2*, the majority of the peninsula's terrain is characterized as being suitable for beginner- to intermediate ability levels based on the presence of gradients in the 0 to 10 percent range. As described in the topography section above, the terrain at the Nordic Center is largely characterized by flat terrain with steeper hillsides down to the water, although the area near the water on the eastern side is quite flat. The western side has steeper terrain dropping off the small ridges running north-south, in a few locations steeper than desired for sustainable trail construction. As to specific example locations, consistently beginner-level terrain is found right around the Nordic Center building. Consistent intermediate-level terrain is found in the *Jody's Loop* area. Consistent advanced-level gradients are very limited, with a few locations found west of Crown Point Road.



C. SOLAR ASPECT AT FRISCO NORDIC CENTER

Slope aspect plays an important role in snow quality and retention. There are a variety of exposures at the Nordic Center which can have a considerable effect on the quality of skiing on Nordic Center trails, including changes in sun angle, temperature, wind direction, and shadows; slope aspects at the Nordic Center are depicted on *Figure 3*. The effect of these exposures is heightened by the fact that much of the Nordic Center has been clear cut and has very little vegetation to protect snow and guests from the elements. Typical constraints in relation to the various angles of exposure are discussed below:

North-facing: ideal for snow retention, minimal wind scour, minimal sun exposure

Northeast-facing: ideal for snow retention, minimal wind scour, minimal sun exposure

East-facing: good for snow retention, some wind scour, morning sun exposure

Southeast-facing: fair for snow retention, moderate wind scour, morning and early afternoon sun exposure

South-facing: at lower elevations, poor for snow retention, moderate wind scour, full sun exposure

Southwest-facing: poor for snow retention, high wind scour, full sun exposure

West-facing: good for snow retention, high wind scour, late morning and afternoon sun exposure

Northwest-facing: good for snow retention, moderate wind scour, some afternoon sun

Given the limited tree cover and strong winds by the reservoir, the peninsula is very exposed and susceptible to wind scour and melt-out. The majority of the terrain at the Nordic Center is west facing, good for snow retention but with high wind scour and sun exposure. The western area of the peninsula below the ridges faces east and the northernmost section of the property has largely north facing terrain. Those aspects tend to retain snow better, with less wind scour and sun exposure. The portions of the peninsula facing south are on the peninsula's southwest corner. Those areas, poor for snow retention, are primarily the slopes above the bike path and extending north into sections of the *Buzzsaw* trail area.



Chapter 4
Existing Conditions



Chapter 4.

Existing Conditions

This chapter contains an assessment and analysis of existing facilities and operations at the Nordic Center. Completion of a thorough inventory is the first step in the master planning process and involves the collection of data related to the Nordic Center in its existing state. This includes but is not limited to an inventory of existing trails, facilities, available recreational activities, guest services, parking capacity, general operations and other utilities/infrastructure. This analysis of inventoried data involves the application of industry standards to existing conditions at the Nordic Center. This process allows for the comparison of the Nordic Center's existing facilities to those facilities commonly found at Nordic ski areas of similar size and composition.

Existing facilities are detailed on *Figure 4*.

A. SUMMARY OF THE EXISTING GUEST EXPERIENCE

The existing guest experience at the Nordic Center and Peninsula Recreation Area is varied. Near the Nordic Center Building, basic accommodations and developed recreational activities are available. As previously described, the intersection of Crown Point Road and Recreation Way is the hub of the Nordic Center and Peninsula Recreation Area's trail network. Once away from the central area, guests typically spread out and utilize the Nordic Center and Peninsula Recreation Area's trail system, wherein the recreational experience becomes much more dispersed. Guests often spend hours exploring the trail system before returning to the Nordic Center Building.

The Nordic Center and Peninsula Recreation Area's facilities provide an experience that is perfectly suitable for both residents of Summit County and out-of-town visitors that are in the area primarily for different recreational attractions. In other words, visitors coming from other parts of the region, country, or world may visit the area with the primary intention of skiing at one of the proximate alpine ski areas, but find themselves in search of alternative recreational activities like Nordic skiing, snowshoeing, tubing or sledding. The Nordic Center and Peninsula Recreation Area does not typically generate visitation from outside the region itself; however, it is part of the broader suite of recreational opportunities that make Summit County a prime destination for those seeking outdoor recreation-centric vacations. Many Summit County vacationers desire recreational alternatives to alpine skiing during their vacation, and in these scenarios, the Nordic Center and Peninsula Recreation Area becomes an ideal destination. For these reasons, the Nordic Center and Peninsula Recreation Area is an exemplary recreational and community asset for both local residents and out-of-town visitors. A 5-year average between 2010 and 2016 shows that the Nordic Center received 51,000 winter visits. It is estimated that on peak days, the Nordic Center and Peninsula Recreation Area welcomes approximately 1,100 visitors per day.

During the summer season, the Nordic Center and Peninsula Recreation Area remains a destination for vacationers but is primarily a recreational and community asset for local residents. The trail system and other facilities (e.g., disc golf course, multi-purpose and ball field, etc.) provide a diverse range of recreational opportunities throughout the summer. Various programs like the youth summer camps provide another valued community asset (as detailed in the *Programs and Events* discussion).

B. WINTER EXPERIENCE

1. Summary of the Existing Guest Experience

The existing guest experience during winter at the Nordic Center and Peninsula Recreation Area is varied, as guests have many recreational activities to choose from. The following activities are available to guests in the winter:

- » Nordic skiing
- » Snowshoeing
- » Fat biking
- » Tubing
- » Sledding
- » Sleigh/wagon rides

Nordic skiing, snowshoeing, and fat biking occur within the Nordic Center and Peninsula Recreation Area's existing trail network. In general, the trail network is adequate but could be enhanced with a number of general routing improvements.

First and foremost, the trail network lacks sufficient looped trails and dedicated connector trails. The current state of trail connectivity means that users often have to utilize out-and-back trails to return to their starting point. It is also important to note that the existing trail network was constructed prior to tree salvage on the Peninsula Recreation Area that followed the mountain pine beetle infestation. Because of the significant number of trees that were killed/removed due to mountain pine beetles, the trail network is now highly exposed to and poorly protected from the elements.

Table 4-1 includes information on the existing winter trail network, including ability level, user type, and distance of each trail.



TABLE 4-1. EXISTING WINTER TRAIL NETWORK

TRAIL NAME	ABILITY LEVEL	USER TYPE (NORDIC, MULTI-USE)	DISTANCE (MILES)
Balfonz Blitz	Expert	Nordic	0.5
Buzzsaw Winter	Expert	Nordic	4.0
Crown Point Road	Beginner	Nordic	2.2
Jody's Loop	Intermediate	Nordic	2.0
Perimeter Trail	Beginner	Multi-Use	3.9
Olympian's Link	Expert	Nordic	0.4
Reichl's Retreat	Intermediate	Nordic	0.4
Peninsula Road	Beginner	Nordic	1.0
Scenic Loop	Beginner	Nordic	0.5
TOTAL			14.9

2. Existing Facilities

Certain facilities and infrastructure at the Nordic Center and Peninsula Recreation Area are specifically intended to support winter season activities, including the Nordic Center Building, tubing hill and surface lift, sledding hill, snowmaking system, stables and yurt. Refer to the *Existing Infrastructure* discussion for further information.

3. Activities

Winter trail activities at the Nordic Center and Peninsula Recreation Area, such as Nordic skiing, snowshoeing and fat biking, utilize the trail network described in **Table 4-1**. The recreational experience within the trail network during the winter is considerably more dispersed than that of the non-trail winter activities.

Non-trail winter activities at the Nordic Center and Peninsula Recreation Area consist of tubing, sledding, and sleigh/wagon rides operated by the Two Below Zero Sleigh Ride Company. The recreational experience at the hub of the Nordic Center and Peninsula Recreation Area's trail network (near intersection of Crown Point Road and Recreation Way) often feels busier than it does further out in the trail network, as guests are in close proximity to Highway 9, parking, and a plethora of activities occurring within or near the Nordic Center Building.

C. SUMMER AND MULTI-SEASON EXPERIENCE

1. Summary of the Existing Guest Experience

The Nordic Center and Peninsula Recreation Area currently offers a wide array of recreational activities that can be enjoyed during the spring, summer and fall. Recreational activities available to guests in these months include but are not limited to:

- » Road biking and mountain biking (as well as opportunities for biking on soft surface roadways/ Nordic trails)
- » Hiking and trail running
- » Baseball and other field sports
- » Skate park-related activities and BMX biking
- » Disc golf
- » Camping and boating (96-site campground with boat launch)

Table 4-2 includes information on the existing summer trail network. Please note that most of the summer trails used for mountain biking, hiking, and trail running are also used as Nordic trails during the winter. All summer trails are currently designated as multi-use trails.

TABLE 4-2. EXISTING SUMMER TRAIL NETWORK

TRAIL NAME	ABILITY LEVEL	DISTANCE (MILES)
Balfonz Blitz	Expert	0.5
Buzzsaw Summer	Intermediate	2.5
Cross Over	Intermediate	0.2
Crown Point Road	Beginner	2.2
Jody's Loop	Intermediate	2.0
Perimeter Trail	Beginner	3.9
Olympian's Link	Expert	0.4
Rocky's Ride	Expert	0.5
Reichl's Retreat	Intermediate	0.4
Switchback	Intermediate	0.5
Scenic Loop	Beginner	0.5
TOTAL		13.6



2. Existing Facilities

Certain facilities and infrastructure at the Nordic Center and Peninsula Recreation Area are specifically intended to support activities that occur during the summer season, including the skate park, disc golf course, multi-purpose and ball field, paved bike path, mountain biking trails, bike park, recreation path, and a 96-site campground with a boat-launch. Refer to the *Existing Infrastructure* discussion for further information.

3. Activities

Summer trail activities at the Nordic Center consist of mountain biking, hiking, and trail running, and utilize the trail network described in **Table 4-2**. Road-biking also occurs along a portion of the Summit County Recreation Path that passes by the Nordic Center and Peninsula Recreation Area (not included in **Table 4-2**). As described above for winter trail activities, the recreational experience within the trail network is considerably more dispersed than the experience of non-trail activities.

Almost all of the summer trails are Nordic trails during the winter months, which results in a sub-optimal user experience of the trail network. The user experience during the summer months would be greatly enhanced if summer optimized trails were constructed separate from the Nordic Trails that currently define the trail network during the summer and winter seasons.

Non-trail activities consist of baseball, skating, disc golf, camping and boating, and any other activities that utilize the multi-purpose field.

D. EXISTING INFRASTRUCTURE

1. Town of Frisco Lands

The following infrastructure currently exists at the Nordic Center on private lands owned by the Town of Frisco:

- » Day Lodge – Central hub for youth programs, weddings and other community events (includes a concession stand and is mostly used during the summer)
- » Nordic Center Building – Serves as the welcome center for most winter activities taking place at the Nordic Center
- » Ball Field – Maintained ball field (bases and permanent pitching mound) and benches
- » Skate Park – Used by skaters, rollerbladers, and BMX-bikers; includes a concrete pump track (currently being replaced)
- » Tubing Hill and Lift – One of the primary winter activities that locals and visitors alike specifically come to the Nordic Center for. It is comprised of a carpet lift with an approximate hourly capacity of 2,000 people per hour that takes tubers to the top of the hill. It is groomed regularly. Guests must use an inflatable tube provided by the Nordic Center.
- » Sledding Hill – As compared to the tubing hill, this is an informal sledding hill. Guests walk to the top and may use various types of sleds to descend

- » Disc Golf Course – Suitable for all skill levels with great views of Lake Dillon and the Ten Mile Range
- » Snowmaking System – Provides consistent snow coverage for the tubing hill and some of the winter trails
- » Yurt – Used as warming hut
- » Winter Trails – Used for Nordic skiing, snowshoeing, and fat biking
- » Maintenance Shop – Supports all staff operations
- » Stables – Houses the Two Below Zero Sleigh Ride Company horses
- » Well House – A small building enclosure around a well and its apparatus
- » Multi-Purpose Field – Outdoor field providing for various activities
- » Paved Bike Path – Portion of the Summit County Recreation Path that passes through the Nordic Center and Peninsula Recreation Area
- » Access Road Network – Supports operations by providing transport around Nordic Center and Peninsula Recreation Area for staff

2. National Forest System Lands

The following infrastructure currently exists at the Nordic Center on publicly-owned NFS lands:

- » Winter Use Trails (see **Table 4-1**)
- » Summer Use Trails (see **Table 4-2**)
- » Paved Recreation Path – Portion of the Summit County Recreation Path, adjoining the Town of Breckenridge and the Town of Frisco and continuing on to Eagle County; abuts the Nordic Center (forms the southeastern boundary)
- » Access Road Network – Supports operations by providing transport around Nordic Center and Peninsula Recreation Area
- » Campground with Boat Launch – Contains 96 campsites and Lake Dillon boat-launch

E. PROGRAMS AND EVENTS

The Town of Frisco operates events at the Nordic Center on a 5-year event permit (current through 2021), administered by the Forest Service. The following regular programs and special events, which may use both Town of Frisco and NFS lands within the PRA, currently take place at the Nordic Center:

- » Youth Programs – Frisco Fun Club, BOKS Kids Before School Program, Bike Camp, Adventure Camp, H2O Camp, Girls on the Run Camp, Play-Well Lego Camp
- » Mountain Biking, Trail Running, and Nordic Skiing Races – Frisco Triathlon, Mountain Goat Kids Trail Running Series, Annual L.A.P.S. Canine 4K, Dillon Challenge, Run the Rockies Trail Races, Turkey Day 5K; Gold Rush
- » Weddings – Summertime weddings take place on the Peninsula Recreation Area as planned (oftentimes both the Day Lodge and campsites are used)
- » Disc Golf Tournaments
- » Club Meet-Ups, Free Family Fun Fairs, other community events as planned (seasonally dependent)
- » Sleigh/Wagon Rides – Operated by Two Below Zero Sleigh Ride Company



Community Events, Races, Youth Programs, Disc Golf

F. EXISTING GUEST SERVICES, SPACE USE ANALYSIS, & FOOD SERVICE SEATING

Existing guest services include but are not limited to food and beverage options, ski rentals and other retail sales, lockers for gear storage, and a first aid station (refer to **Table 4-3**).

TABLE 4-3. EXISTING GUEST SERVICES, SPACE USE & FOOD SERVICE SEATING

FUNCTION	BUILDING/LOCATION	
	DAY LODGE (SQ. FT.)	NORDIC CENTER (SQ. FT.)
Restaurant Seating	1,617	924
Kitchen/Scramble	258	N/A
Bar/Lounge	258	N/A
Restrooms	544	360
Guest Services	430	N/A
Daycare/Nursery	N/A	N/A
Rentals/Repair	N/A	320
Retail Sales	430	N/A
Ticket Sales	430	N/A
Public Lockers	84	N/A
Season Pass Lockers	N/A	N/A
Safety/First Aid	56	N/A
Administration	N/A	81
Employee Lockers/Lounge	441	N/A
Mechanical (including furnace)	448	N/A
Total Square Footage	3,950	1,685
Indoor Restaurant Seats*	50	12
Outdoor Restaurant Seats*	22	10
Type of Food Service	Grab-and-go	Grab-and-go



G. EXISTING PARKING CAPACITY

Existing parking options at the Nordic Center and Peninsula Recreation Area exist at the Day Lodge, Nordic Center, multi-purpose and ball field, and the Dickey Day Use parking lot (refer to **Table 4-4**).

TABLE 4-4. EXISTING PARKING OPTIONS AND CAPACITY

PARKING LOT/ LOCATION	SURFACE	TOTAL ACREAGE	VEHICLE CAPACITY	ESTIMATED GUESTS/VEHICLE	YEAR BUILT
Day Lodge	Asphalt	0.3	42	3	2009
Nordic Center	Asphalt	0.3	60	2	2009
Multi-purpose and Ball Field	Asphalt	0.3	80	2	2009
Dickey Day Use Parking Lot	Asphalt	0.1	18	2	2018

H. EXISTING OPERATIONS

1. Snowmaking Coverage

a. Snowmaking System

The snowmaking system at the Nordic Center provides coverage for 12 acres, which includes both the tubing hill and select Nordic trails, proximate to the Nordic Center. The average depth of snowmaking coverage required for these operations is 3 feet. The snowmaking system is supported by a pump house built in 2010 (350 square feet) that also serves as a plumbing shop.

Snowmaking infrastructure includes two air/water guns, four fan guns, and two tower guns, all of which are supported by seven 3-inch manual hydrants.

b. Water Supply

The Town of Frisco has allocated 35 acre-feet of water per year to the Nordic Center and Peninsula Recreation Area for snowmaking, which is used for both the tubing hill and Nordic trails. Refer to **Table 4-5** for statistics on water consumption and snowmaking between 2013 and 2016.

TABLE 4-5. WATER CONSUMPTION AND SNOWMAKING STATISTICS

SEASON	WATER CONSUMPTION (ACRE-FEET)	TOTAL SNOW PRODUCED (ACRE-FEET)
2013/14	30	59
2014/15	27	53
2015/16	21	41

2. Grooming

Grooming is a critical operation for any Nordic ski area. The goal of grooming operations is to provide optimal skiing conditions in light of snow and other weather-related factors. More specifically, grooming aims to produce a firm, durable base for skiing that is both resistant to breakdown from repeated use and less prone to melting and degradation.

A snowcat is equipped with various attachments to either groom smooth lanes for skate skiing or to set classic tracks. Techniques and tools used depend largely on the condition of snow, ranging between freshly-fallen powder to congealed, tough ice.

The Nordic Center's grooming fleet consists of two snowcats: one for the tubing hill and one for the Nordic Center. On average, 7 acres at the tubing hill and 28 acres at the Nordic Center are groomed nightly. A typical grooming shift lasts approximately two hours for the tubing hill and six hours for the Nordic Center.

Currently, grooming operations at the Nordic Center and on the Peninsula Recreation Area are difficult to conduct because of the existing layout of trails. The same inefficiencies associated with the trail network that were described above (i.e., limited looped and dedicated connector trails) cause inconveniences for grooming operations.

3. Maintenance Facilities

A maintenance shop built in 2015 (4,200 square feet) serves as a storage facility, carpentry shop, and area for lift operations maintenance.



Frisco Bike Park and Wagon Rides



Chapter 5

Upgrade Plan



Chapter 5.

Upgrade Plan

This MDP has been prepared in compliance with the terms and conditions of the Forest Service-issued 40-year Term SUP for the Nordic Center. As stated previously, Forest Service acceptance of this MDP does not convey approval of any projects contained herein. Implementation of any projects on NFS lands within the Nordic Center SUP area is contingent upon site-specific environmental review and approval in accordance with NEPA. Planned projects contained in this MDP are conceptual in nature and may be refined in the future, as long as the original intent of a planned project is maintained.

This upgrade plan focuses on enhancing the guest experience through a series of improvements to the winter and summer trail networks.² Improvements to the trail networks, facilities, and suite of multi-season activities described in this section include:

- » A conceptual Nordic ski trail network approximately 37.3 kilometers (23.2 miles) in length, including existing trails, new trail construction, trail re-routes, and strategic connectors. 7.5 miles of fat bike trails are also included in the winter upgrade plan, depicted on *Figure 5*.
- » A conceptual mountain biking and multi-use trail network approximately 26.2 miles in length, including existing trails, new trail construction, trail re-routes, and strategic connectors suitable for varying ability levels, depicted on *Figure 6*.
- » Ancillary summer and multi-season guest services projects, including platforms for lunch/viewing sites, trail bridges, yurt/warming hut and composting toilet.
- » Non-trail winter and multi-season activities (e.g., boulder play area, biathlon range, and ice pond. These activities would be located according to summer zone designations; refer to *Figure 8*, which depicts summer zone designations.
- » The continuation of year-round buck and rail fence construction for the purposes of retaining snow, strategic tree planting, and bi-annual tree removal in the northeast quadrant of the PRA as the area is currently unusable due to the high number of standing and fallen dead tree. Tree removal will begin on the southernmost portion of the zone and will progress northward.
- » Pending future environmental analysis under NEPA, the Nordic Center's SUP area will be expanded to include the area between Highway 9 and the Recreation Path; this connecting parcel will allow for the extension of the winter and summer trail networks; refer to *Figures 5 through 8*, which identify the proposed SUP boundary adjustment.

² All trails presented here are conceptual and are subject to change during site-specific planning and layout.

It is anticipated that many projects, particularly trail construction, improvement, and reclamation projects, could be implemented immediately following MDP acceptance and NEPA analysis; however, this upgrade plan presents a vision for the Nordic Center that could be implemented incrementally for approximately ten to fifteen years after the MDP is accepted.

The Nordic Center strives to exceed its goals and objectives for providing its guests with world class experiences; however, there are numerous known deficiencies in the recreational opportunities available during the winter and summer seasons, many of which were identified by community members during the public outreach process for this MDP. The upgrade plan was developed to address these deficiencies. Beyond just addressing these deficiencies, the summer and winter event and facility upgrades detailed in this MDP will also enable the PRA to host national and international events in multiple sports.

No changes to grooming, maintenance facilities, utilities, or communications are included in this MDP.

A. UPGRADED WINTER TRAIL NETWORK

The intent of the upgraded winter trail network is to improve the existing trail network that users are familiar with. It strives to bolster the existing trail network with segments of new trail, for a ski experience that provides variety for locals but is easily navigated by visitors.

The upgraded winter trail network is summarized in **Table 5-1**.

TABLE 5-1. UPGRADED WINTER TRAIL NETWORK

CONSTRUCTION OPERATION	TOTAL DISTANCE (MILES)
Existing trails to be retained	14.4
Existing trails to be closed	0.5
New trail construction	9.3 (includes 1.75 mile loop on tubing hill/Town of Frisco property)

With the exception of *Olympian's Way*, few of the existing winter trails were designed for recreational use. For example, trails such as *Jody's* and *Buzzsaw* are primarily old logging roads and many of these trails have never had rocks removed or camber corrected with machinery. With the loss of trees and resulting loss of snow, sections of these trails are no longer skiable with low snow. In order to be skiable for the majority of winter months, many existing trails will require a mix of trail bed work, re-alignment and natural buck and rail snow fencing.

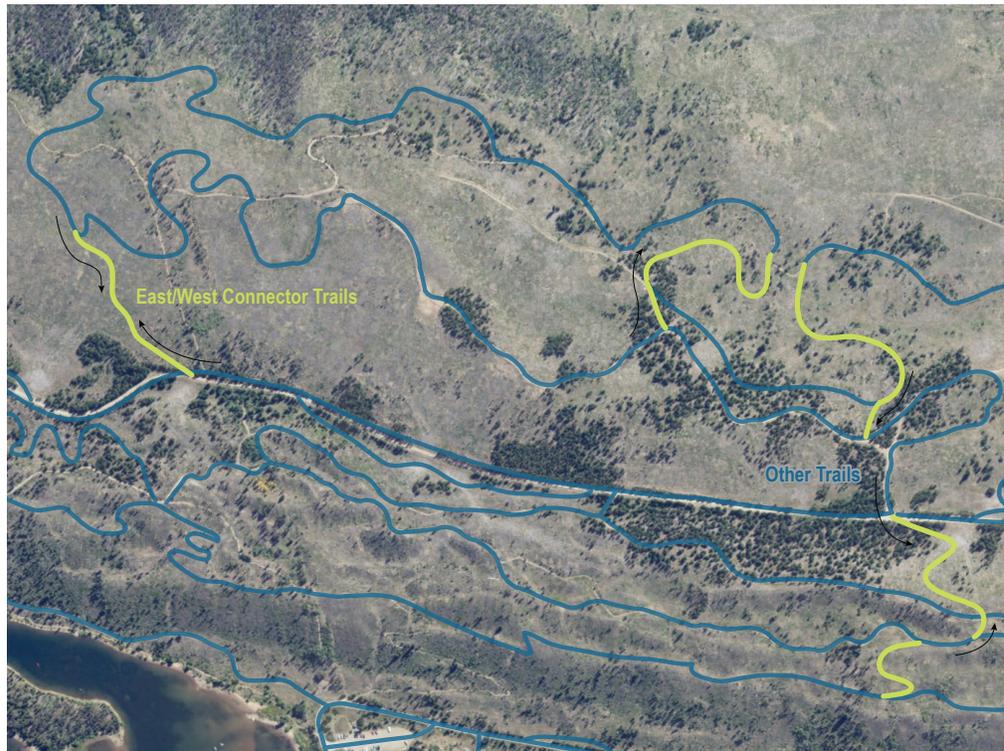


To address specific deficiencies in the existing trail network, the development of conceptual Nordic trails adheres to the following principles, in addition to the Design Criteria presented in Chapter 2:

1. *Shift sections of Nordic trails West of the Nordic Center to a more east-west orientation to better use natural terrain features on the peninsula. This new alignment will also create a denser 3 kilometers early season snowmaking loop that will require fewer hours to cover (expanding to 5 kilometers by 2021).*
2. *East-west connectors in the areas of Jody's and Buzzsaw will shift the trail configuration toward a "stacked loop" configuration and provide many more options for skiers (see Illustration 1).*
3. *Make key intermediate trails that utilize existing road beds less linear, and thus more engaging for Nordic skiing.*
4. *Preserve and upgrade existing trails consistent with the expressed wishes of Summit County residents.*
5. *Utilize as many existing trail segments as possible without compromising the above objectives.*
6. *Following implementation of the race loop around the tubing hill, two ski/pedestrian/bike bridges could be added to connect the winter and summer trails over Recreation Way (as noted in Figure 5).*

Illustration 1. **East-West** **Connector Trails** **Example**

These trails provide loop-skiing opportunities and better utilize the peninsula's natural topography.



1. Nordic Ski Trails

According to these principles, the conceptual Nordic ski trail network contains approximately 15.1 kilometers (9.3 miles) of new trail construction. Conceptual trails include realignments of existing trails, trail segments that provide access to new areas of the peninsula, and strategic connections to enhance navigability and the guest experience. When compared to the existing trail network, conceptual trails would accentuate the terrain available on the peninsula and provide challenging but gratifying experiences for many ability levels. The conceptual trail network is displayed on *Figure 5*.

2. Race Loop

Although the conceptual Nordic ski trail network as a whole could be utilized for racing, this plan includes a race-specific loop approximately 3 kilometers (1.75 miles) in length in the vicinity of the existing tubing hill and access to snowmaking. Public outreach identified the need to provide a race-specific loop at the Nordic Center that could be used for training programs and hosting events. The race loop would be located on a hill with approximately 100 feet of vertical relief, and could include steep climbs, technical descents, and other unique training features. The race loop would be easily accessible from the existing Day Lodge.

3. Fat Bike Trails

In recent years, Nordic ski trail networks have become de facto fat biking destinations, due to the suitable riding surface they provide. Many Nordic skiers express discontent with fat bike use of trails groomed for Nordic skiing, due to the potential for trail conflicts, trail surface degradation, and other factors. In order to best accommodate the Nordic skiing and fat biking public, the winter upgrade plan includes approximately 7.5 miles of conceptual fat bike/E fat bike trails, which would be groomed over-snow by snowmobiles. Fat bike trails are designed to intersect perpendicular to Nordic ski trails to the greatest extent possible, rather than following the Nordic ski trail surface, to decrease the potential for trail conflicts.





4. Snowmaking/Snowmaking Loop

Town of Frisco currently creates artificial snow on a 2.2 kilometers snowmaking loop that includes a portion of the Frisco Bay Trail and is located entirely on Town of Frisco lands. The snowmaking process consists of creating snow behind the Nordic Center and moving it onto the trail with bucket loads. This process of snowmaking will continue for the next three to five years, and Town of Frisco will investigate the option of installing permanent snowmaking infrastructure on this snowmaking loop when it becomes cost effective. Town of Frisco also plans to expand the snowmaking loop by an additional 1 kilometer on the southwest end of the Frisco Bay Loop, which is also located entirely on Town of Frisco lands.

5. Yurt/Warming Hut

The MDP charette and public comment process generated multiple requests for a winter structure. This structure could be a warming hut, which would not be available for overnight use, or a yurt that would be available for overnight use and would have a stove and composting toilet. The approximate location for this structure is depicted in *Figure 7*.

B. UPGRADED SUMMER TRAIL NETWORK

The conceptual summer trail network consists of 26.2 miles of mountain biking and multi-use trails, new trails planned in order to address deficiencies in the existing trail network identified in Chapter 4. The conceptual trail network was designed to provide summer users with a trail network of their own, through the improvement of existing trails and the development of new trails using current trail design techniques. Trails will be located throughout the Nordic Center and Peninsula Recreation Area as shown *Figure 6*.

The upgraded summer trail network is summarized in *Table 5-2*.

TABLE 5-2. UPGRADED SUMMER TRAIL NETWORK

CONSTRUCTION OPERATION	TOTAL DISTANCE (MILES)
Existing trails to be retained	11.4
Existing trails to be closed	2.2
New trail construction	17 (excluding proposed bike skills park)

New trails will enhance the recreation experience by providing loop opportunities, enhanced connectivity, facilitating access to previously undeveloped areas of the peninsula, and providing experiences for a variety of ability levels. New trail configuration and design seeks to satisfy the following user group and purposes:

- » **Local/frequent users:** the Nordic Center and Peninsula Recreation Area's increased connectivity to the recreation path via two tunnels will significantly increase the number of multiple weekly visits by residents for "lunch runs/rides." The new trail configuration with key "cloverleaf" junctions allows for hundreds of variations in loops to keep locals entertained for years of use.
- » **Visitors:** will find concise signage for loops with noted distance and difficulty. Visitors would also benefit from new trail configuration described under local/frequent users discussion.
- » **Events:** new "cloverleaf" junctions will allow for running, multi-sport and cycling events to be run on the Nordic Center and Peninsula Recreation Area without having to close significant amounts of area to visitors. The new trails combined with existing double track roads will also increase the quality of event courses. Improvements to existing trails include rock pulling, branch trimming, and some tree removal to improve sight lines. All trails will be open to multiple uses, with the exception of directional advanced mountain biking trails (0.6 mile total). Additionally, a mountain bike skills park is planned to provide a platform for first-time and beginner-level riders to learn the skills and develop the confidence necessary to progress in the sport.
- » **Picnic tables/platforms:** may be placed in select locations in zones one and two as depicted in *Figure 7*. These amenities would encourage and define a destination (for day hikers in particular) and draw visitors to accessible and scenic locations.
- » **Access Points:** the network is designed around the Dickey Day trailhead parking lot and Day Lodge area as the major access points for users. Two secondary trailheads include the Old Dickey Day Trailhead (accessed from the multi-use path) and the boat launch parking lot. Users can access beginner or intermediate trails from all trailheads. As discussed in Chapter 4, most of the existing trails at the Nordic Center are actually Nordic trails, which provide a cross-country trail riding experience. While cross-country trail riding experiences are still highly desirable, two directional, advanced trails are included to accommodate the growing number of gravity riders. Directional trails are also strategically placed in high-use areas of the Nordic Center and PRA to reduce up/down user interaction on adjoining trails.



TABLE 5-3. UPGRADED SUMMER TRAIL NETWORK ABILITY LEVEL DISTRIBUTION

ABILITY LEVEL	LENGTH (MILES)
Easiest	8.6 ^a
Intermediate	15.5
Advanced	1.0
<i>Directional, Bike-Optimized</i>	0.6
Other	0.5
Total	26.2

Notes:
Trail ability level ratings are based on the mountain biking experience; however, all trails, with the exception of the mountain biking optimized directional trails, will be open to multiple uses.

^a Does not include the mountain bike skills park, which is depicted as a zone.

The easiest ability level trails will be located on the perimeter of the peninsula. Easiest trails (including existing dirt roads) also bisect the Nordic Center and Peninsula Recreation Area and allow for users to shorten or expand loops. Intermediate trails traverse the interior of the peninsula, incorporating additional elevation gain/loss and some technical terrain features. Advanced trails will be steeper, incorporating additional technical terrain features and elevation loss/gain. Only the directional, advanced trails will be bike-optimized. The other trails will be constructed to mountain biking trail design standards; however, they will be suitable for a variety of uses.

Overall, these upgrades will increase opportunities for guests to explore NFS lands within the Nordic Center SUP area and within the Peninsula Recreation Area as a whole during the summer season and will promote the development of new riders. Interpretive signage could be located along planned trails to promote stewardship of surrounding natural resources.

C. TRAIL INTERFACE AND CONNECTIVITY

1. Interface between Winter and Summer Trails

Winter trails with no existing single-track or double-track will be closed to summer use with the installation of seasonal signage. An example is the improved section of *Lower Buzzsaw*. The majority of new Nordic trails will not have a single-track component and will not require signs to limit access.

In the area of *Jody's East and West*, as single-track alternatives and additions are built and after revegetation has been completed, the current double-track width trail bed will be improved for Nordic use and these sections would be closed to summer access with seasonal signs.

Please refer to *Figure 7*, which shows both the winter and summer upgrade plans.

2. Planning Area 4 and Connectivity to Frisco

Planning Area 4, a planning area identified in the *Town of Frisco 2017 Trails Master Plan*, encompasses the area to the south and west of the PRA (see *Illustration 2*). Planning Area 4 includes Mount Royal, Miner's Creek, Rainbow Lake, Ophir Mountain and Gold Hill. These popular areas are located on NFS lands and are each central community recreation destinations. They are characterized by a naturally-forested backcountry character that is in close proximity to the Town of Frisco, in contrast to the developed recreational experience available within the PRA. The overarching goal for Planning Area 4 is to have a connected, maintained, and legitimized (via partnership with the Forest Service) natural trail system in Frisco's backyard, that connects Mountain Royal, Miner's Creek, Rainbow Lake, Ophir Mountain, Gold Hill, etc. with the PRA.

Beyond the current PRA, the Town of Frisco has expressed interest in planning, building and managing both winter and summer trails on the south side of Highway 9. All trails and potential infrastructure projects contained in this MDP are complementary to a connected trail network within Planning Area 4. Town of Frisco will engage with the Forest Service to explore opportunities in this area.

D. NON-TRAIL AND FACILITY UPGRADES

In addition to the winter and summer conceptual trail networks, several additional facilities, infrastructure, and activities are proposed for potential implementation at the Nordic Center over the next fifteen years (refer to **Table 5-4**). The Town of Frisco will work with the Forest Service to further develop these concepts and ensure compliance with relevant Forest Service direction. Specifically, any facilities constructed on NFS lands will comply with guidelines of the Built Environment Image Guide.³

The specific locations of these facilities, infrastructure, and activities were not identified for this MDP, but would be determined based on their consistency with the summer activity zones introduced in Chapter 2. Access, remoteness, naturalness, and infrastructure were considered to define the summer and multi-season setting and guest experience within different landscapes on the Peninsula Recreation Area. Five zone designations are possible; however, only Zones 1, 2, and 3 (those zones containing the highest levels of development) are present on the Peninsula Recreation Area (refer to **Figure 8**).

TABLE 5-4. GUEST SERVICES FACILITIES UPGRADE PLAN

LAND OWNERSHIP	TYPE	FACILITY	APPROPRIATE SUMMER ZONE
Forest Service (Zone 2 and 3, as applicable to Summer and Winter Activities)	Facilities	Viewing deck/pavilion	Zones 2 or 3
		Backcountry yurts or warming hut	Zones 2 or 3
Town of Frisco (Zone 1, as applicable to Summer Activities)	Facilities	Picnic tables/platforms	Zones 2 or 3
		Composting toilets	Zone 2
		Expanded Nordic lodge, potentially in new location	Zone 1
		Trail bridges from top of tubing hill to Dickie Trailhead	Zone 1
		Outdoor amphitheater	Zone 1
		Storage/office building	Zone 1
		Pay-to-use pavilion	Zone 1
	Infrastructure/ Activities	Skate Park Lot (capacity 60 cars)	Zone 1
		Nordic Lot south (capacity 30 cars)	Zone 1
		Pump House Diagonal Lots (capacity 18 cars)	Zone 1
		Boulder play area (rock climbing)	Zone 1
		Additional athletic field or court	Zone 1
		Skate park rebuild	Zone 1
		Biathlon range	Zone 1
Infrastructure/ Activities	Picnic area	Zone 1	
	Ice pond for pond hockey	Zone 1	
	Boardwalk to marina	Zone 1	
	Ski jump	Zone 1	
	Bike path additions and upgrades	Zone 1	
	Dog park	Zone 1	
	Boat launch/rental upgrades	Zone 1	
Infrastructure/ Activities	Year-round campground upgraded and operated by Town of Frisco	Zone 1	
	Expanded disc golf course	Zone 1	

³ The Built Environment Image Guide provides design guidance for structures located on NFS lands. The Frisco Nordic Center is located in the Rocky Mountain Province.



1. Zone 1

a. Setting

Zone 1 includes Town of Frisco lands, NFS lands, and Forest Service campgrounds operated by concessionaires in the summer. The proposed expansion of Zone 1 would encompass both Forest Service and Town of Frisco lands.

The existing setting of Zone 1 is highly developed and disturbed. Services and activities in Zone 1 include food and beverage operations, shelter and emergency services, restroom facilities, landscaped areas, and other activities. Within Zone 1, the built environment dominates the landscape. Within the context of the overall SUP area, the following summarizes the setting in Zone 1:

- » Road access and roads are prevalent;
- » Considerable human activity occurs within and proximate to this setting—there is little to no feeling of remoteness;
- » Terrain modifications (ground disturbance and vegetation removal) dominate the area; and
- » Infrastructure, including buildings, are present.

b. Desired Experiences

Within Zone 1, guests are expected to encounter a high concentration of other guests. The level of development will reflect the current setting and function of these areas as hubs of activity and portals to NFS lands. Zone 1 abuts Zone 2 on the fringes of developed areas. This allows guests to experience a gradual transition between the built environment (Zone 1) and more-natural areas that still contain activities and facilities blending with the area's natural setting (Zone 2). Zone 1 will offer interpretive opportunities in a developed setting, with goals of enhancing guests' understanding of the natural environment as they prepare to venture into less-developed areas.

Please note that with the anticipated increase in year-round users, additional parking options have been identified. In particular, the Skate Park Lot, Nordic Lot South, and Pump House Diagonal Lots are identified in **Table 5-4**. It is estimated that for each of these parking areas, there would be an average of two to three guests per vehicle. All additional parking would exist within Town of Frisco lands.

2. Zone 2

a. Setting

The majority of NFS lands within the Nordic Center SUP were designated as Zone 2.

The existing setting of Zone 2 is less disturbed when compared with Zone 1. This zone provides more naturalness due to a lesser degree of disturbance from the surrounding area and greater degree of separation from existing infrastructure. Within the context of the overall SUP area, the following summarizes the setting in Zone 2:

- » Road access and roads are present;
- » Human activity (people recreating) occurs within and proximate to this setting—there is little feeling of remoteness;
- » Terrain modifications (ground disturbance and vegetation removal) are evident in the area, but past disturbance blends with the landscape; and
- » Infrastructure, including buildings, are present.

b. Desired Experiences

Most guests will access Zone 2 from Zone 1. In moving between these zones, guests will transition from the built environment to a setting characterized by both developed and passive activities proximate to existing infrastructure and facilities, but still offering a more-natural feel (i.e., trails). Zone 2 provides the initial opportunity for guests to learn about and engage in their natural surroundings through hands-on recreational, interpretive, and educational offerings. Thus, areas within Zone 2 serve as transitional zones, encouraging guest exploration into more natural portions of the National Forest in a setting that still feels comfortable for less-experienced Forest users.



3. Zone 3

a. Setting

Much of the north- and east-facing terrain within Nordic Center’s SUP boundary is designated as Zone 3. The boundary of this zone is consistent with the Forest Service SIO designation of “moderate” for this area (refer to Chapter 2 for a discussion of SIO designations).

The setting of Zone 3 contains areas of disturbance from the existing trail network but is largely unaltered. In this area, guests can find a greater degree of remoteness and naturalness than anywhere else on the peninsula. Within the context of the overall SUP area, the following summarizes the setting in Zone 3:

- » Road access and roads are present, but limited to certain areas;
- » Human activity (people recreating) can be seen but is at a lower density than could be found in other portions of the SUP area—a stronger feeling of remoteness is present;
- » The area is moderately disturbed by Nordic Center operations, including vegetation removal from trail development and some ground disturbance; and
- » There is no existing infrastructure in this area.

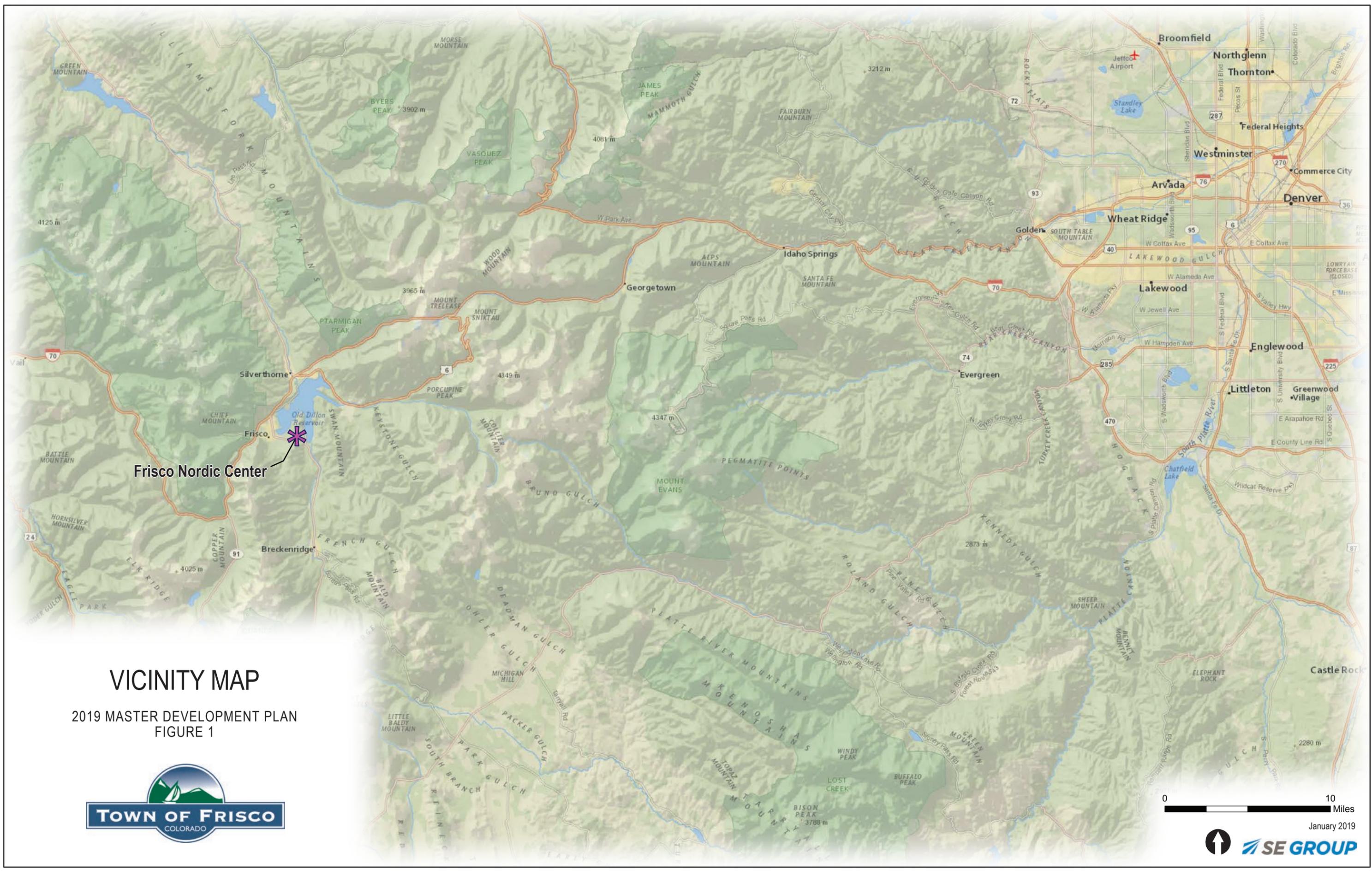
b. Desired Experiences

Guests will initially experience Zone 3 via a hike or ride from Zone 2. Once in Zone 3, guests will have a variety of opportunities to engage in their surroundings in a more natural and remote environment and will be treated to expansive views across Lake Dillon to the North.

As depicted in *Table 5-4*, there are a number of facilities that are appropriate for Zone 3; however, implementation of these facilities should maintain a low density within this zone. While each of these facilities may be appropriate individually, the cumulative impact of implementing each facility noted as appropriate for Zone 3 could create a density of infrastructure inconsistent with the desired experience for this zone. Development in Zone 3 should support dispersed recreation and naturalness currently available in this extent of the Nordic Center’s SUP boundary.



Figures



Frisco Nordic Center

VICINITY MAP

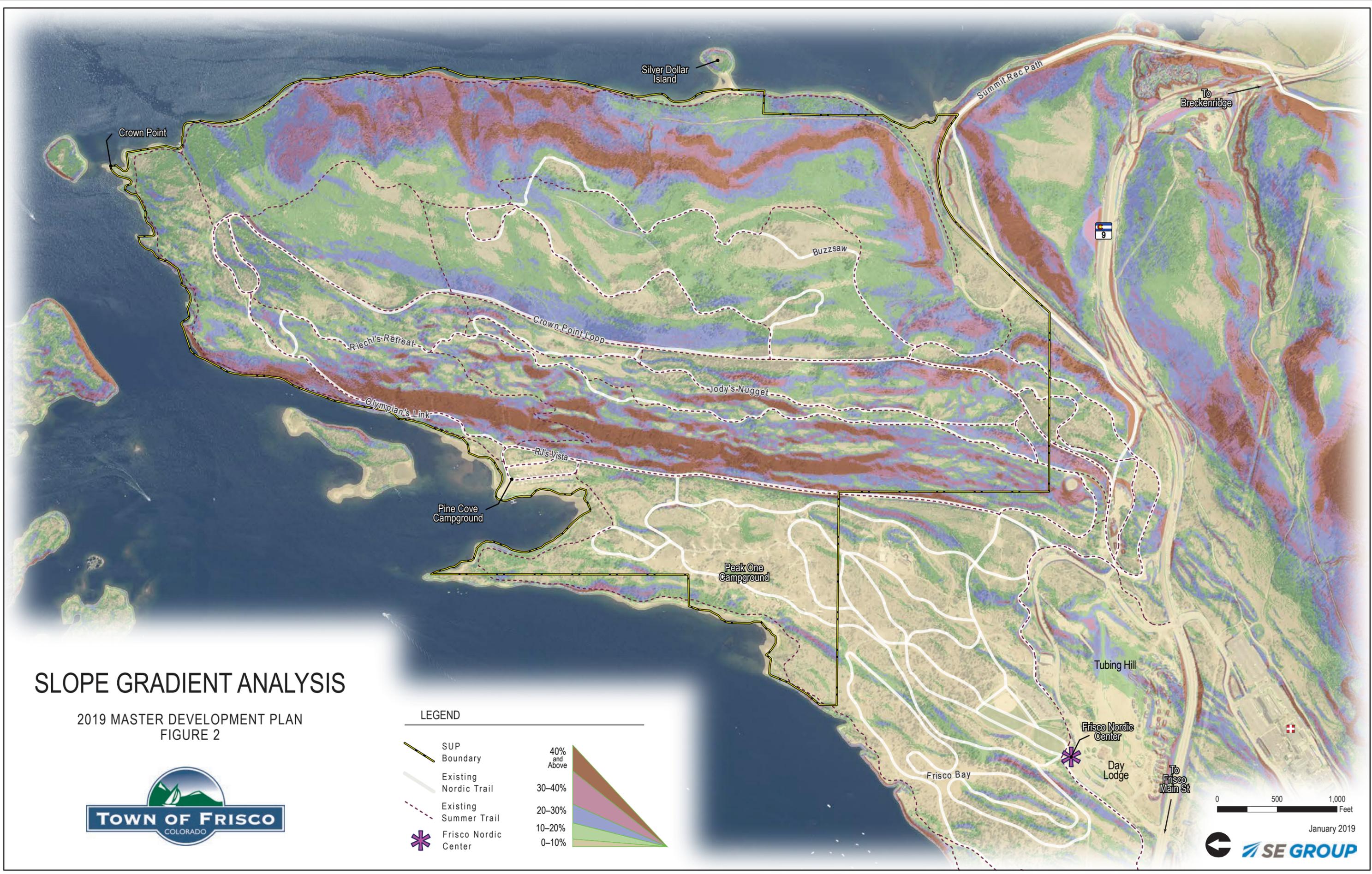
2019 MASTER DEVELOPMENT PLAN
FIGURE 1



0 10 Miles

January 2019





SLOPE GRADIENT ANALYSIS

2019 MASTER DEVELOPMENT PLAN
FIGURE 2



LEGEND

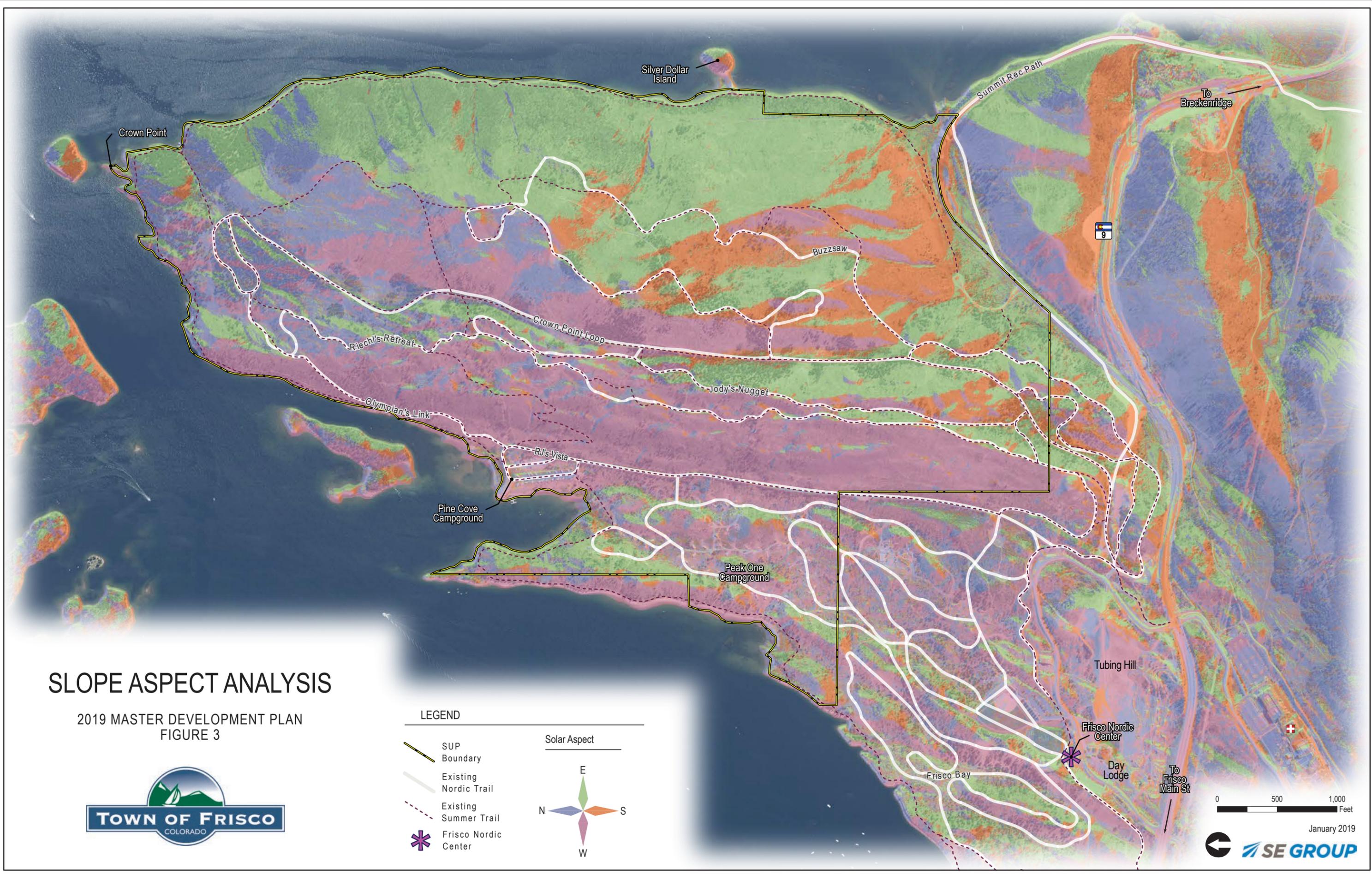
- SUP Boundary
- Existing Nordic Trail
- Existing Summer Trail
- Frisco Nordic Center

	40% and Above
	30-40%
	20-30%
	10-20%
	0-10%



January 2019





SLOPE ASPECT ANALYSIS

2019 MASTER DEVELOPMENT PLAN
FIGURE 3



LEGEND

- SUP Boundary
- Existing Nordic Trail
- Existing Summer Trail
- Frisco Nordic Center

Solar Aspect

0 500 1,000 Feet

January 2019





EXISTING CONDITIONS

2019 MASTER DEVELOPMENT PLAN
FIGURE 4

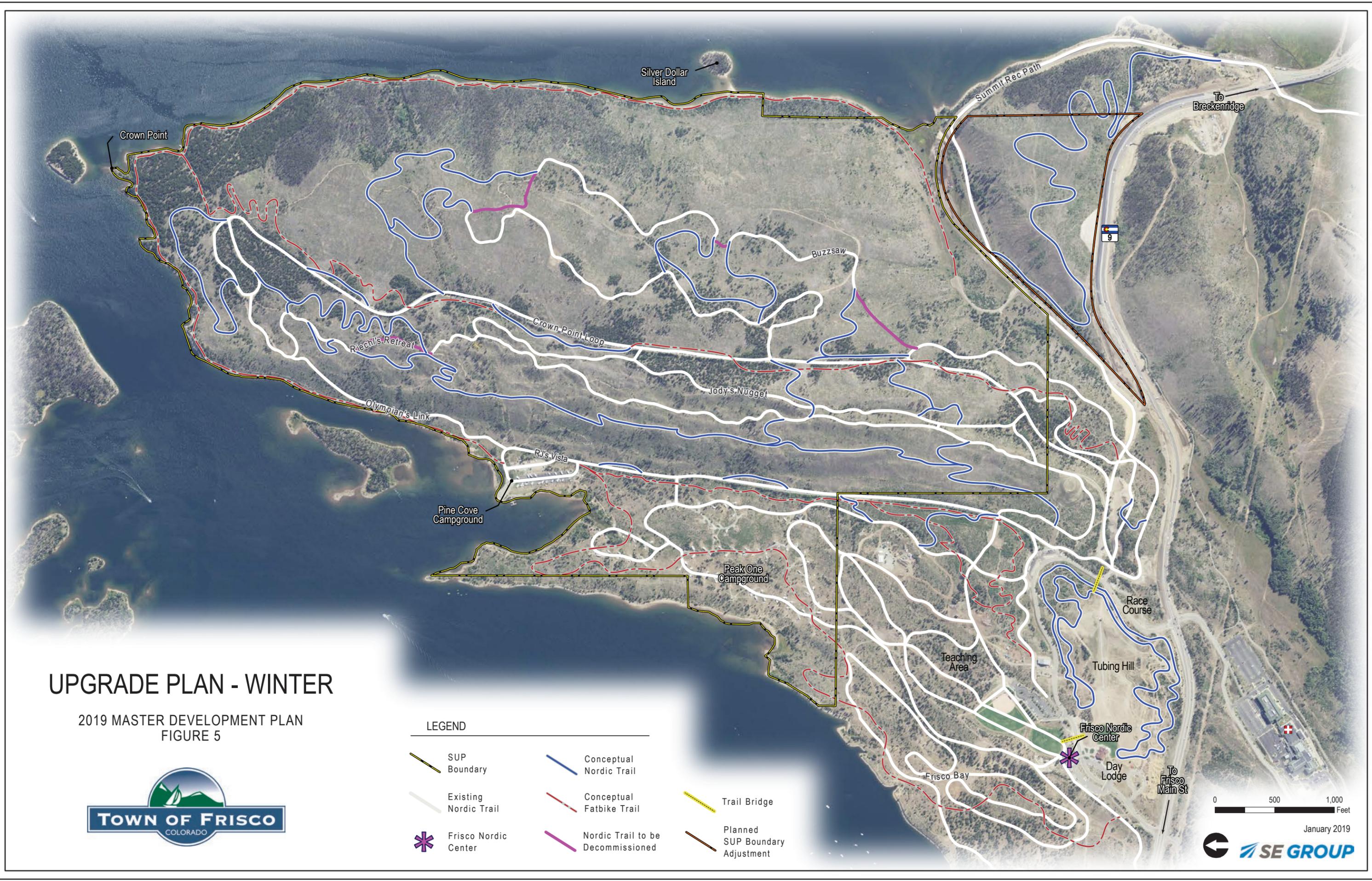


LEGEND	
	SUP Boundary
	Other Forest Service Lands
	Existing Nordic Trail
	Existing Summer Trail
	Frisco Nordic Center



January 2019





UPGRADE PLAN - WINTER

2019 MASTER DEVELOPMENT PLAN
FIGURE 5



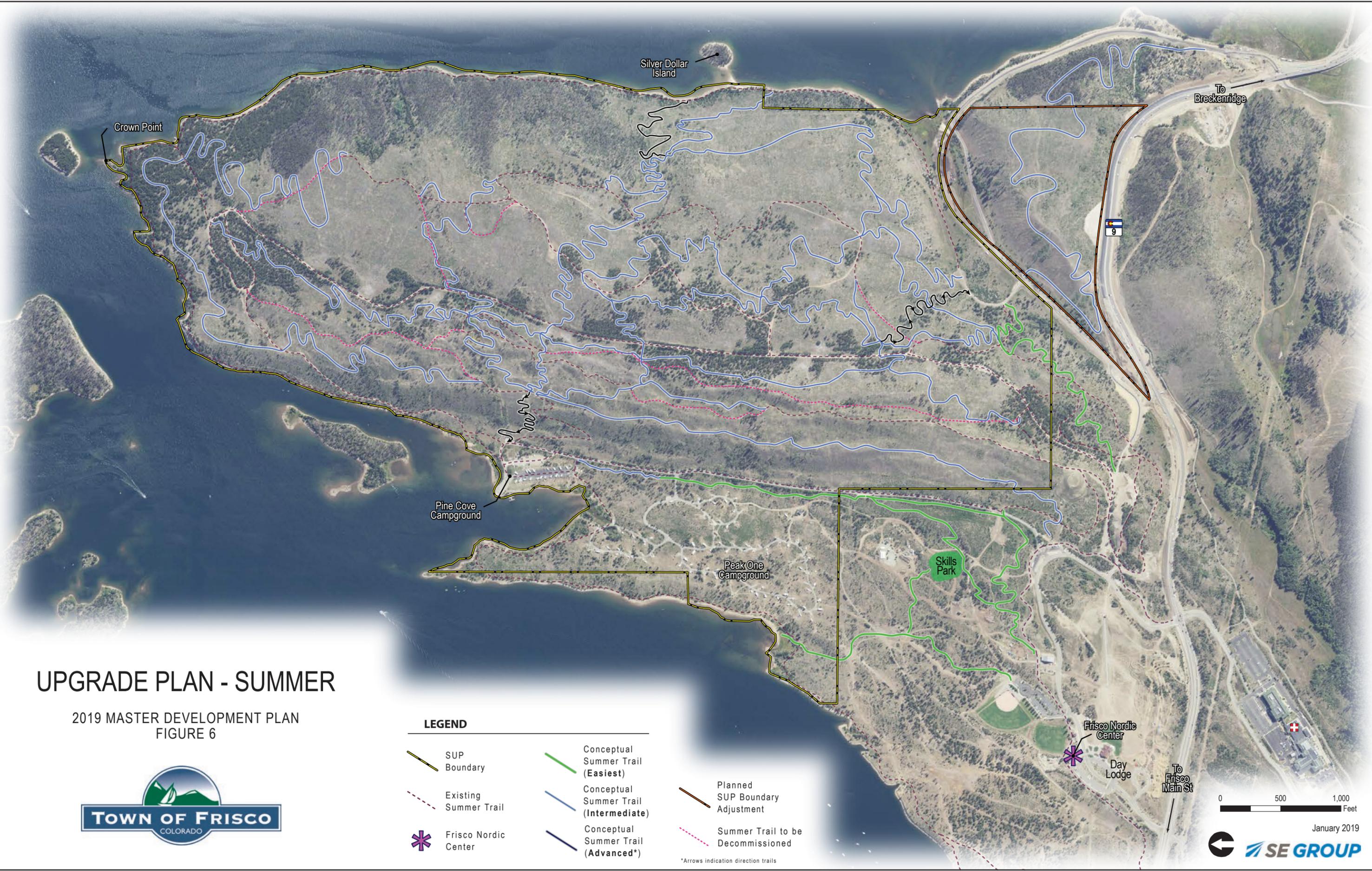
LEGEND

- SUP Boundary
- Existing Nordic Trail
- ✱ Frisco Nordic Center
- Conceptual Nordic Trail
- - - Conceptual Fatbike Trail
- Nordic Trail to be Decommissioned
- - - Trail Bridge
- - - Planned SUP Boundary Adjustment



January 2019





UPGRADE PLAN - SUMMER

2019 MASTER DEVELOPMENT PLAN
FIGURE 6



LEGEND

- SUP Boundary
 - Existing Summer Trail
 - Frisco Nordic Center
 - Conceptual Summer Trail (Easiest)
 - Conceptual Summer Trail (Intermediate)
 - Conceptual Summer Trail (Advanced*)
 - Planned SUP Boundary Adjustment
 - Summer Trail to be Decommissioned
- *Arrows indication direction trails



January 2019



UPGRADE PLAN - OVERALL

2019 MASTER DEVELOPMENT PLAN
FIGURE 7

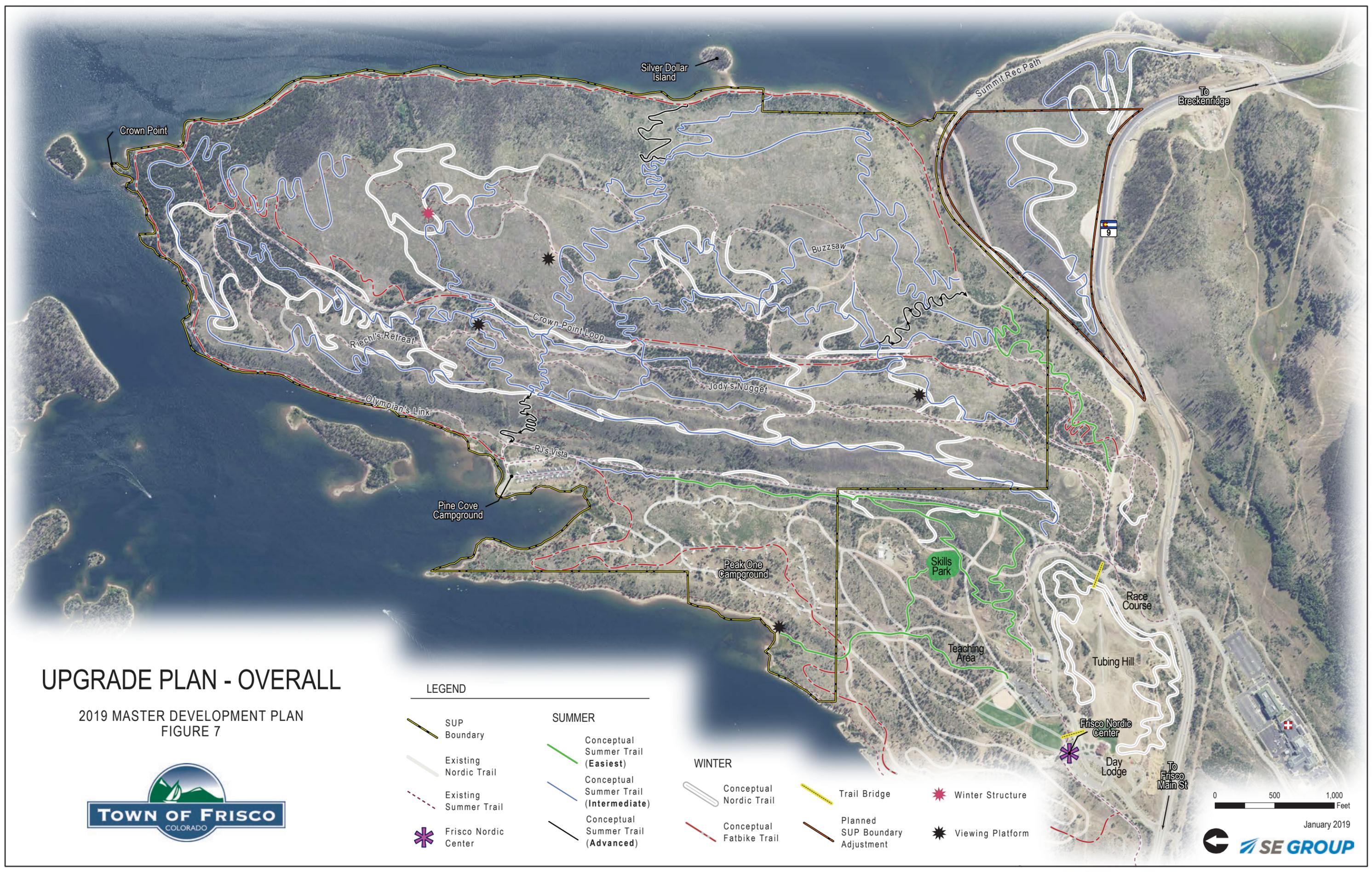


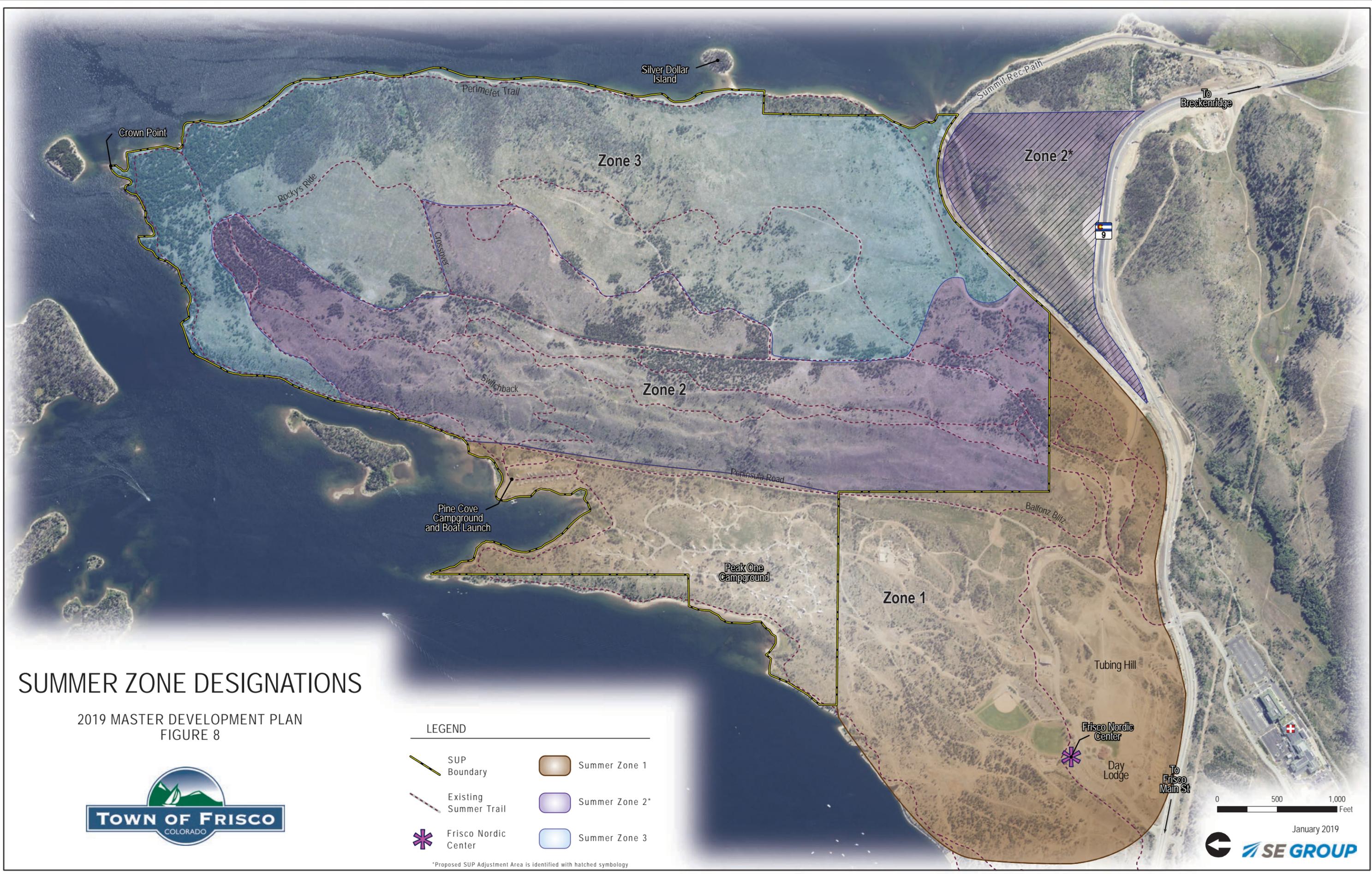
LEGEND

- | | | | | |
|-----------------------|--|--------------------------|---------------------------------|------------------|
| SUP Boundary | SUMMER | Conceptual Nordic Trail | Trail Bridge | Winter Structure |
| Existing Nordic Trail | Conceptual Summer Trail (Easiest) | Conceptual Fatbike Trail | Planned SUP Boundary Adjustment | Viewing Platform |
| Existing Summer Trail | Conceptual Summer Trail (Intermediate) | | | |
| Frisco Nordic Center | Conceptual Summer Trail (Advanced) | | | |



January 2019





SUMMER ZONE DESIGNATIONS

2019 MASTER DEVELOPMENT PLAN
FIGURE 8



LEGEND

- SUP Boundary
- Existing Summer Trail
- Frisco Nordic Center
- Summer Zone 1
- Summer Zone 2*
- Summer Zone 3

*Proposed SUP Adjustment Area is identified with hatched symbology

0 500 1,000 Feet

January 2019

