

# 2020 Recreation Capacity Analysis of the Dillon Reservoir Recreation Area and Summit County Recreational Pathway System



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# EXECUTIVE SUMMARY

## Purpose

The Dillon Reservoir Recreation Area (DRRA) and Summit County Recreational Pathway system (Recpath) are popular recreational amenities for resident and visitors alike. Increasing usage at these publically managed recreational sites and facilities presents numerous challenges related to public safety, impacts to infrastructure and natural resources, as well as a potentially diminished user experience. In response to increasing demands and evolving usage patterns, the Dillon Reservoir Recreation Committee (DRReC) and Summit County Open Space and Trails Department (OST) conducted a comprehensive analysis aimed at quantifying recreational use within the DRRA and on the Recpath system, evaluating carrying capacity of these facilities, assessing user experience, and developing recommendations for managing ongoing and future capacity issues and challenges.

## DRRA and Recpath Capacity Analysis

This analysis and report update and expand upon a previous DRRA capacity analysis completed in 2012. While the previous capacity analysis focused on segments of the Recpath system within the DRRA, this analysis includes the full 55 miles of Recpath system managed by the County and towns of Frisco, Breckenridge, Dillon, and Silverthorne. Utilizing both quantitative and qualitative tools, this capacity analysis and report include data collected from stakeholder interviews, intercept surveys, an online survey, general observations, and Recpath trail counters.

### Dillon Reservoir Recreation Area

The capacity analysis divides the Dillon Reservoir surface into several geographic zones. Capacity for each zone was calculated based on zone acreage, watercraft types present, and required acreage per watercraft types. Results indicate that most zones on the reservoir are below carrying capacity at peak periods, but the peninsula shoreline zone near Pine Cove and Peak One campground is slightly over capacity. Several pinch points on the reservoir, where boats tend to congregate and/or pass through (e.g., channel between Sentinel Island and Crown Point, Giberson Bay, reservoir center, and other areas), can create congestion challenges, even though the overall use density in these areas is below capacity.

In addition to summer use, winter recreational use within the DRRA is becoming increasingly popular, most notably with ice fishing. Popular access points near Dillon Marina and the Snake River inlet now have vehicle parking challenges during peak periods.

### Recpath System

Several locations on the Recpath are at, or nearing capacity on busy days, and others only require a minimal increase in usage for a level of service (LOS) decrease (i.e., decrease in quality of user experience). Peak use levels over the 2019 peak season have increased dramatically since 2012 throughout the Recpath system. At the Four Mile Bridge Recpath segment, just north of Breckenridge, the 2012 peak day was 601 and the 2019 peak day was 1,208 (101% increase). In 2012, the peak day at Officers Gulch in Tenmile Canyon was 1,451, compared to 2,268 in 2019 (an increase of 56%). Of note, recent observed increases at Officers Gulch correlate with increased permitted use by Vail Pass bicycle shuttle operators. On Swan Mountain, the 2013 peak day was 460 and the 2019 peak day was 432 (a decrease of 6.5%). At all counter locations except Officers Gulch, the

busiest day of 2019 occurred over July 4th weekend. Each counter location was an LOS A or B, although Dillon Dam Road and Swan Mountain require only minimal additional volume to downgrade. The busiest day at Officers Gulch during the Triple Bypass was a LOS D. Notable busy locations on the Recpath include near Dillon Marina, Frisco Bay Marina, Tenmile Canyon Recpath, and the Vail Pass Recpath. On summer weekends, these locations can reach LOS D (Dillon Marina) or LOS C (other locations), signifying they are at or approaching their capacity.

Recpath usage overwhelmingly occurs between the months of May and September. Though Recpath usage is fairly evenly distributed across the days of the week, overall weekday use has increased and become a larger percentage of total usage compared to historical averages. Friday usage now slightly exceeds Sunday usage and overall, Friday-Saturday-Sunday usage accounts for 47.8% of total usage, compared to 46% in 2012. Saturday, the highest average use day (18% overall), was only 5% greater than the lowest use days of Tuesday and Thursday (13% each).

Since the completion of the previous capacity study in 2012, the level of annual use occurring in June, July, and August has typically increased up to 150% throughout the Recpath system. The level of system-wide use occurring on Friday, Saturday, and Sunday has increased slightly, from 46% to 48%. In 2019, Fridays had a higher level of use than Sundays. Recpath usage has remained concentrated during the peak hours. In 2019, 57% of use occurred between the hours of 10 a.m. and 2 p.m.

Most locations on the Recpath have a very high percentage of cyclist usage (>90%) compared to all other uses. Segments near Silverthorne, Dillon Marina, and Frisco Bay Marina had lower percentages of cyclist use compared to overall use, but cycling still represented 50–70% of total use.

## Other Notable Findings

In addition to expanding recreational use within the DRRA and Recpath system, visitor and event parking is becoming increasingly challenging at the marinas, along the Dam Road, and at major trailheads. Free parking is now commonly full during a typical day, and large events, such as the Frisco Bay Invitational mountain bike race at the Peninsula Recreation Area (PRA), exceed facility parking capacity. User perception and experience also varied significantly between residents and visitors. While many residents feel like Recpath crowding is an issue (based on online survey results) and avoid the Recpath during peak use periods, visitors continue to have a positive experience at all times, as indicated by stakeholder interviews and intercept surveys.

## Recommendations

Recommendations, yielded from the capacity analysis, aim to identify methods for reducing facility impacts, mitigating future challenges related to anticipated ongoing usage increases, and improving and/or maintaining positive user experience. A comprehensive discussion of recommendations is included in Section 8 of this report, but highlights are described below.

### Capacity and User Experience

Where capacity challenges and use conflicts already exist, such as parking areas at major trailheads and access points, along Dillon Dam Road, and at the marinas, consider implementing a paid parking strategy to mimic adjacent paid use areas, such as the Giberson Day Use Area and Heaton Bay Campground. Paid parking and fee areas often still have additional capacity at peak usage times, when immediately adjacent non-fee areas do not. Fee areas may also better distribute

users throughout the DRRRA and Recpath system, thereby alleviating some of the existing capacity challenges at congested locations.

The report makes several recommendations related to public information sharing, outreach, and messaging. Tools and strategies such as a system-wide parking map, enhanced coordination with partner agencies, lodging businesses, tourism agencies, and transportation providers (e.g., free Summit Stage), as well as enhanced efforts aimed at educating users about access, avoiding peak times, alternative recreation sites, and scheduled events, may better balance recreational use both spatially and temporally throughout the DRRRA and Recpath system. Based on stakeholder feedback, this report recommends continuing to prohibit personal watercrafts and towed uses on the reservoir in order preserve the character that current recreational users prefer.

The report makes recommendations aimed at better educating the public about existing rules and regulations, proper etiquette within the DRRRA and on the Recpath system, and enhanced enforcement where necessary. The report also recommends utilizing existing resources, such as volunteer groups, rental vendors (e.g., bike shops, boat rentals, etc.), lodging providers, visitor centers, and strategically located signage to better educate users about trail, on-water, on-ice, and Recpath etiquette.

The report recommends ongoing monitoring of capacity and user experiences through solicited feedback (e.g., surveys, intercepts by Sherriff's Department Boat Patrol Rangers, etc.), as well as utilizing new technologies (e.g., drone imagery) to better document usage and usage patterns.

## Events

Where events create user conflict and capacity challenges, the report recommends considering a variety of techniques aimed at mitigating such impacts. Recommendations include developing a Countywide events calendar and collaborative planning approach to better manage locations, size, traffic and parking constraints, and trail impacts. In addition to collaborating on planning, the report recommends requiring permittees to provide public outreach to distribute appropriate information about the event(s), potential event-related impacts, and alternative recreational destinations to avoid an event. Permitting authorities may also consider collaborating to set aside event-free weekends in order to address local event fatigue sentiments. The DRRReC and County may also consider establishing an event permit impact fee in order to offset, or mitigate impacts to natural resources, displacement of other users, additional public safety requirements, and/or parking impacts.

## Permitting

The report makes several recommendations aimed at facilitating a simplified event permitting process, as well as ensuring a positive user experience for event participants and the public in general. In order to more clearly define overlapping jurisdictions, the report recommends creating a jurisdictional map to better illustrate jurisdictional authorities where overlapping agency management responsibilities exist, most notably within the DRRRA. The report recommends updating the permit application in response to stakeholder feedback received during this process, as well as creating an online application to better serve permit applicants and permitting staff. Finally, the permitting process may benefit from an administrative review process for minor photo/film shoots within the DRRRA.

## Using the Report

Though this report provides a baseline understanding of current usage patterns within the DRRA and on the Recpath system, the DRReC and OST should anticipate the nature of recreational use to continue to change over time. Numerous recommendations made herein aim to mitigate capacity issues and other associated challenges. Some of the recommendations of this report are simpler to implement than others and should be revisited over time. Overall, this approach would suggest adaptive management to address issues in the DRRA and on the Recpath. Similarly, new capacity challenges may arise, while others dissipate over time. Therefore, this report should be treated as a living document, visited frequently and updated as necessary.



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# 1 BACKGROUND

Summit County is a recreation tourism destination that attracts visitors year-round, especially during the peak winter and summer months, as well as residents looking for high quality recreational amenities. In winter, the County is a hotbed for skiing, while in summer, locals and visitors enjoy trails, multi-use paths, and water-based recreation.

As of 2019, the County's year-round population is slightly more than 30,000 people. Of the County's 30,000 housing units, about half of the homes in the county are short-term rentals or second homes.<sup>1</sup> During peak tourism periods, the number of people in the County increases, with short-term rentals, second homes, hotel beds, and campsites occupied. The County's economy revolves around tourism, with 58% of private employment in tourism, compared to 16% nationally. In recent years, County tourism has continued to grow, especially during the summer (see Section 1.3). While this growth has strengthened the local economy, it has placed pressure on some of the recreational amenities and transportation facilities in the County.

The Summit County Recreational Pathways System (Recpath) and the Dillon Reservoir Recreation Area (DRRA) are two popular summer recreational amenities.

The Summit County Recpath is a 55-mile paved pathway system maintained by the County and incorporated towns within the County (Dillon, Frisco, Silverthorne, and Breckenridge). The system passes through and connects Breckenridge, Dillon, Frisco, and Silverthorne, circumnavigates the Dillon Reservoir, and heads west to Vail Pass and east to Keystone. System extensions are planned south towards Fremont Pass during 2020, as well as south towards Hoosier Pass (conceptual planning stages). The Recpath system is popular with road cyclists, tourists appreciating the scenic views, dog walkers, joggers, commuters, and other non-motorized passive user groups.


As a multi-use pathway, the permitted user types include, but are not limited to, those biking, jogging, walking, in-line skating, skiing, and walking with dogs under physical control. As of 2019, Class 1 e-bikes are permitted on the Recpath. Otherwise, motorized use is not permitted on the Recpath, except for in a few short sections to access residences. In the winter, the Recpath is groomed for skiing and fat biking between Frisco and Breckenridge and plowed through the Town of Dillon. All other sections of the Recpath are not specifically managed to accommodate winter use. The Swan Mountain Recpath is closed seasonally to accommodate elk habitat (December 1 – March 31) and the Tenmile Canyon Recpath is closed late fall through mid-spring due to avalanche hazards.

The DRRA encompasses the surface area of the Dillon Reservoir and adjacent properties as shown on the map in Figure 1. The Dillon Reservoir is a 3,233-acre body of water popular for kayaking, paddleboarding, fishing, motorized boating, and rowing in the summer. During the winter, the lake freezes over and ice fishing and snowkiting are popular activities. Motorized uses are not permitted on the reservoir ice surface. Seasonal waterfowl hunting is also permitted in designated areas of the reservoir. The reservoir is owned by Denver Water and serves as a water source for the Denver metropolitan area. As such, water contact activities such as swimming are

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<sup>1</sup> U.S. Census, 2017

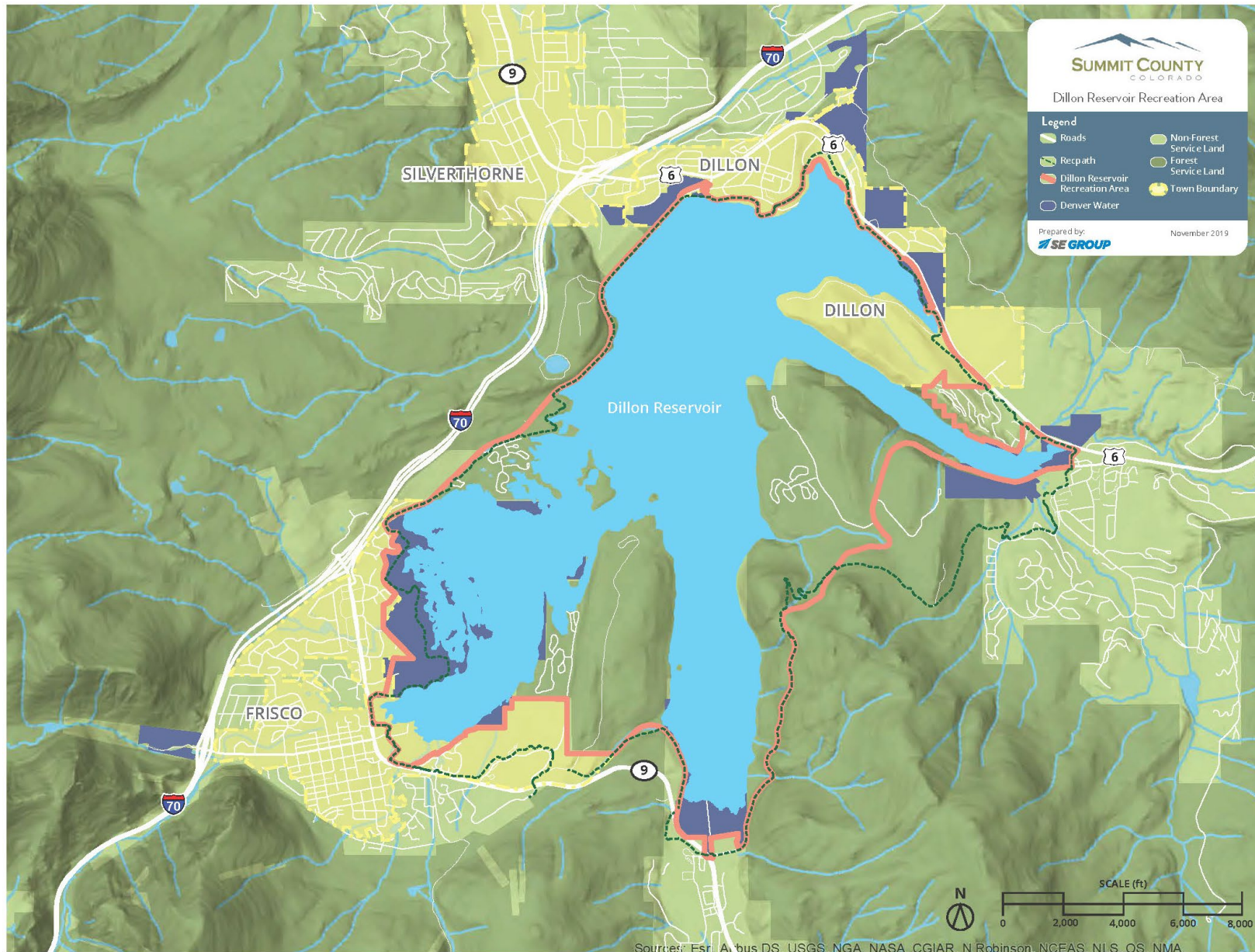




prohibited. Towed uses (e.g., water skiing) and personal watercraft (e.g., jet skis) are also prohibited uses.

Formalized access to the reservoir is available from the Dillon and Frisco Bay marinas, five Forest Service campgrounds, and additional day use areas maintained by the Forest Service and Summit County. The five campgrounds, with almost 350 sites between them, are within the DRRRA, as are portions of the Recpath system and the natural surface trails on the Frisco Peninsula and Sapphire Point.

FIGURE 1. DILLON RESERVOIR RECREATION AREA



## 1.1 Jurisdictions and Management

The management of both the DRRRA and Recpath involve many entities and overlapping jurisdictions.

The Dillon Reservoir Recreation Committee (DRReC) is an interagency committee formed through an intergovernmental agreement (IGA) to manage the DRRRA. The IGA is included as Appendix A. The DRReC's members include Denver Water, the Town of Dillon, the Town of Frisco, Summit County Government, and the U.S. Forest Service. The DRReC is staffed by Summit County and meets monthly to review permit applications, discuss management of the reservoir, allocate funds, and plan for the future.

Within the DRRRA, the DRReC issues, manages, and administers permits for commercial uses and special events on the reservoir surface and immediately adjacent areas. Informally, the DRRRA is delineated by the Summit County Recpath and Swan Mountain Road circumnavigating the reservoir. Each of the agencies and municipalities on the committee manage portions of the DRRRA and may require additional permits or regulations.

The Summit County Sheriff's Department is responsible for enforcing rules and regulations on the surface of the reservoir, Denver Water land within the unincorporated areas of the DRRRA, and within the incorporated areas as may be provided by the IGA. The Colorado (Watercraft) Vessel Code and Colorado Boating Regulations are applied and enforced as applicable to the DRRRA.

The Recpath is managed by multiple entities, although unlike the DRRRA, there is no overarching management body. The entities that manage portions of the Recpath are Summit County Open Space and Trails, the Town of Breckenridge, the Town of Frisco, the Town of Dillon, and the Town of Silverthorne within their respective jurisdictions. Management within the ski area Planned Unit Developments (PUD) often occurs in coordination with Copper Mountain Resort and Keystone Resort. Where the Recpath coincides with National Forest System land and state/federal highway infrastructure, significant management coordination also occurs with the U.S. Forest Service and the Colorado Department of Transportation (CDOT). Summit County Open Space and Trails maintains the majority of the system, over 38 miles of pathway of 55 total, including sections on the National Forest and in the CDOT right-of-way on Vail Pass. The Recpath segments on the National Forest are managed by the County under a Special Use Permit (SUP) from the Forest Service (e.g., Frisco to Copper, along Dillon Dam Road, Swan Mountain Road). The County facilitates all special event permitting on County-managed sections Recpath system, including on the National Forest, in accordance with the Forest Service SUP. The Forest Service also permits bicycle shuttles to drop guests at Vail Pass.

The towns manage and maintain the sections of the Recpath that fall within their municipal boundaries. They are responsible for signage, maintaining the surface, and weed control adjacent to the path. All towns require permits for commercial uses occurring on their respective sections of the Recpath. The County does not allow commercial uses on County-managed sections of the Recpath. However, the County requires a permit for all special events with more than 50 participants occurring on County-managed segments of the Recpath. None of the towns have an event permitting process specific to the Recpath but would require a special event permit for an event occurring within the town limits. For the sections of the Recpath within the DRRRA, the DRReC requires a permit for any special event with more than 25 participants and all commercial uses.

## 1.2 Previous Dillon Reservoir Recreation Capacity Studies

The 2012 Dillon Reservoir Recreation Capacity Analysis<sup>2</sup> describes the baseline capacity of boating on the reservoir and the Recpath segments around the reservoir. The 2012 report also discusses how special events affect the Recpath experience. It includes tools for Summit County Open Space and Trails and the DRRReC to mitigate capacity issues associated with special events.

This 2019 report is an update and expansion of the 2012 analysis for current levels of use. In addition to the geographic area covered in the 2012 analysis, this report includes all sections of the Recpath, including those beyond the perimeter of the reservoir. This report also considers the existing levels of boating use compared to the capacity benchmarks.

## 1.3 Changes and Growth in Summit County since 2012

Shifting Summit County demographics and tourism patterns, along with sheer growth in tourism in the area, are important to consider in evaluating the changes in Recpath and reservoir use since the previous report. The average age of Summit County has increased, from 36.4 (2010) to 39.4 (2017), with an influx of retirees. The percentage of residents over 65 has increased from 7.7% in 2010 to 11.3% in 2017. Retirees tend to have flexible schedules and are often able to use the Recpath midweek. Overall, population growth has been modest during the last decade, increasing from 27,994 at the 2010 census to 31,007 in 2018 estimates (1.3% annual growth). However, the population has grown rapidly in the Colorado Front Range with over a million new residents since 2000.<sup>3</sup> Summit County is one of the closest and most popular mountain destinations for Front Range residents.

During the last decade, summer tourism in Summit County has become increasingly popular. The last complete summer tourism data is from 2016. Between 2011 and 2016, the county saw five straight years of increasing sales tax revenue during the summer. Lodging occupancy also increased during that time period, with much of the growth in midweek bookings.<sup>4</sup> This corresponds to the trends in Recpath use; weekends have been and will continue to be busy, but the volume of midweek use is also increasing. For recent years, monthly comparison data is available. Since 2016, there has been variability in sales tax revenue collection, with some towns experiencing more growth, while other towns have seen a slight decline in revenue.<sup>5</sup>

According to the 2019 DRRR Rangers End of Season Report, the Summit County Sheriff's Department has recorded a large increase in contacts, with assists and rescues largely remaining constant over the past few years. The number of vessel and paddle contacts increased from 451 in 2017 to 1,060 in 2019. Vessel and paddle assists held relatively constant at 147 in 2019, compared to 149 in 2017 and person overboard rescues increased from 9 in 2017 to 11 in 2019.

The Lake Hill workforce housing development is proposed for a 45-acre parcel of County-owned land sited between Dillon Dam Road and I-70 to the west of Old Dillon Reservoir. The development would introduce several hundred new full-time residents along Dillon Dam Road, potentially affecting traffic patterns, parking, and users in that area.<sup>6</sup>

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<sup>2</sup> RPI Consulting, 2012

<sup>3</sup> Colorado Parks and Wildlife, 2019

<sup>4</sup> Summit Daily, 2016

<sup>5</sup> Summit Daily, 2018 and 2019

<sup>6</sup> Summit County, 2017

# 2 METHODOLOGY AND PROCESS

The methodology deployed in this study is both quantitative and qualitative towards best understanding capacity and user experience during peak use periods on the Recpath system and reservoir. Qualitatively, the analysis process included stakeholder interviews with 20+ entities who use and manage the Recpath system and DRRA, intercept surveys of Recpath and reservoir users at peak periods, and an online survey on use and experience on the Recpath and reservoir. The interviews and survey responses revealed issues with the existing permitting process and levels of use, especially as they relate to the user experience. This qualitative information was used to substantiate and provide context for the quantitative analysis. In addition, parking lots and special events were observed to understand how they impact capacities and the user experience.

The study focused on analyzing use at peak periods (summer weekends), so that the recommendations of this report can enhance the user experience and mitigate the issues when they are most prevalent, namely peak periods. Thus, fieldwork observations and surveys were conducted on summer weekend days, with some weekday fieldwork as a point of comparison. The analysis uses the 10th busiest day of the season as a standard to represent a typical busy day, but not a holiday or special event, when one might expect the user experience to be impaired.

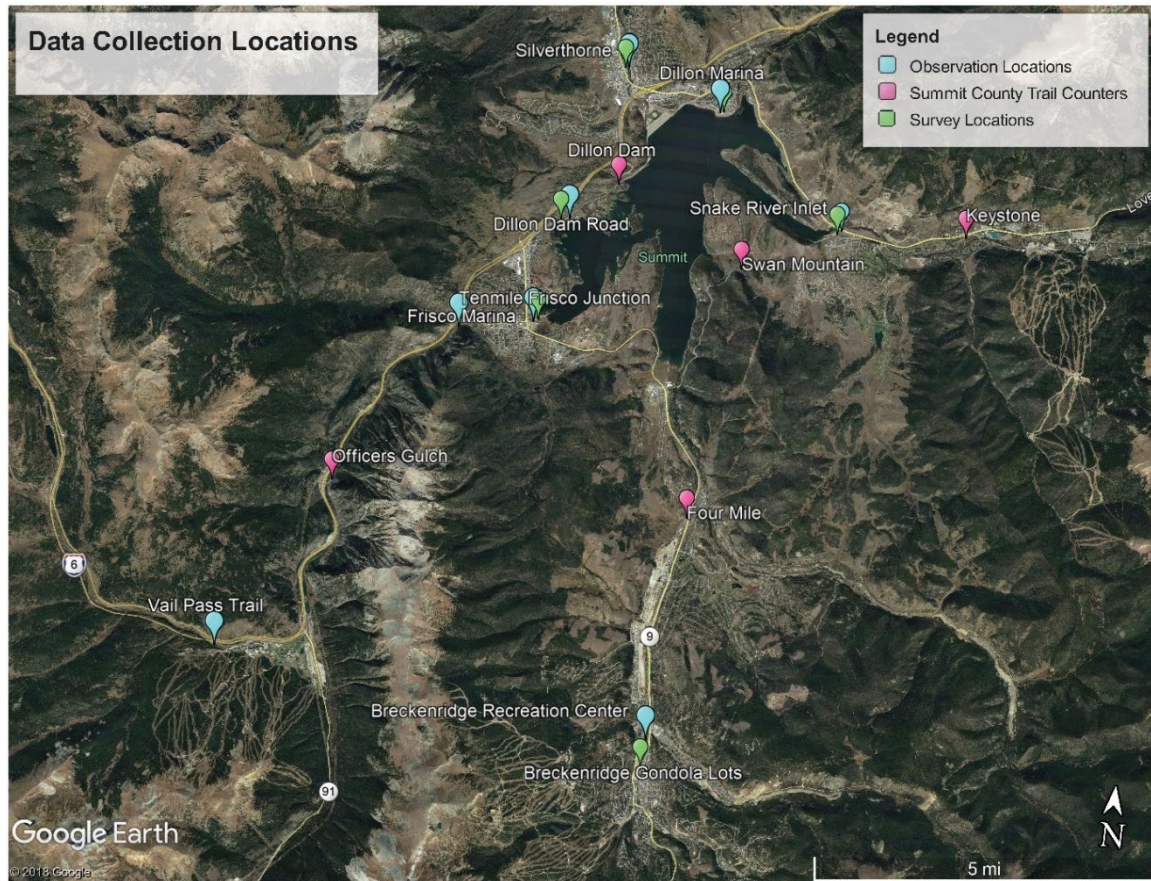
## 2.1 Fieldwork

SE Group and Friends of the Dillon Ranger District (FDRD) conducted fieldwork at the locations shown on the map contained in Figure 2. The fieldwork included an intercept survey of Recpath and reservoir users as they completed their activities and observations of Recpath users (number of users, type of users) to provide data for capacity calculations. SE Group and FDRD conducted fieldwork on Saturday August 3, Sunday August 4, Saturday August 10, Sunday August 11, Thursday August 15, Saturday August 24, and Sunday August 24, 2019. The weekend of August 10th and 11th was very rainy and data from those dates was not included in this analysis, with the fieldwork repeated at those locations on August 24th and 25th. Fieldwork was done on Thursday August 15 to understand how weekday use and experience compared to weekends. Fieldwork was conducted between 9 a.m. and 2 p.m., with most of the fieldwork occurring between 11 a.m. and 1 p.m., the busiest periods on the Recpath and reservoir.

The observations by the Summit County Sheriff's Office Boat Patrol Unit were heavily utilized in this analysis, in understanding dynamics and key issues and levels of use on the reservoir.



FIGURE 2. DATA COLLECTION LOCATIONS



## 2.2 Reservoir Capacity

A zone-based analysis was conducted for the reservoir. As use is concentrated in specific areas of the reservoir, the water surface was divided into 12 zones, each with their unique levels and mix of user types. For each zone, the number of watercrafts at peak time was estimated based on the distribution of users from each of the reservoir access points. This distribution and estimated number of watercrafts were based on, and confirmed by, the Summit County Sheriff's Boat Patrol Unit observations.

The number of watercrafts was compared to the zonal watercraft capacity as determined by the Environmental Resources Management (ERM) model.<sup>7</sup> The ERM model is frequently used to determine carrying capacity on bodies of water that see tourism and a mix of uses. The watercraft capacity for each zone was derived from the zone acreage, the mix of watercraft types in the zone, and the acreage per craft standard used in the ERM model.

For further details on the methodology, assumptions, and the results, see Section 6.1.

<sup>7</sup> Environmental Resources Management, Inc., 2004



## 2.3 Recpath Capacity

The Recpath capacity analysis measures the Level of Service (LOS) provided on the Recpath at current pathway use levels and dynamics. LOS is a grading system to quantify how well traffic flows on a transportation facility, in this case, a shared-use path. LOS scores reflect the level of congestion, safety, and quality of the experience being provided on the Recpath. Further, the LOS scores indicate whether the current use volume is above, approaching, or well below capacity of the Recpath segment.

This analysis follows the Shared-Use Path Level of Service Calculator of the Federal Highway Administration (FHWA).<sup>8</sup> This model is based on the frequency of encounters and other factors shown to impact a rider's feeling of safety: the path width and the presence or lack of a striped centerline. The use data from trail counters and collected through field observations was inputted in the model to extract LOS scores.

For further details on the methodology, assumptions, and the results, see Section 6.2.

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<sup>8</sup> North Carolina State University and Toole Design Group, 2006

# 3 STAKEHOLDER INTERVIEWS

SE Group conducted stakeholder interviews with parties involved in the management and use of the Summit County Recpath and Dillon Reservoir Recreation Area (DRRA). These interviews were open-ended conversations around events, the DRReC permitting process, and issues stakeholders face in using and or managing the Recpath and DRRA.

The following government entities, organizations, and commercial operators participated in the stakeholder interviews.

- ❖ Denver Water, Manager of Recreation
- ❖ Summit County Sheriff's Department, Special Operations
- ❖ Town of Frisco, Recreation Programs and Nordic Center & Trails and Marina
- ❖ Town of Dillon, Public Works and Events & Marketing and Marina
- ❖ Town of Breckenridge, Open Space & Trails
- ❖ Town of Silverthorne, Planning
- ❖ Summit County, Open Space and Trails
- ❖ DRReC, Permit Administrator
- ❖ Forest Service, District Recreation and Permit Administrator
- ❖ Summit School District, Facilities Scheduling
- ❖ Colorado Parks and Wildlife (CPW)
- ❖ Adventure Paddle Tours
- ❖ Stand Up Paddle Colorado
- ❖ Dillon Yacht Club
- ❖ Dillon Junior Sailing
- ❖ Frisco Rowing Center
- ❖ Summit Shuttle
- ❖ Summit Biking Group
- ❖ Rebel Sports
- ❖ Wilderness Sports
- ❖ Carvers Ski and Bike
- ❖ Courage Classic event organizer
- ❖ Summit Endurance Academy
- ❖ Alpine Fishing

## 3.1 Interview Topics

The following topics were discussed in the conversations with stakeholders: parking, growth, events, user experiences, Recpath dynamics, etiquette and education, and the DRReC. A summary of each topic follows.

### 3.1.1 Parking

Many stakeholders brought up parking as the major issue, particularly at popular reservoir access points such as the marinas and Giberson Bay from Dillon Dam Road. According to stakeholders, parking at the marinas is typically full all day. Many business operators said that parking issues make it challenging for them to do business: guests are frequently late and frustrated when they arrive for their activity. Suggested solutions included paid parking, parking structures, transit stops, publicizing and marketing less crowded parking areas that are close by, and using e-bikes to access the marinas.

Parking is less of an issue for Recpath users, as people can ride from their homes/accommodations and many popular Recpath access points have ample parking (i.e., Breckenridge gondola lots, Silverthorne outlets, Copper Mountain). Many Recpath users do park at the marinas, exacerbating parking issues in those locations.

### 3.1.2 Recent Growth

According to the stakeholders, use of both the Recpath and reservoir has increased dramatically in recent years. Bike shops reported a tenfold increase in rentals over the past decade and the Frisco Bay Marina went from 9,000 watercraft rentals in summer 2014 to 15,000 in summer 2018. Some of this growth is occurring mid-week, but weekends are also getting busier. The shops and operators do not feel that the experience they offer has been compromised by this growth. Reservoir rental providers and tour operators may be looking to increase their fleet or offering, but are concerned about where additional users would park. As demand is beginning to exceed availability at the parking facilities, parking serves to limit the number of users on the reservoir.

At this point, marina rentals and tours on peak summer weekends are largely by advanced reservation only. Advanced reservations offer an opportunity for informing users about parking and etiquette.

Stakeholders expressed concern about what the next few years would bring and how the facilities could possibly accommodate continued growth.

### 3.1.3 Events

Many stakeholders expressed event fatigue or a feeling that Summit County has, or is approaching, an oversaturation of events. Many expressed a sentiment along the lines of *“it feels like there is constantly an event,”* due to the number of events occurring in the County and the high number of visitors on any given Saturday. According to stakeholders, events tend to have a limited impact on the on-Recpath or on-reservoir experience but exacerbate the area’s existing parking issues. For example, Stand Up Paddleboard Colorado’s “busiest day ever” coincided with the Dillon Open Regatta and an event at the amphitheater, creating serious parking issues in Dillon. Some stakeholders brought up better coordination in terms of events between the towns.

At this time, on-water events present less of a crowding issue, as they tend to be smaller in size. However, according to interviewees, reservoir event registrations are more likely to fill up, while Recpath events registrations are declining. The 2019 Frisco Triathlon, a July event that includes a paddleboard component on the reservoir, filled up in March 2019. No stakeholders pointed to an individual event as the issue, rather they focused on the cumulative effects.

CPW brought up issues stemming from events on the Recpath, when wildlife are forced to move away from their habitat near the Recpath.

#### 3.1.4 User Experience

The Recpath and reservoir are continuing to provide a very positive user experience for visitors. Bike shop employees said their customers are having a very positive experience and rarely complain about crowding or other issues. The shop employees repeatedly stated they personally would never venture out onto the Recpath on weekends, due to perceived crowding. Many of the stakeholders, as Summit residents, expressed similar sentiments or “only idiot locals go out on the Recpath on weekends.”

With the reservoir, many felt that prohibiting personal watercraft (e.g., jet skis) and towed activities (e.g., water skiing) has preserved a more natural, quiet experience that both locals and visitors appreciate. The surveys and stakeholder interviews did not yield any feedback suggesting changing this current prohibition.

#### 3.1.5 Recpath Dynamics

According to stakeholders, the many different, somewhat incompatible, user types on the Recpath is the source of Recpath “chaos,” rather than the sheer number of users. Differing speeds between user groups and users spread two or three abreast can create conflict. These dynamics vary slightly by Recpath section but this issue was brought up by every municipality (i.e., Silverthorne is a mix of walkers and road cyclists while Copper to Frisco combines recreational cyclists, road cyclists, and skateboarders). Around sharp curves, issues are more likely to occur (Dillon Dam area, approaching Frisco Bay Marina, the top of Vail Pass). Stakeholders mentioned creating safe accommodations to encourage road cyclists to use the road and widening the Recpath, especially at pinch points.

Stakeholders were generally positive about the addition of e-bikes, with few aware of complaints and issues.

#### 3.1.6 Etiquette and Education

Many stakeholders highlighted the importance of education and etiquette to provide an excellent user experience as use increases on the Recpath and reservoir. Commercial outfitters and bike shops provide varying levels of education. Some are very focused on it, while others are more concerned with getting people out the door. Stakeholders also brought up the many users of the Recpath and reservoir who do not rent equipment or rent elsewhere, where no education or appropriate safety equipment such as life jackets is provided. Road bikers were mentioned as some of the worst offenders, often speeding past without a verbal warning. Some stakeholders expressed a desire for more signage, while others were concerned about the effectiveness, as people would continue to ignore signage. Many comments brought up a vacation mentality, where visitors to Summit County are on vacation and are more focused on enjoying the scenery and the experience instead of following rules and regulations.

### 3.1.7 Dillon Reservoir Recreation Committee

Many stakeholders expressed a desire for an electronic, more streamlined, and long-term DRReC permitting process. Many mentioned the overlapping permit areas and the associated confusion and expense with obtaining a permit. For example, applicants often do not realize they need multiple permits or have to pay a DRReC, Forest Service, and Town of Frisco fee to operate on the peninsula. Stakeholders are looking for the DRReC to have a very clear decision-making process free of political inputs and to be more proactive than reactive around planning and managing use. Stakeholders felt that parking should be considered in every DRReC decision.

## 3.2 Summary of Issues

- Parking negatively affects user experiences and creates congestion
- Mix of user types on Recpath creates conflicts
- Feeling of event fatigue is experienced by local residents and operators
- Event-related parking
- Insufficient user education and awareness
- Poor trail etiquette exacerbates issues around trail level of use and user types
- Lack of event coordination between jurisdictions
- Wildlife conflicts on Recpath
- Managing expected additional growth
- The DRReC's lack of a defined decision-making process or way to say no

Stakeholders also brought up that the size of the parking facilities limits the number of people who can access and use the reservoir and that locals feel the Recpath is too crowded to use on weekends.

# 4 SURVEY RESULTS SUMMARIES

## 4.1 Online Survey

An online survey on use and experience on the Recpath and reservoir was conducted as part of this report. The survey was open during August through September 2019 and received 464 responses, largely from residents of Summit County (92% of all respondents). Survey respondents were asked whether they wanted to answer questions about the reservoir, Recpath, or both. Most respondents chose to answer both sets of questions (72%), with 22% only answering questions about the Recpath, and 6% exclusively answering for the reservoir. The full survey results summary is available as Appendix B.

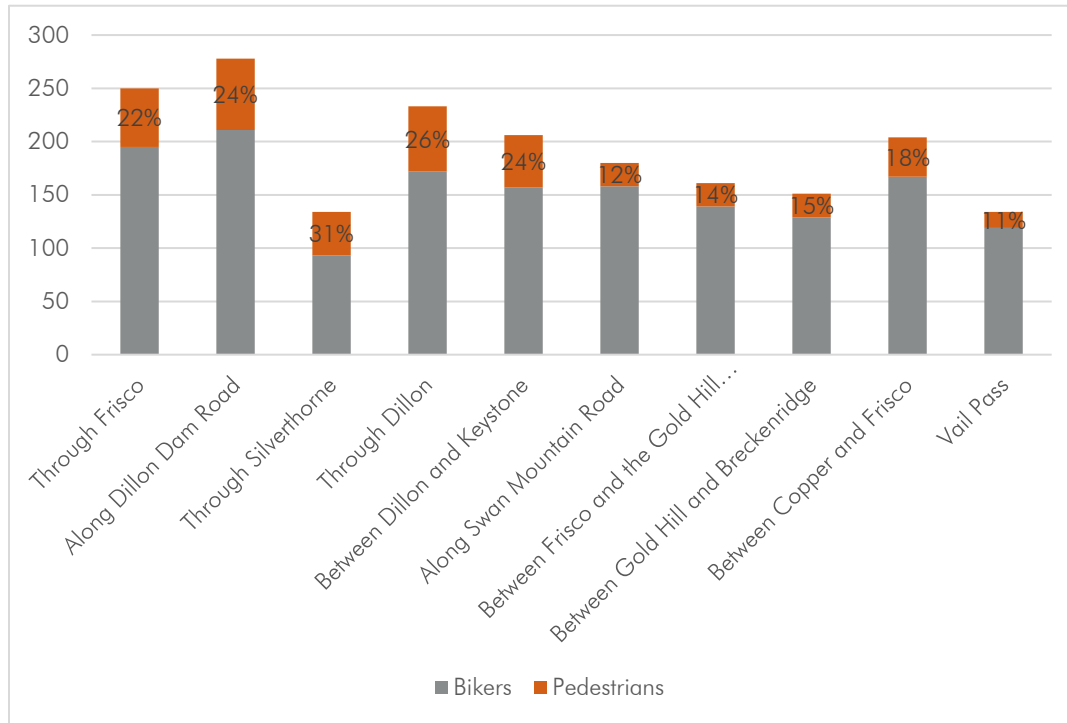
### 4.1.1 Recpath Survey Results

Survey respondents tend to use the Recpath frequently, with 61% using the Recpath daily or a few times a week. The most popular times to use the Recpath were weekends between 9 a.m. and 4 p.m. and weekdays between 9 a.m. and 4 p.m., with 200+ respondents stating they used the Recpath during each of those times. While many respondents and stakeholders stated they avoid the Recpath during peak hours on weekends, survey results showed that those days and times are still popular times for Recpath use among locals. Survey respondents were largely road bikers, with a sizeable number of recreational cyclists, walkers, and runners as well.

Chart 1 shows the number of respondents who used each section of the Recpath by percent of cyclists and pedestrian use. Along Dillon Dam Road, through Frisco, and through Dillon were some of the most popular sections. Through Silverthorne and through Dillon Dam Road had a high percentage of pedestrian users.



CHART 1. RECPATH SECTION USE



Source: SE Group – Online Survey

Most respondents walked or biked from their homes to the Recpath but other popular access points include Zach's Stop (Frisco), the Dillon Marina, the Silverthorne Outlets, and Snake River Inlet. Most respondents (66%) find it easy to access the Recpath and only 4% find it challenging.

Many respondents stated that they typically have negative or somewhat negative encounters with skateboarders (40% of respondents), e-bikes (35%), dog walkers, (30%), and road and recreational cyclists (each at 28%). Respondents also brought up negative encounters with Vail Pass bike tours, large groups (of both walkers and bikers), squatters, and those stopped on the path.

Respondents were asked to rate their experience on the Recpath for each of the times when they use the system. Table 1 shows the percent of respondents rating their experience during each of the following times as good/excellent. Notably, fewer than half rate their weekend midday experience as good/excellent.

Respondents were then asked for each time when they used the Recpath if it was uncrowded, crowded but not detracting from their experience, or such that crowding is an issue. There was a strong overlap between respondents' experience rating and the level of crowding rating. Table 1 also shows the percentage of users who stated that Recpath crowding is an issue during each time interval. Notably, a very high percentage of users (64%) say that crowding is an issue on the Recpath on weekends between 9 a.m. to 4 p.m.

Table 1. Recpath Responses

	Weekdays 6 a.m. to 9 a.m.	Weekdays 9 a.m. to 4 p.m.	Weekdays after 4 p.m.	Weekends 6 a.m. to 9 a.m.	Weekends 9 a.m. to 4 p.m.	Weekends after 4 p.m.
Excellent/ Good Rating	94%	77%	83%	85%	47%	69%
Crowding is an issue	5%	19%	7%	11%	64%	21%

Source: SE Group – Online Survey

Dog walkers were the most likely user group to consider crowding an issue, while recreational cyclists were the least.

Over half (54%) of survey respondents use the Recpath during the winter. Walking/snowshoeing was the most popular winter Recpath activity and all surface treatments, grooming, plowing, and none, were well used.

#### 4.1.2 Reservoir Survey Results

The survey received responses from a variety of user types, with the largest group primarily hanging out on shore. Paddleboarders and kayakers/canoers were the next most popular user groups, representing about 50% of all survey responses.

The majority of respondents use the reservoir relatively infrequently. Almost half of users use the reservoir a few times over the summer and only 19% use the reservoir daily or a few times a week. By a large margin, weekends between 9 a.m. and 4 p.m. was the most popular time to use the reservoir, particularly amongst sailors and kayakers/canoers.

Respondents primarily access the reservoir out of the two marinas. Dillon Dam Road was also a popular access location, but few respondents reported using either of the Forest Service Day Use areas (6%). Driving is the most popular method to access the reservoir, with 65% of respondents driving during most periods. During the peak times, when parking can be challenging, the percent driving falls slightly to 61%.

Respondents were asked to rate their experience finding parking at each of the times they drive to the reservoir. In the mornings on both weekdays and weekends, over fifty percent of respondents rated their experience finding parking as easy. At all other times, over half of respondents said that finding parking was moderately difficult or challenging. On weekends from 9 a.m. to 4 p.m., about 60% of respondents stated that finding parking was challenging. The parking experience during the peak period varied somewhat by access location, with 75% of those looking to park at the Frisco Bay Marina finding it challenging, compared to 43% at the Dillon Marina. Along Dillon Dam Road and the Forest Service day use areas, about 60% of users found it challenging.

Few respondents rated their encounters with other watercrafts as negative (1.9% of encounters rated as negative). Many respondents did rate their encounters with motorboats (21% of all respondents) and pontoon boats (15%) as somewhat negative.

Respondents were asked to rate their experience on the reservoir for each of the times when they use it. Table 2 shows the percentage of respondents rating their experience during each of the following times as good/excellent. Notably, only 67% of respondents rated their weekend 9 a.m. to

4 p.m. use as good/excellent, much lower than at other times. For each time period, the reservoir experience received a comparatively higher rating than the Recpath did.

**Table 2. Reservoir Responses**

	Weekdays 6 a.m. to 9 a.m.	Weekdays 9 a.m. to 4 p.m.	Weekdays after 4 p.m.	Weekends 6 a.m. to 9 a.m.	Weekends 9 a.m. to 4 p.m.	Weekends after 4 p.m.
Excellent/ Good Rating	96%	90%	91%	88%	67%	77%

Source: SE Group – Online Survey

For most of the time periods, the vast majority of respondents did not feel crowding was an issue on the reservoir. On Weekends from 9 a.m. to 4 p.m., 35% of respondents felt crowding was an issue, and 19% felt crowding was an issue on weekends after 4 p.m. A relatively high percentage did feel the reservoir was crowded during those times, but not detracting from their experience as well.

Rowers (71%), those fishing from a boat (50%), and sailors (43%) were most likely to say crowding was an issue on weekends from 9 a.m. to 4 p.m. Paddleboarders and kayakers/canoers felt that crowding was an issue just above the overall average (37% and 38%). Those hanging out on shore and motorboaters were least likely to say crowding was an issue during that time period.

### 4.1.3 Write-in Comments

The survey also received over a hundred write-in comments. Key themes that emerged through these comments were:

- Appreciation for the Recpath system
- Concerns about safety on Vail Pass segment and blind curves between Dillon and Frisco
- Parking is an issue at marinas, but on water, user experience is generally pleasant
- Need for better Recpath education, etiquette, and signage; many respondents complained about people who don't notify when passing and others called for greater enforcement
- Desire for extension of the Recpath system (over Swan Mountain, to Blue River, and to Fremont Pass)
- Desire for more grooming and plowing of the Recpath in the winter
- Frustration with number of events, lack of coordination between towns/County
- Complaints about road bikes, skateboards, headphones, e-bikes, and pedestrians; many respondents also expressed gratitude that e-bikes were now allowed
- Desire to see the reservoir allow swimming

## 4.2 Intercept Survey

An intercept survey on use and experience on the Recpath and reservoir was conducted as part of this report. Surveys were conducted on summer weekends during the middle of the day as the respondents were ending their activities on the Recpath and reservoir. The survey received 73 responses, with the strong majority from Summit County visitors. For a full summary of the results, see Appendix C.

Survey respondents reported very positive experiences on the Recpath and reservoir, with 97% of Recpath users reporting a good/excellent experience and 100% of reservoir users reporting a good/excellent experience. Most respondents found it easy to access the Recpath and reservoir, whether by driving, walking, or biking. For those driving and parking, two-thirds rated their experience as easy. This varied by location, with all those parking at Snake River Inlet finding it easy but about half of those at the Frisco Bay Marina rating it as moderate/challenging.

Recpath users surveyed were a relatively even mix of walkers, recreational cyclists, and road cyclists. Respondents rated their interactions with other users relatively positively, with a few complaints about recreational cyclists, dog walkers, and road cyclists. Of those using the Recpath on weekends, 24% said it was uncrowded, 71% said it was crowded but not detracting from their experience, and one person said crowding was an issue.

Reservoir users surveyed were largely paddlesport participants who rented or brought their paddleboard or kayak to the marina. Respondents were extremely positive about their encounters with other watercrafts and their experience on the dock. Most respondents (78%) felt the reservoir was crowded but it didn't detract from their experience, 22% said it was uncrowded, and no respondents said crowding was an issue.

# 5 EVENTS

The DRRRA and the Recpath are a scenic and popular setting for recreation events and races in Summit County. However, the larger events can be challenging to accommodate given existing use of the DRRRA, reservoir, and its parking areas. Efforts to shift events towards shoulder seasons have been ineffectual, given the popularity of summer events. In 2019, the following summer events occurred on the DRRRA and Recpath and were permitted by the DRRReC.

**Table 3. 2019 Permitted Summer Events**

Event	Description	Participants	Date	Location	Parking Location
Run the Rockies Road 10K and Half Marathon	Running race on the Recpath	250	6/1/19	Tenmile Canyon stretch of the Recpath	Town of Frisco
Bacon Burner	6k running race associated with the Frisco Barbecue Festival	130	6/17/19	Recpath from Frisco Bay Marina to Lake Point Drive	Frisco Bay Marina
Triple Bypass	Long distance bike ride from Evergreen to Avon	3,500	7/13/19	Recpath between Swan Mountain and Vail Pass)	None
Frisco Triathlon	SUP, Mountain Bike, and Trail Run Triathlon	200	7/13/19	Reservoir, Peninsula	Frisco Bay Marina
Courage Classic	Charity Bike Ride with day 2 routes on the Recpath	1,400	7/21/19	Recpath (various sections)	Copper Mountain
Dillon Open Regatta	Two-day sailing regatta	75	8/3/19 and 8/4/19	Reservoir	Dillon Marina
Copper Triangle	Bike event over Fremont, Tennessee, and Vail Passes	1,800	8/3/19	Vail Pass Recpath section	Copper Mountain
Run the Rockies Trail 10K and Half Marathon	Trail running race on the peninsula	365	8/10/19	Peninsula	Frisco PRA
Frisco Bay Invitational	High School mountain biking race	750	8/24/19	Peninsula	Frisco PRA and Summit Middle School

Source: Summit County Open Space and Trails, Town of Frisco, Town of Dillon

Events that occur at locations adjacent to the reservoir and Recpath may present challenges and add to parking issues. The Dillon Amphitheater is a prime example, where parking for concerts and events can exacerbate parking issues. The Frisco Bay Marina also hosts several summer events that do not extend onto the reservoir such as the Kids' Sandcastle Competition, Fall Locals' Party, and the Rock the Dock Party. There are several smaller sailing events out of the Dillon Marina, such as the Thursday Night Race Series or closed regattas, which do not require a permit. With the small size of these events and the off-peak timing of the Thursday race series, these events tend to have a limited impact on parking and on-water crowding.

Many stakeholders felt the number and size of events is becoming overwhelming, especially with a high number of non-event users present at all times. The stakeholders did not feel the issue arose from a single event, but rather the cumulative impact or feeling of "constant events." With most events, parking is the primary issue, while the on-water or on-Recpath experience remains manageable. One stakeholder, the Frisco Rowing Center, chose not to continue its annual race event due to the hassle and crowds at and out of the Frisco Bay Marina.

SE Group observed the Courage Classic, Dillon Open Regatta, and the Colorado High School Cycling League Frisco Bay Invitational to understand the dynamics of these events.

## 5.1 Observation Summaries

SE Group observed the Courage Classic, Dillon Open Regatta, and the Colorado High School Cycling League Frisco Bay Invitational to understand the dynamics of these events.

### 5.1.1 Courage Classic

The Courage Classic is a two-day charity bicycle tour event based out of Copper Mountain. On the first day of the event, a Saturday, the course goes over Fremont, Tennessee, and Vail Passes, with participants only utilizing the Recpath on Vail Pass. Vail Pass shuttles are not allowed to operate on that day, but the Recpath remains crowded with about 1,800 participants mixed with non-event users on the Recpath. On the second day of the event, a Sunday, about 1,000 participants ride course routes on the Recpath and County roads either to Summit High School, to Keystone, or up to Ute Pass north of Silverthorne.

The consultant team observed the event on Sunday and talked to event staff, participants, and non-event Recpath users. Overall, there were few issues with the Sunday event, as start times are dispersed throughout the morning. The Recpath felt congested to some of the event participants, particularly near the start by Copper and near Summit High School, but the congestion did not seem to detract from the overall experience. Participants attributed the feeling of congestion to both the many event participants and the non-event users on the Recpath. Most non-event users did not have issues with the event as many individuals were aware beforehand and planned accordingly or saw the event signage. The non-event users who were unaware did express some frustration. The parking for the event occurs at Copper Mountain and the event draws few spectators, resulting in negligible parking issues.

### 5.1.2 Dillon Open Regatta

The Dillon Open Regatta is a sailing regatta hosted by the Dillon Yacht Club out of the Dillon Marina. Participation in the event has declined in recent years with about 70 participants in the 2019 regatta, held August 3rd and 4th. Dillon Yacht Club members and the marina help staff the event, with the marina moving all the trailers out of the way to free up parking spots and Yacht Club



members assisting with all aspects of the regatta to ensure that regular rentals and marina operations can continue.

As for parking, the event does not attract a large number of participants/vehicles but may exacerbate the existing parking issues in Dillon. This year, the Saturday of the event coincided with one of the busiest days of the summer for Stand Up Paddleboard Colorado, the paddlesport rental company out of the Dillon Marina. The limited availability of parking led to frustrated and late customers and regatta participants. However, the regatta and SUP Colorado have separate spaces at the marina and regatta participants and paddlesport users tend to stay separate on the water, resulting in few issues past the parking lot.

During the regatta, there were few issues at the marina and on the water. Many of the regatta participants are slipholders who head in and out of the dock smoothly. A line at the boat ramp does back up, but extra staff/volunteers are on hand to keep it moving as fast as possible. On the water, other users generally steer clear of the racecourse and there are boats associated with the regatta to help keep non-regatta boats away. On Sunday of the regatta, all participants had to clear the racecourse due to a thunderstorm. The situation was challenging, but all boats were able to get off the water relatively quickly.

### 5.1.3 Frisco Bay Invitational

The Frisco Bay Invitational is a Colorado High School Cycling League mountain bike race on the Frisco Peninsula. The event took place on August 25th and had about 750 participants. With high school age participants, the event attracts significantly more attendees with parents, siblings, and grandparents. Prior to 2019, the event included both the north and south divisions of the Colorado High School Cycling League, for 1,200 total participants spread across Saturday and Sunday. This year, the race only included the north division, but that division grew from 600 to 750 riders.

Parking is a major challenge for this event. The peninsula does not have enough spaces to accommodate the number of attendees – the peninsula has about 200 spaces for a 750-rider event, in 2019. This year, overflow parking was located at Summit Middle School, with attendees allowed to drop people and belongings at the peninsula. Attendees were informed of this arrangement ahead of time and instructed to walk, bike, or take the Summit Stage bus from the middle school. Most attendees had no issue with the arrangement, but many felt that signage pointing towards the peninsula was lacking. A few people did complain, and a handful, not wanting to walk, parked illegally on Highway 9. There were no major congestion issues entering or exiting the peninsula, as attendees arrived early in the day, before other traffic, and departures were dispersed throughout the day.

The race is based out of the Frisco Day Lodge and tubing hill area and the course stays on the eastern side of the peninsula, avoiding the campground areas. The course also avoids the popular Lakeshore Perimeter Trail. However, with the parking lots full throughout the day and most trails being utilized for the racecourse, the peninsula is effectively closed to non-event users. Likely, people who drove to hike, bike, skate, or disc golf on the peninsula were forced to turn around and go elsewhere. People did ride the Recpath through the Peninsula, but most of the race-related activity and people were away from the Recpath. Teams did warm up on nearby sections of the Recpath and despite the relatively narrow width of the Recpath through the PRA and the large groups warming up, no incidents were reported.

# 6 CAPACITY ANALYSIS

This section is a quantitative evaluation of the existing levels of use of the Recpath system and the reservoir. This section analyzes whether these existing levels of use compromise the user experience, safety, and management of the Recpath and reservoir. When the levels of use are compromising those factors, the “capacity” of the recreational facility is being exceeded. In the overall report, both a quantitative and qualitative analysis were conducted.

Qualitatively, the online and intercept surveys asked users whether they felt crowding was an issue and about their overall experience. A high proportion of the online survey respondents, largely Summit County residents, felt that crowding on the reservoir and especially the Recpath was an issue at peak times and did not rate their experience positively. Of intercept survey respondents, largely visitors to Summit County, few felt crowding was an issue at peak times (0% of reservoir respondents and 5% of Recpath respondents) and nearly all rated their experience positively (100% of reservoir respondents and 97% of Recpath respondents). In summary, many residents’ responses suggested the capacity of the Recpath and, to a lesser extent, the reservoir, are being exceeded at peak times, while visitors, with a different context and mindset, predominantly did not express that sentiment. For further results and discussion of the surveys, see the survey results section (Section 4) and Appendix B and C.

The quantitative analyses of Recpath and reservoir capacity in subsequent sections of this report contrast the existing levels of use against established standards for capacities of shared-use paths and recreational bodies of water capacities. These national, evaluative standards incorporate factors such as user safety, ease of management, user conflict, flow of traffic, and the quality of the user experience. The standards and the results are analyzed and summarized in the following report.

## 6.1 Reservoir

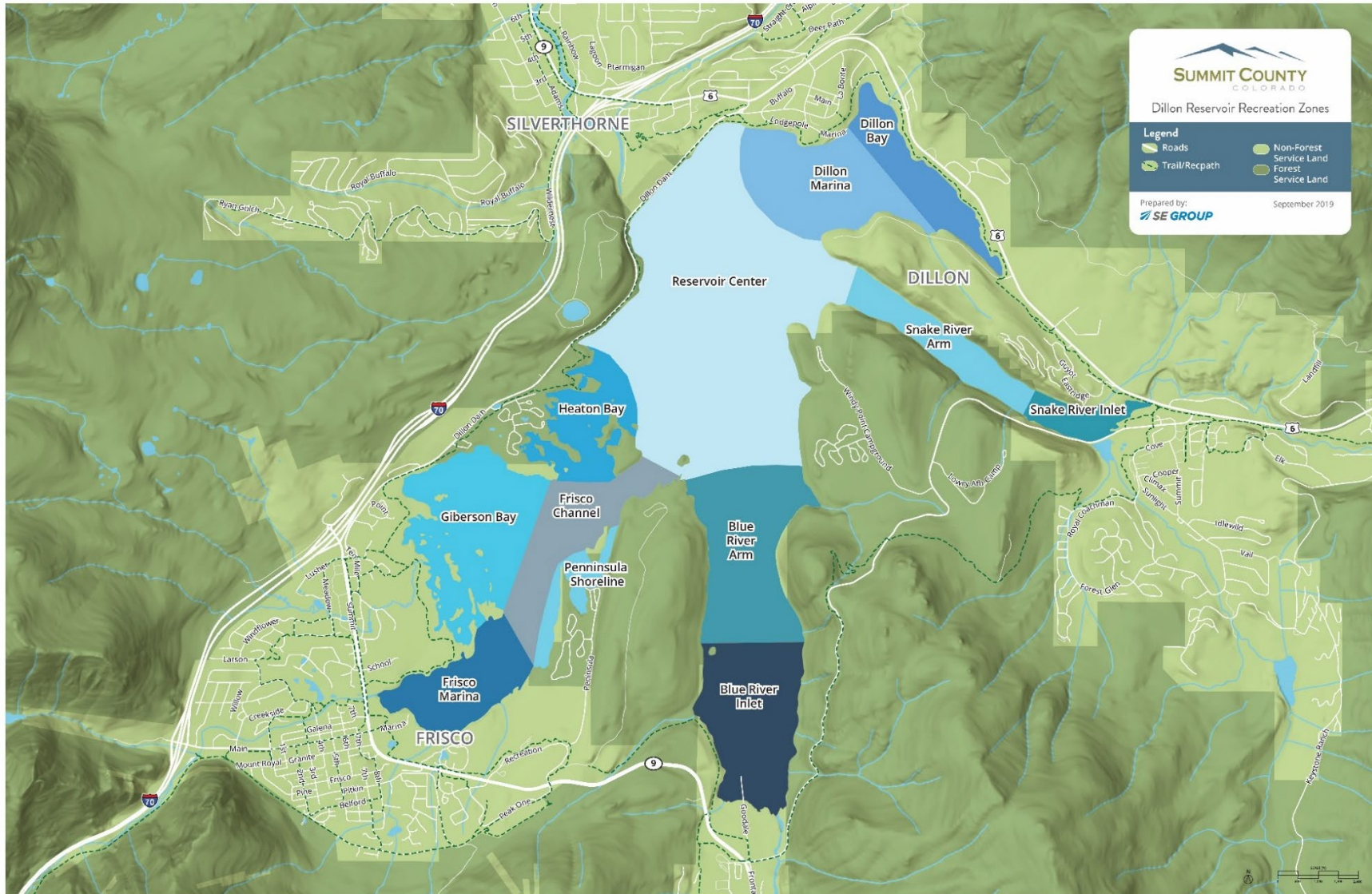
This analysis determines a carrying capacity for the Dillon Reservoir and examines how that capacity relates to current peak period use. The model used for this analysis, the Environmental Resources Management (ERM) model, was originally developed to examine capacity at Deep Creek Lake, Maryland, a popular recreational reservoir amongst tourists and nearby residents.<sup>9</sup> The ERM model adapts the *Management of Aquatic Recreation Resources* model to allow for different zones on the body of water and a mix of watercraft types within those zones. The ERM model is frequently used to determine carrying capacity on bodies of water that see tourism and a mix of uses.

Dillon Reservoir is a large waterbody where the patterns and level of use vary. This analysis divided the reservoir into twelve zones, as shown on Figure 2.

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<sup>9</sup> Environmental Resources Management, Inc., 2004

FIGURE 3. RESERVOIR ZONES



The appropriate density for each zone was calculated based on the acreage and mix of watercraft types. The zones, with their acreage and description of use, are detailed in Table 4. For this study, paddlesports are defined as kayaking, canoeing, and paddleboarding, and motorboat/sailboat includes power boats, pontoon boats, and sailboats.

**Table 4. Reservoir Zones**

Zone	Acreage	Use Description
Frisco Bay Marina	177	High paddlesport, moderate motorboat/sailboat traffic in and out
Peninsula Shoreline	62	High paddlesport, low motorboat/sailboat traffic
Frisco Channel	208	High paddlesport, fast-moving motorboat/sailboat traffic
Giberson Bay	335	High paddlesport, moderate motorboat/sailboat traffic
Heaton Bay	159	Moderate paddlesport, low motorboat/sailboat traffic
Reservoir Center	1,125	High paddlesport, motorboat/sailboat traffic
Blue River Inlet	286	Low paddlesport, motorboat/sailboat traffic
Blue River Arm	321	Low paddlesport, moderate motorboat/sailboat traffic
Snake River Inlet	61	Low paddlesport, low motorboat/sailboat traffic
Snake River Arm	135	Low paddlesport, moderate motorboat/sailboat traffic
Dillon Marina	164	High paddlesport, moderate motorboat/sailboat traffic in and out
Dillon Bay	143	High paddlesport, low motorboat/sailboat traffic

Source: Summit County GIS, SE Group

In the ERM model, each type of watercraft requires a specific acreage/craft ratio to allow for a positive user experience, safety, and minimal user conflict. Table 5 shows the number of acres allocated to each individual watercraft type.

**Table 5. Watercraft Acreage Requirements**

Watercraft	Acres/craft
Sailboat	4.3
Motorboat	9.0
Fishing Boat	1.3
Paddlesport	1.3

Source: ERM Deep Creek Lake Boating Carrying Capacity Assessment

The capacity of each zone is derived from the number of watercraft types used in each zone. The breakdown in Table 6 was developed from analysis and observation of current peak day use.

**Table 6. Peak Period Percentage of Watercraft Type per Zone**

Location	Sailboat	Motorboat	Fishing Boat	Canoe/Kayak/ Paddleboard
Frisco Bay Marina	6%	6%	5%	83%
Peninsula Shoreline	2%	2%	2%	93%
Frisco Channel	15%	17%	2%	66%
Giberson Bay	2%	2%	4%	92%
Heaton Bay	2%	2%	6%	91%
Reservoir Center	30%	14%	14%	42%
Blue River Inlet	7%	7%	34%	55%
Blue River Arm	20%	20%	10%	50%
Snake River Inlet	8%	8%	32%	56%
Snake River Arm	18%	18%	15%	37%
Dillon Marina	9%	11%	2%	77%
Dillon Bay	0%	2%	2%	97%

Source: SE Group, Summit County Sheriff's Office Boat Patrol Unit Estimations

The appropriate number of watercrafts and density can be calculated given the acreage of each zone and the breakdown of watercrafts within them. For example, in the Frisco Bay Marina, 83% of crafts are canoes/kayaks/paddleboards that require 1.3 acres/craft, 6% are sailboats requiring 4.3 acres/craft, 6% are motorboats requiring 9 acres/craft, and 5% are fishing boats requiring 1.3 acres/craft. Calculating a weighted average of the densities results in 1.96 acres/craft across the entire zone. With 177 acres, 90 watercrafts in the zone at once would be the carrying capacity.

**Table 7. Watercraft Target Density and Capacity**

	Target Density (acres/craft)	Acreage	Watercraft Capacity
Frisco Bay Marina	1.96	177	90
Peninsula Shoreline	1.55	62	40
Frisco Channel	3.04	208	68
Giberson Bay	1.54	335	218
Heaton Bay	1.53	159	104
Reservoir Center	3.31	1,168	340
Blue River Inlet	2.07	286	138
Blue River Arm	3.42	321	94
Snake River Inlet	2.19	61	28
Snake River Arm	3.11	135	43
Dillon Marina	2.42	164	68
Dillon Bay	1.45	143	99

Source: Summit County GIS, SE Group

Estimates for the number of users in each zone at one time were developed based on access points and observation. The estimation was based on the total available slips and moorings available at the marinas, number of paddlesport racks, number of available rentals, number of guide operations, available parking spaces, and observations from the Summit County Sheriff's Office Boat Patrol Unit and the marina managers. From each access point, it was then estimated what percentage of its users would be in each zone of the reservoir, based on observations from the Summit County Sheriff's Office Boat Patrol Unit and the marina managers.



The estimated number of users in each zone at a peak period is compared to the watercraft capacity in the following table.

**Table 8. Watercraft Capacity and Estimated Peak Use**

	Watercraft Capacity (number of watercrafts)	Estimated Peak Use (number of watercrafts)	Margin
Frisco Bay Marina	90	65	Under (-25)
Peninsula Shoreline	40	42	Over (+2)
Frisco Channel	68	41	Under (-27)
Giberson Bay	218	124	Under (-96)
Heaton Bay	104	50	Under (-54)
Reservoir Center	340	84	Under (-256)
Blue River Inlet	138	15	Under (-123)
Blue River Arm	94	30	Under (-64)
Snake River Inlet	28	13	Under (-15)
Snake River Arm	43	27	Under (-16)
Dillon Marina	68	54	Under (-14)
Dillon Bay	99	56	Under (-43)

Source: SE Group; Summit County Sherriff's Office Boat Patrol Unit

Key: red = existing number of watercrafts exceeds the capacity of the zone  
yellow = existing number of watercrafts is near the capacity of the zone (within 30 watercrafts)  
green = existing number of watercrafts is well below the capacity of the zone

According to the analysis, most zones are below carrying capacity at peak periods. The peninsula shoreline zone is slightly over capacity, but given the curves of the shoreline, it may not feel as crowded to users. However, in a few of these zones, there are pinch points where boats tend to congregate or pass through and congestion can become an issue, even if the overall density is below capacity. Major pinch points on the reservoir include:

- The very center of the reservoir where sailing races occur and motorized boats pass through between the Frisco and Dillon marinas.
- The cut in between Sentinel Island and Crown Point, a narrow channel where most boats travel to go between the Frisco/Giberson area and the center of the Reservoir, Blue River arm, and Dillon.
- The narrow Snake River arm where wakes can be very impactful to fishing boats or kayaks/canoes/paddleboards.
- Frisco Channel with its high volume of motorboat/sailboat traffic, especially when boats cut across from the peninsula shoreline to Giberson Bay.
- The corner between the Frisco Bay Marina zone and the Giberson Bay zone has a high level of congestion with paddlesport watercrafts coming in and out.

While the results of the analysis do indicate that there is currently additional capacity on the reservoir, it is important to consider the impact additional users would have at the on-water pinch points and on-land pinch points, such as parking and restrooms.

## 6.2 Recpath

This section looks at current use of the Recpath in terms of patterns, trends, and Level of Service (LOS). LOS is a grading system to quantify how well traffic flows on a transportation facility, in this case, a shared-use path. A higher grade signifies a free-flowing pathway, while a low grade signifies a congested, over capacity pathway.

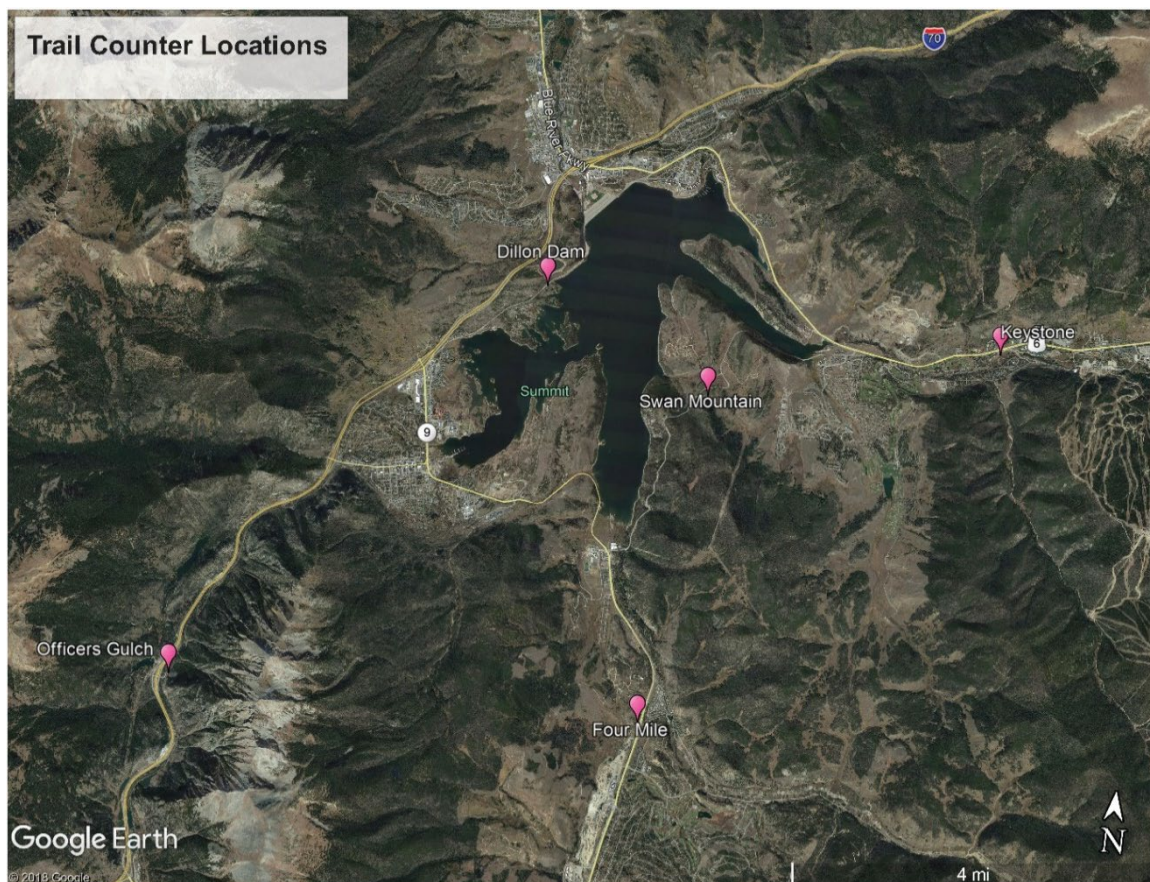
Data from trail counters and fieldwork was analyzed and presented in Section 6.2.1 to incorporate the patterns and trends of current Recpath use into the LOS analysis and discussion.

### 6.2.1 Usage Patterns

This section looks at 2018 and 2019 Recpath use data from trail counters to understand use patterns around seasonality, day of the week, and time of day.

The results presented herein aggregate the five counter locations and describe differences in usage patterns among the counters. The counter located in Keystone appears to have collected inaccurate data through the winter and was not used in the analysis of seasonality. The Swan Mountain Recpath has a wildlife closure from 12/1 to 3/31.

**FIGURE 4. TRAIL COUNTER LOCATIONS**

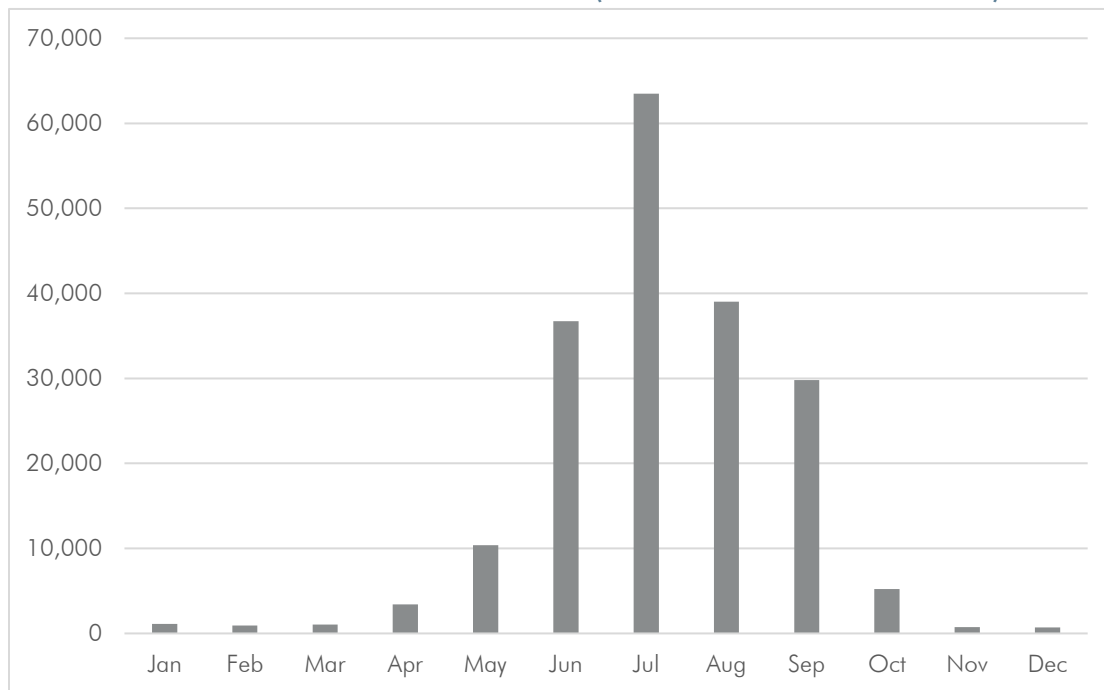


## Seasonality

The peak season of Recpath usage is from the beginning of June to the middle of September (combined counts above 7,500 per week across the four counters). This analysis explores patterns and trends in Recpath during the peak season, which in 2019, was June 3, 2019 through September 10, 2019. While Recpath use is high throughout the summer, use is further elevated around the month of July. From the week preceding July 4th through late July, combined counts across the four counters are above 12,000 per week.

June, July, and August 2019 use accounts for 72% of counted use throughout the year, with July accounting for 33% of annual counted use. September use represents an additional 15% of use.

**CHART 2. 2018/2019 MONTHLY COUNTS (ALL LOCATIONS COMBINED)**



Source: Summit County Open Space and Trails, SE Group

Note: Chart displays data from October 2018 through September 2019 to present a full year of data.

The seasonal use patterns do not show much variation between the counter locations. Use at Officers Gulch is more concentrated during the summer months due to events, limited access, and winter avalanche closure. In 2019, the delayed opening due to avalanche debris on the Recpath exacerbated this trend. The following table shows total use in July at each location.

**Table 9. 2019 July Recpath Use**

	Officers Gulch	Dillon Dam	Four Mile	Swan Mountain
July Total Use	19,721	20,286	16,659	7,257
July % of Total	48%	29%	29%	29%

Source: Summit County Open Space and Trails, SE Group

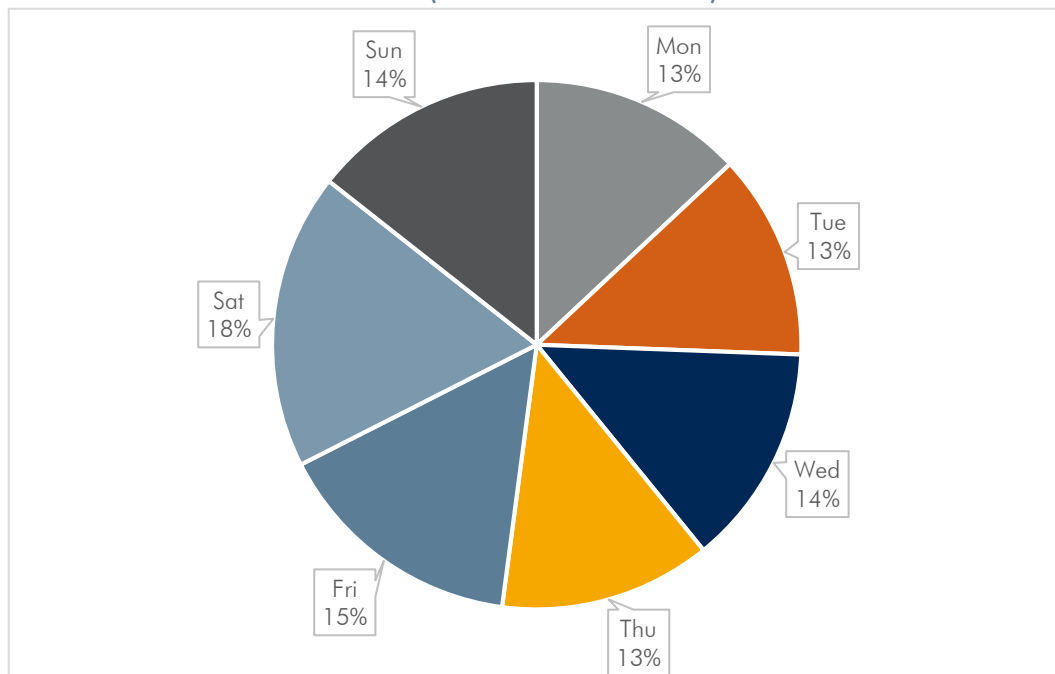
The Recpath is open during the winter (with the exception of the Swan Mountain Recpath and Tenmile Canyon Recpath), and certain segments are groomed (Frisco peninsula to Breckenridge) or plowed (Town of Dillon). One counter (Four Mile) is located along a groomed segment. No counters are located along the plowed segments. Use of the Four Mile segment is low during the winter months, with January, February, and March making up 0.8%, 0.8%, and 1.2% respectively of annual use (450-650 users per winter month). A temporarily placed game camera on the groomed Iron Springs section of the Recpath near the Peninsula Recreation Area captured visuals of winter use during the winter of 2018/19. The camera does not quantify use but showed use patterns that are likely higher than that recorded at Four Mile.

Given the concentration of use during the peak season, the days of the week and time of day patterns are analyzed in Chart 3 only for the peak season.

### Days of the Week

Recpath usage is fairly balanced between the days of the week. Recpath usage during the week has increased and become a larger percentage of total usage. Friday usage now slightly exceeds Sunday usage and overall, Friday-Saturday-Sunday usage makes up 47.8% of total usage, compared to 52% in 2011. However, in contrast to user perceptions, Saturday, the highest average use day, was only 5% greater than the lowest use days of Tuesday and Thursday (13%).

**CHART 3. DAYS OF THE WEEK (2019 PEAK SEASON)**



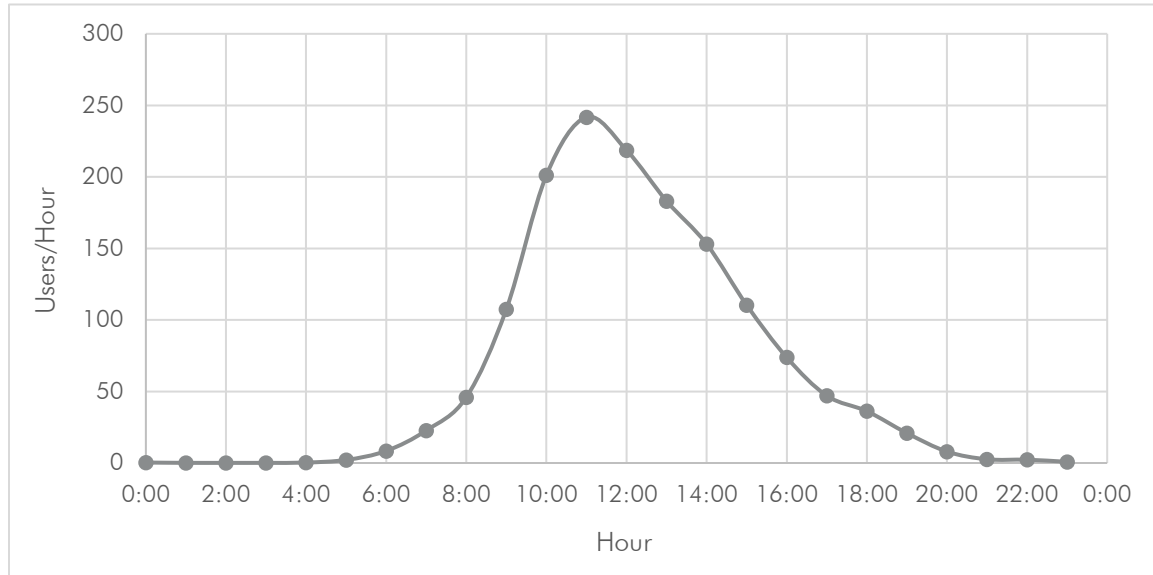
Source: Summit County Open Space and Trails, SE Group

The days-of-the-week usage patterns do not vary much by counter location. Four Mile has slightly higher midweek use, while Officers Gulch and Swan Mountain have slightly higher weekend use than the overall breakdown. These slight differences are likely attributable to differences in the user profiles of each segment. Many weeklong Summit County visitors will include a ride on the Recpath during their stay, and often choose easier routes such as between Frisco and Breckenridge (Four Mile). Swan Mountain and Officers Gulch (up to Vail Pass) are more difficult rides, more frequently undertaken by local residents or weekend visitors from the Front Range. In addition, multiple large events passed the Officers Gulch counter on summer weekends.

## Time of Day

During the peak season, the peak hours of use are 9 a.m. to 4 p.m. The highest use occurs during the 10 a.m., 11 a.m., and 12 p.m. hours. This trend is consistent between weekends and weekdays, suggesting limited morning and evening commuting. 82% of Recpath usage occurs during the peak hours.

**CHART 4. AVERAGE COUNTS PER HOUR (ALL LOCATIONS, PEAK SEASON)**



Source: Summit County Open Space and Trails, SE Group

The peak period and high use hours do not vary much by counter location. The majority of use at the Officers Gulch counter occurs slightly later in the day and the majority of Swan Mountain use is slightly earlier in the day than the average. At Officers Gulch, this difference may be related to the one-way downhill travel option (Vail Pass shuttle). With Swan Mountain, it may be related to the high proportion of road cyclists on the segment, who may start their rides earlier in the day.

The following chart shows use during the 12 p.m. hour at each counter. Notably, the number of users is very similar at Officers Gulch, Dillon Dam, and Four Mile, although the busiest hours for Dillon Dam and Four Mile occurred earlier in the day.

**Table 10. Use During the 12 p.m. Hour at the Counters**

	Officers Gulch	Dillon Dam	Four Mile	Swan Mountain
Average 12 p.m. Use (Users/Hour)	61.3	66.4	62.7	28.2
% of Daily Use	18%	13%	14%	15%

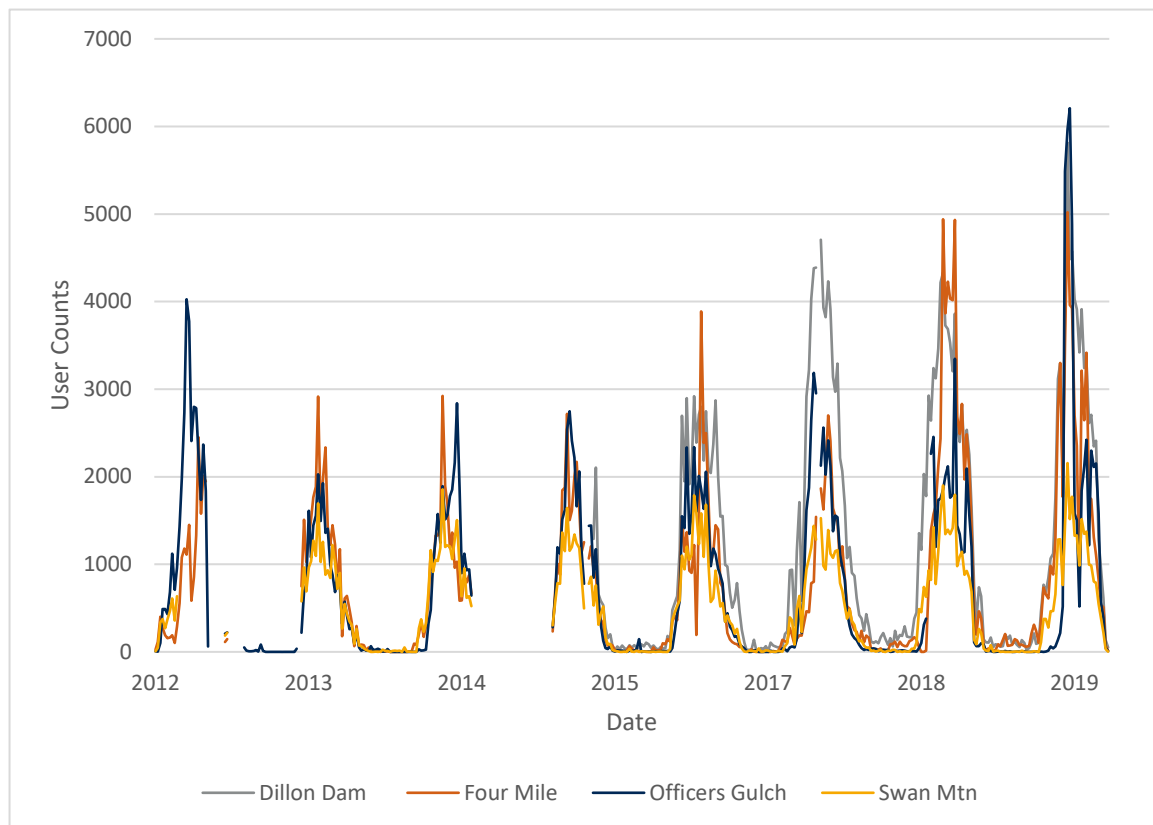
Source: Summit County Open Space and Trails, SE Group

## 6.2.2 Historic Recpath Usage Trends

This section evaluates historic usage trends from Recpath counter data recorded since the previous capacity analysis was completed in 2011. Data is available from the Four Mile, Officers Gulch, and Swan Mountain counters from 2011 to present. However, for unknown reasons there appears to be error within the 2011 counter datasets resulting in what appear to be erroneously high user counts during that year. This issue is most notable at the Officers Gulch counter but is apparent throughout the system. As a result, for the purposes of this analysis and report, we consider the 2011 data to be outliers and have dismissed from the analysis.

As shown in Chart 5, annual use throughout the Recpath system has increased dramatically since 2012. Most locations now experience double, or greater usage levels during peak periods compared to 2012.<sup>10</sup>

**CHART 5. WEEKLY RECPATH USE 2012-2019**



Source: Summit County Open Space and Trails. Gaps represent when data was not recorded.

Use at the Four Mile and Swan Mountain counter locations remained relatively consistent through 2016 before increasing dramatically from 2018 through 2019.<sup>11</sup> The Swan Mountain counter shows the most consistent use patterns, with a moderate but steady increase from 2013 to present. At the other counter locations, use has increased dramatically in the past few years. The Four Mile data indicates relatively consistent usage patterns until 2018, before increasing dramatically. Use declined slightly in 2019 but remained well above pre-2018 levels. The Dillon Dam Road counter shows a steady growth in users over time, with 2019 peak usage double 2016 levels.

<sup>10</sup> Note that the Dillon Dam counter began collecting data in late 2015

<sup>11</sup> Note peak summer trail counter data is not available for 2017



The Officers Gulch counter has shown unique trends compared to other counter locations. Usage levels remained relatively consistent before increasing dramatically in July 2019. The recent usage increases may correlate with an increase in the Vail Pass Bicycle Delivery permits issued by USFS in 2017. According to the USFS, in the previous annual temporary use Vail Pass Bicycle Delivery permits issued in 2012 (expired in 2016), seven (7) permittees were issued 13,700 user days for Summit County side of Vail Pass. The actual average use between 2012 and 2015 was 11,300 users per season. When the USFS issued 10-year permits to the shuttle operators in 2017, they permitted 14,000 users with an additional 1,835 pool days that could be split between operators (total permitted user days = 15,835). In 2019, Summit County shuttle operators dropped off 13,794 clients, which is an increase of 2,494 clients compared to the 2012 - 2015 average, or a 22% increase in clients. The additional 2,494 permitted user days is an approximately 16% increase in permitted user days in 2019 compared to 2012 - 2015.

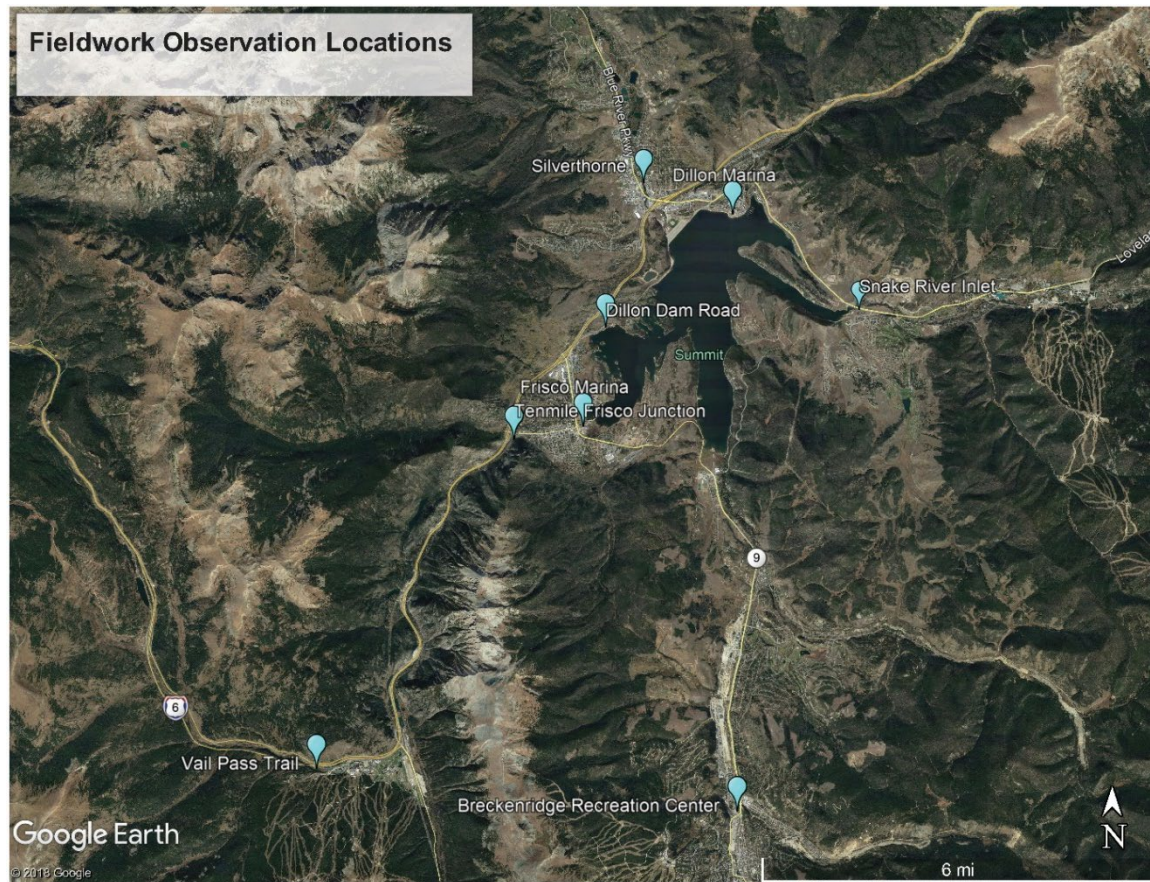
Of importance to note, a historic March 2019 avalanche cycle deposited significant debris onto the Tenmile Canyon Recpath, requiring a cleanup effort that closed the Recpath into late June. When the Recpath opened for the 2019 season, the remaining avalanche debris may have been an attraction resulting in additional users/visitors to Officers Gulch.

Counter data also shows that the Recpath system now experiences higher levels of use on Fridays than Sundays. Use has become increasingly concentrated during the peak hours, primarily during the middle of the day between 10 a.m. and 2 p.m., with 57% of use occurring between those times. Levels of use during other daylight hours is similar to historic levels. The changes in timing of use are variable by location. For example, at Four Mile, the time patterns around use have remained relatively similar throughout the dataset, with much higher levels of midday use. At Swan Mountain, use is slightly higher throughout the day.

### 6.2.3 Fieldwork Summary and Findings

SE Group and Friends of the Dillon Ranger District (FDRD) conducted fieldwork to provide additional locations and information for capacity analysis. Volume counts were conducted at additional locations near access points, to allow for analysis of those often-crowded locations. User type and direction of travel were recorded, to develop the assumptions for analysis.

FIGURE 5. FIELDWORK OBSERVATION LOCATIONS



The fieldwork was done on weekends and one weekday in August of 2019. According to the trail counter data, weekends in July tend to have higher volumes than weekends in August, suggesting the trail counts collected and analysis portray busy, but not the high peak weekends of summer.

Data collection occurred on August 3, 4, 10, 11, 15, 24, 25, 2019. However, it rained on August 10 and 11, and the volumes recorded are well below those collected on other dates. As this analysis seeks to understand the high use days on the Recpath, the data from that weekend was discarded and data was collected later at those locations on better-weather days. Refer to Appendix C for the Intercept Survey Results Summary.

### Findings

The volumes at each location are incorporated into the LOS calculations in the following sections and tables. Other findings include:

- E-bike use is relatively low on the Recpath. E-bikes were between 1% and 6% of all cyclists at each observation location. 2019 was the first year e-bike use was permitted on the Recpath system and use is expected to increase in the future.
- The breakdown of cyclists versus non-cyclists varied by location. The Swan River Inlet, Dillon Dam Road, Vail Pass, and the Tenmile Recpath – Frisco Junction area all had a very high percentage of cyclists (>90%). Silverthorne, the Dillon Marina, and the Frisco Bay Marina were lower percentages of cyclists (50–70%).

- Most locations had relatively even flow of traffic. Vail Pass had disproportionately downhill traffic (75%) towards Copper Mountain. This is likely due to the time of day when data was collected, early afternoon, and the shuttle drop off service.
- Group size of both cyclist and non-cyclist groups was recorded. Larger groups can make for more challenging passing, with riders/pedestrians walking or riding abreast or in long single file chains. On average, group size was relatively small, at below two trail users per group. Groups tended to be slightly larger passing the Breckenridge Recreation Center and by the Dillon and Frisco Bay marinas.

#### 6.2.4 Level of Service

Based on the data presented above, LOS scores were developed for each Recpath trail counter and observation location. LOS is a commonly used rating system to grade the quality of service and flow of traffic on a roadway, or in this case, a shared use path. These LOS scores reflect the level of congestion, safety, and quality of the experience being provided on the Recpath. Further, the scores indicate whether the current volume of users is above, approaching, or well below capacity of the Recpath segment.

This analysis follows the Shared-Use Path Level of Service Calculator of the Federal Highway Administration (FHWA).<sup>12</sup> The methodology was developed as part of the FHWA *Evaluation of Safety, Design, and Operation of Shared-Use Paths* and was developed with North Carolina State University and Toole Design Group. Shared-Use Path LOS is derived from the frequency of encounters and other factors shown to significantly impact a rider's feeling of safety: the path width and the presence or lack of a striped centerline. The methodology allows us to consider bicycles moving in the same direction passing each other, path width, and centerline presence, which the methodology used in the 2011 report did not.

The LOS grades are based on four factors: path width, active passes (frequency of encountering and passing other users in the same direction), meetings (frequency of encountering other users in the opposite direction), and the presence of a striped centerline. The frequency of active passes and meetings are based on the user type (cyclists vs. pedestrians), user speeds, and overall user volume on the trail. Encountering slow moving users on a high-volume segment affects the LOS significantly, as slow-moving users require passing maneuvers from cyclists or limit cyclists' ability to make passing maneuvers. Narrower pathway widths decrease the available space for making passing maneuvers and striped centerlines affect the cyclist's sense of freedom to maneuver. However, the FHWA Guide also notes that, "while the finding might appear initially to mean that a centerline stripe degrades pathway LOS and should not be used, it is important to note that there may be other valid safety reasons for providing a centerline stripe, particularly on crowded trails, on curves with limited sight distance, and in other appropriate circumstances."

The LOS analysis was conducted from the perspective of a cyclist travelling at 10 mph, the average speed of a cyclist based on the breakdown of user types and assumed speeds. A cyclist's perspective was used as on a shared-use path, quality and safety of the experience decrease faster from a cyclist's perspective. For pedestrians, who move at constant and similar speeds to each other, crowding does not become an issue until it is difficult to move. However, bicycle flow can be more challenging due to higher and variable speeds.

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<sup>12</sup> North Carolina State University and Toole Design Group, 2006

Because the Recpath is multi-directional, the analysis assumes equal traffic flow in both directions. The equal flow was confirmed through the fieldwork conducted by SE Group and FDRD. On Vail Pass, traffic did not flow equally. See Table 16 for the assumptions used for the Vail Pass segment.

The pedestrian/cyclist breakdown used in this analysis is based on location, as determined through the analysis fieldwork. The following table shows the breakdown assumed for each location where fieldwork was conducted, or counters are located.

**Table 11. User Breakdown Estimates<sup>13</sup>**

	Cyclist	Pedestrian
Snake River Inlet	95%	5%
Vail Pass	90%	10%
Breckenridge Recreation Center	80%	20%
Dillon Marina	55%	45%
Frisco Bay Marina	70%	30%
Silverthorne	50%	50%
Tenmile Canyon - Frisco Path Junction	85%	15%
Dillon Dam Road	90%	10%
Swan Mountain near Sapphire Point	85%	15%
Officers Gulch	90%	10%
Four Mile	85%	15%
Keystone	70%	30%

Source: SE Group Intercept Survey Conducted on August 3, 4, 24, 25.

Cyclists were further broken down into road cyclists and recreational cyclists and pedestrians were broken down into runners and walkers. Road cyclists were assumed to be 30% of all cyclists and traveling at an average of 15 mph (except at Swan Mountain and Vail Pass, where road cyclists were assumed to be 40% of cyclists). Runners were assumed to be 15% of pedestrians and traveling at an average of 6 mph. Recreational cyclists were assumed to travel at 8 mph and walkers were assumed to travel at 3 mph. These figures are based on the standards used in the FHWA calculator tool. As Class 1 E-bikes can travel up to 20 mph with pedal assist, they are incorporated as road cyclists. Based on the fieldwork, there was a very small number of “other” users such as rollerbladers, scooters, skateboarders, or rollerskiers, and they were not taken into account. Though “other” uses were not considered in this LOS analysis, they are uses of concern to stakeholders who noted negative experiences/conflicts on the Recpath.

<sup>13</sup> The estimates in this table are derived from direct observation of user type breakdown made at observation locations and extrapolation for the counter locations. Observations of user type breakdown were not made at counter locations, and thus estimates are based on nearby observation locations and known use patterns.

Table 12 shows the description and point value of each LOS grade. As the LOS grade decreases, meetings and passings become more frequent, bicycles are forced to maneuver more often, and safety for all users decreases.

**Table 12. LOS Grades Descriptions**

LOS Grade	Point Range	Interpretation
A	$LOS \geq 4.0$	Excellent: Trail has optimum conditions for individual bicyclists and retains ample space to absorb more users of all modes, while providing a high-quality user experience. Some newly built trails will provide grade-A service until they have been discovered or until their ridership builds up to projected levels.
B	$3.5 \leq LOS < 4.0$	Good: Trail has good bicycling conditions, and retains significant room to absorb more users, while maintaining an ability to provide a high-quality user experience.
C	$3.0 \leq LOS < 3.5$	Fair: Trail has at least minimum width to meet current demand and to provide basic service to bicyclists. A modest level of additional capacity is available for bicyclists; however, more pedestrians, runners, or other slow-moving users will begin to diminish LOS for bicyclists.
D	$2.5 \leq LOS < 3.0$	Poor: Trail is nearing its functional capacity given its width, volume, and mode split. Peak period travel speeds are likely to be reduced by levels of crowding. The addition of more users of any mode will result in significant service degradation. Some bicyclists are likely to adjust their experience expectations or to avoid peak-period use.
E	$2.0 \leq LOS < 2.5$	Very Poor: Given trail width, volume, and user mix, the trail has reached its functional capacity. Peak-period travel speeds are likely to be reduced by levels of crowding. The trail may enjoy strong community support because of its high usage rate; however, many bicyclists are likely to adjust their experience expectations, or to avoid peak-period use.
F	$LOS < 2.0$	Failing: Trail significantly diminishes the experience for at least one, and most likely for all user groups. It does not effectively serve most bicyclists; significant user conflicts should be expected.

Source: FHWA Shared-Use Path Level of Service Calculator: A User's Guide

Hourly one-way traffic volumes, user breakdown and speeds, pathway width, and presence of centerline were entered into the LOS calculator. One-way traffic volumes for trail counter data are from the tenth busiest day, a common planning metric for capacity, and the second busiest day (a very busy day but not the maximum), and the busiest day. The volumes used for the LOS analysis are the average volume for the two busiest hours on those days, divided by two to represent one-way travel. Higher volumes do not necessarily signify a lower LOS grade, as the percentage of pedestrians, path width, and presence of a center line are all key factors in determining an LOS grade.

Tables 13, 14, and 15 show the volumes and LOS grades at the trail counter locations for the 10th busiest days, 2nd busiest, and busiest days.



**Table 13. LOS Grades for 10th Busiest Day**

Counter Location	10th Busiest Day	Hourly one-way volume	LOS Score	LOS Grade	Additional volume to downgrade	% Increase to downgrade
Dillon Dam Road	7/3/2019	52	3.5	B	30	58%
Swan Mountain	7/28/2019	24	4	A	15	63%
Officers Gulch	6/27/2019	58	3.5	B	25	43%
Four Mile	7/19/2019	65	3.75	B	100	154%
Keystone	7/16/2019	8	4	A	7	88%

Source: SE Group, Summit County Open Space and Trails

On the 10th busiest day, all Recpath segments with counters were functioning at good to excellent LOS, below capacity. The tenth busiest day represents a typical weekend day. Additional analysis was conducted for the second busiest and busiest days, to see if trail segments were functioning at or above capacity on those days.

**Table 14. LOS Grades for 2nd Busiest Day**

Counter Location	2nd Busiest Day	Hourly one-way volume	LOS Score	LOS Grade	Additional volume to downgrade	% Increase to downgrade
Dillon Dam Road	7/6/2019	73	3.5	B	11	15%
Swan Mountain	7/20/2019	34	4	A	5	15%
Officers Gulch	7/21/2019	145	3.06	C	15	10%
Four Mile	9/1/2019	70	3.74	B	95	135%
Keystone	7/4/2019	11	4	A	4	36%

Source: SE Group, Summit County Open Space and Trails

On its 2nd busiest day, most of the trail segments were at the same LOS grade. The 2nd busiest day for Officers Gulch was the day of the Courage Classic, and its LOS Grade fell to a C or "fair." With most of the counter locations, minimal additional volume would result in a lower LOS grade. For Officers Gulch, 15 additional users in a single direction would result in LOS D, or "poor."

**Table 15. LOS Grades for Busiest Day**

Counter Location	2nd Busiest Day	Hourly one-way volume	LOS Score	LOS Grade	Additional volume to downgrade	% Increase to downgrade
Dillon Dam Road	7/5/2019	77	3.5	B	7	9%
Swan Mountain	7/5/2019	36	4	A	3	8%
Officers Gulch	7/13/2019	247	2.59	D	21	9%
Four Mile	7/5/2019	95	3.69	B	70	74%
Keystone	7/6/2019	14	4	A	1	36%

Source: SE Group, Summit County Open Space and Trails



At all locations except Officers Gulch, the busiest day occurred over July 4th weekend. Each location was an LOS A or B, although Dillon Dam Road and Swan Mountain require minimal additional volume to downgrade. The busiest day at Officers Gulch was the day of the Triple Bypass bicycle tour when it received an LOS D. Traffic was very concentrated in a single direction during the event, resulting in a positive user experience for those heading in the direction of the event and likely a negative one for those using the Recpath in the opposing direction.

The County's trail counters are not located near many of the popular Recpath access points where crowding and congestion with multiple user types can be more of an issue. SE Group and FDRD collected data on hourly volume and user types to develop LOS grades near many of the popular access points. Table 14 shows the volumes and LOS grades for the popular access points on weekends at midday in August.

**Table 16. LOS Grades for Popular Access Points**

Counter Location	Hourly one-way volume	LOS Score	LOS Grade	Additional volume to downgrade	% Increase to downgrade
Snake River Inlet	75	3.71	B	65	87%
Vail Pass <sup>a</sup>	60	3.35	C	60	100%
Breckenridge Recreation Center	110	3.59	B	25	23%
Dillon Marina	100	2.65	D	15	15%
Frisco Bay Marina	110	3.11	C	15	14%
Silverthorne	25	3.72	B	25	100%
Tenmile Frisco Path Junction	85	3.7	B	75	88%

Source: SE Group

Notes:

<sup>a</sup> Vail Pass has different dynamics than other sections of the Recpath. Traffic does not flow equally in each direction, with a higher proportion of cyclist downhill traffic. Cyclists also travel at very high or very slow speeds, depending on whether they are going up or down. For Vail Pass, 60% of road cyclists and 85% of recreational cyclists were assumed to be traveling downhill. Road cyclists were assumed to be traveling downhill at 20 mph and recreational cyclists were assumed to be traveling downhill at 15 mph. Road cyclists were assumed to be traveling uphill at 10 mph and recreational cyclists were assumed to travel uphill at 6 mph.

At some of these locations, the LOS grades show the Recpath nearing capacity. For example, near the Dillon Marina, the LOS grade is "poor" where any additional users will result in a service degradation. The Dillon Marina area is particularly congested due to the high numbers of pedestrians mixed in with cyclists. Vail Pass and the Frisco Bay Marina area are at LOS C, where the current path is relatively sufficient for existing demand, but there is limited additional capacity, especially for more pedestrians. Minimal additional volume at the Frisco Bay Marina and Dillon Marina areas would result in LOS D and LOS E. The other locations analyzed are LOS B, or good, and do have capacity for some additional users.

Recpath counts were also conducted on August 15th, a weekday, in order to understand the LOS on the Recpath during the week.

**Table 17. LOS Grades During a Weekday Count**

Counter Location	Hourly one-way volume	LOS Score	LOS Grade	Additional volume to downgrade	% Increase to downgrade
Dillon Marina	45	3.27	C	25	56%
Frisco Bay Marina	65	3.49	C	60	92%
Dillon Dam Road	50	3.5	B	30	60%

Source: SE Group

The LOS grades are higher during the week. However, at the Dillon Marina, and the Frisco Bay Marina to a lesser extent, there is limited capacity for additional users, especially pedestrians. According to the analysis of trail usage patterns, weekdays are becoming busier and approaching weekend volumes.

The results of this analysis indicate that the Recpath flows well on certain segments, typically those further from major access points/bike rentals shops/population centers. However, there are segments where flow of traffic, safety, and the user experience are impaired at peak periods. In these segments, additional management measures or the dispersal of users to less popular segments (i.e., Silverthorne or Keystone) may be appropriate. In all sections of the Recpath, enhanced etiquette education can improve the flow, safety, and experience of all users.

## 6.3 Parking

At many of the Recpath and reservoir access points, parking can be an issue during peak summer periods. During the summer, many of the parking lots will fill up early in the morning and remain full throughout the day. The full parking lots can lead to other issues, such as illegal and dangerous parking on the side of the roadway, late arrivals to scheduled activities, and a negative user experience. The parking issues are exacerbated by events and people parking in these areas to do non-Recpath and reservoir activities (i.e., explore a town, go for a hike, etc.). There are also many parking areas that are relatively underutilized, presenting an opportunity to disperse users.



*Cars looking for parking at the Frisco Bay Marina on a summer Saturday*


Table 18 details many of the summer public parking options. Under the “Size” column, the parking lot is listed as small if it has less than 25 spaces, medium if it has 25 to 50 spaces, and large if greater than 50 spaces. “Other activities” refers to whether the parking lot is used for other activities such as hiking and mountain biking, fishing, exploring town, shopping, or using the recreation center. Level of use is based on how frequently the parking lot fills up. High use lots fill up consistently and early during peak periods. Moderate use lots may fill up on particularly busy weekends or during events. Low use lots rarely fill up during the summer months. The paid summer parking areas are the Breckenridge gondola lots and Giberson Bay and Pine Cove Day Use areas.

**Table 18. Summer Parking Options**

Number	Name	Size	Access Provided	Other activities	Level of Use	Paid?
1	Copper Mountain	Large	Recpath	Yes	Moderate	No
2	Copper Conoco	Small	Recpath	Yes	Moderate	No
3	Officers Gulch	Medium	Recpath	Yes	High	No
4	Frisco Kayak Lot	Medium	Recpath	Yes	High	No
5	Zach’s Stop	Medium	Recpath	Yes	High	No
6	Frisco Bay Marina	Medium	Recpath, Reservoir	Yes	High	No
7	Frisco Day Lodge/Nordic Center/Two Below Zero Parking	Large	Recpath	Yes	Moderate	No
8	Dickey Day Use	Small	Recpath	Yes	Moderate	No
9	Pine Cove Day Use Area	Medium	Reservoir	Yes	Moderate	Yes
10	Blue River Inlet	Medium	Reservoir	No	Low	No
11	Gold Hill	Small	Recpath	Yes	High	No
12	Breckenridge Recreation Center	Large	Recpath	Yes	High	No
13	Breckenridge Gondola lots	Large	Recpath	Yes	Moderate	Yes
14	Snake River Inlet	Medium	Recpath, Reservoir	No	Moderate	No
15	Keystone	Large	Recpath	Yes	Low	No
16	Dillon Marina/Amphitheater lots	Large	Recpath, Reservoir	Yes	High	No
17	Silverthorne Outlets	Large	Recpath	Yes	Low	No
18	Dillon Dam Road pull-offs <sup>a</sup>	Medium	Recpath, Reservoir	Yes	High	No
19	Giberson Bay Day Use Area	Medium	Reservoir	No	Low	Yes

Notes:

<sup>a</sup> These parking lots are not formalized parking areas but have traditionally been used for parking. Formalized parking in these areas would require coordination with Summit County Road and Bridge Department and the Forest Service.

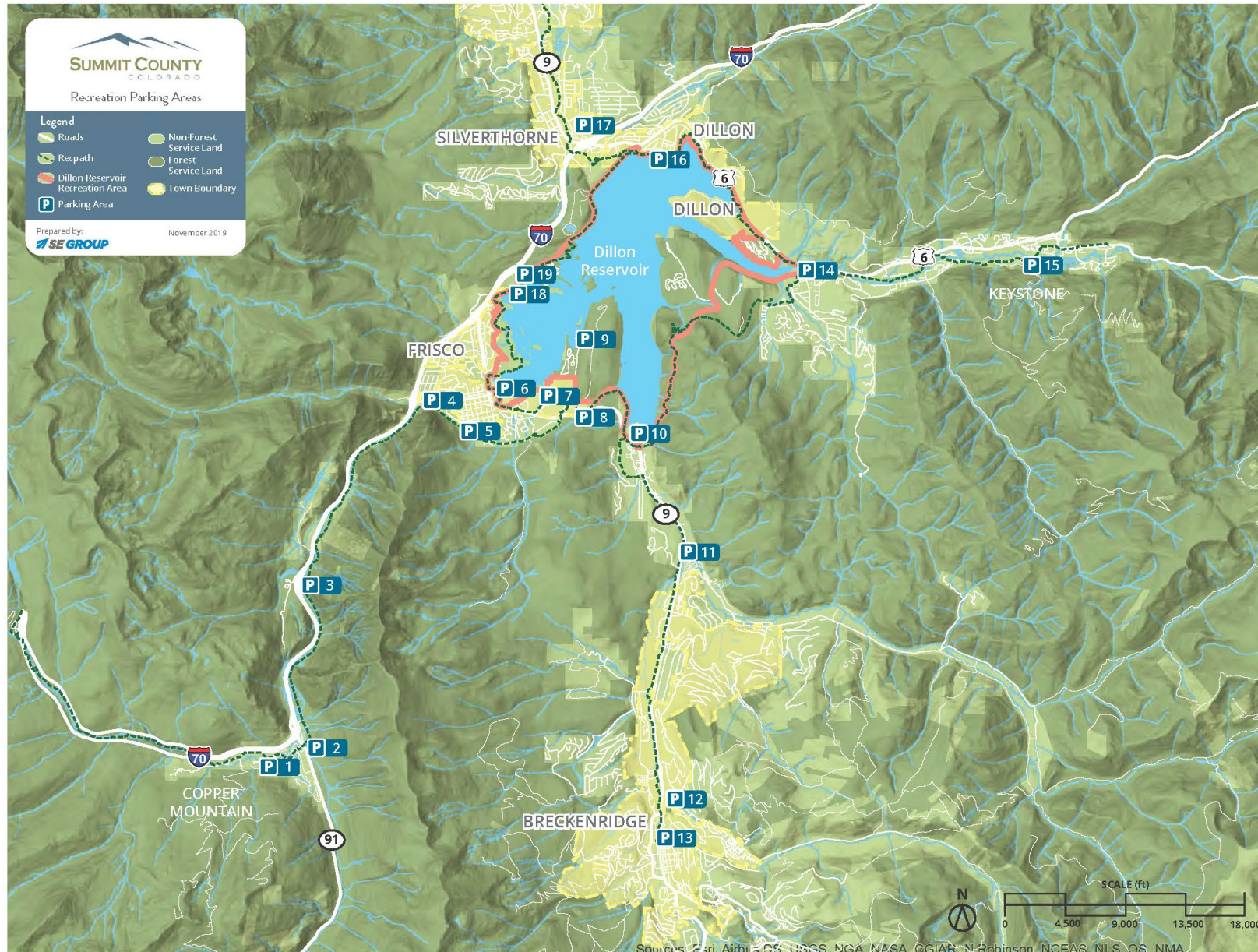


As many of these parking lots tend to fill up quickly on weekends, people will park on the side of the road, particularly along Dillon Dam Road.

In the winter, the Snake River Inlet and the Dillon Marina parking lots are the primary access points for ice fishing. With access concentrated in these locations and fewer spaces with snow and boat storage, parking can be challenging. Ice fishing use on the reservoir has grown in recent years, with parking becoming increasingly challenging.



FIGURE 6. DILLON RESERVOIR AND RECPATH PARKING AREAS



# 7 PERMIT PROCESS

The DRReC was formed to “establish a framework of shared management of recreational activities on and around Dillon Reservoir and a common set of rules and regulations for the benefit, enjoyment, and safety of the visitors and residents of Summit County.”<sup>14</sup> This framework was established through an Intergovernmental Agreement (IGA) made by and among Denver Water, Summit County, the Town of Dillon, and the Town of Frisco and a Memorandum of Understanding (MOU) with those entities and the Forest Service (see Appendix A). The entities administer and manage activities for the DRRA consistent with the policies, principles, and recommendations of the Dillon Reservoir Recreational Area Plan. The DRReC has adopted rules and regulations, most recently updated in 2002 (Appendix D), for the public recreation lands and facilities that lie within its jurisdiction.

As directed in the IGA and MOU, the DRReC issues permits for special events and special uses (e.g., commercial tours, outfitters and guides, and commercial photography and filming) that occur within the DRRA. On behalf of the DRReC, Summit County manages and otherwise administers special event and special use permits. Summit County also provides law enforcement services for the DRRA. For events that take place within the DRRA management boundary, a DRReC permit is required and the DRReC makes a recommendation to the local authority’s permit issuer.<sup>15</sup>

The DRRA, inherently, involves many overlapping jurisdictions. Permit applicants are occasionally unaware of the different jurisdictions and the multiple permits they may be required for a special event or commercial use. The overlapping jurisdictions can require multiple permit fees for permittees to hold an event or special use in the DRRA.

In recent years, as recreational demand and use within the DRRA has increased, the DRReC has faced numerous challenging permitting decisions. The DRReC would benefit from a more defined and formalized decision-making framework that establishes whether an event or special use aligns with the mission and goals.

Other concerns raised around the existing permitting application include:

- ❖ The permit application, which is currently the same for uses and events, should be updated to only include relevant questions/information for events or use—in its current form, several questions may be considered irrelevant depending on the specific type of permit being requested (i.e., use versus event) and
- ❖ An online application process would be helpful to applicants.

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<sup>14</sup> Dillon Reservoir Recreation Area Coordination Committee, 1989, amended 2014

<sup>15</sup> Dillon Reservoir Recreation Area Coordination Committee, 1989, amended 2014, Section 6



# 8 RECOMMENDATIONS AND POLICIES

## 8.1 Parking and Use Growth

1. Work with local tourism agencies to develop educational resources and provide information around the parking challenges at the reservoir, suitable parking areas, and the connectivity between Summit Stage and the Recpath.
2. Develop and work with the appropriate entities to publicize a parking map that shows suitable areas to encourage parking by activity. For example, the map would show Copper and Keystone for Recpath activities, but not show the marinas.
3. Coordinate with Copper Mountain and Keystone Resort to encourage use of their parking areas for Recpath access.
4. Address Giberson Bay shoulder and pull-out parking with organization for designated spaces, enforcement of illegal parking, or paid parking to mirror the fee at the adjacent Forest Service day use areas. Coordinate with the Forest Service and County Road and Bridge through this process.
5. Consider instituting paid parking and/or a reservation system that dedicates parking for reservoir users at the marinas.
6. Continue to monitor the growth of winter recreation (e.g., ice fishing) and explore solutions for winter recreation parking as it becomes an issue. Possible solutions include moving snow storage and/or boat storage to other locations.
7. Partner with the local municipalities to perform a parking study that looks comprehensively at outdoor recreation access points in the region.
8. Engage with Summit County Planning Department and other potential partners in planning for the eventual Lake Hill workforce housing development.
9. For any potential increase to permitted reservoir use (e.g. new commercial operations, expanded rental fleets):
  - a. Thoroughly examine the impact to parking and ensure that the additional users would not exacerbate existing parking issues.
  - b. Consider impacts associated with the increase in boat rental fleets using the watercraft capacity model.
  - c. Coordinate closely with the marinas to plan for and minimize the effects of the increase in boat rental fleets.
10. Consider utilizing new technologies and/or approaches to better quantify/estimate reservoir use and patterns (e.g., aerial drone imagery, on-water point counts, etc.)

11. Continue to monitor the quantitative capacity and user experience of both the Recpath and reservoir through an annual report card(s) that includes:
  - a. Annual peak period boat counts for each zone compared to the zone's capacity,
  - b. Visitor Recpath satisfaction surveys, conducted in coordination with FDRD, considering a few key questions from the 2019 survey,
  - c. Synopsis of Recpath counter data and trends.

## 8.2 Events

1. Work with other County departments, the municipalities, and the Forest Service to develop a joint planning approach for managing events. This could include a county-wide working group, process, and calendar of events. A calendar should include information about each event such as the location, size, and expected impact to traffic, parking, and certain trails.
2. Depending on the nature of events, require a shuttle to and from remote parking facilities to create a positive participant experience and reserve parking for non-event participants.
3. Consider reserving a portion of a parking area during an event for non-event users looking to recreate.
4. In coordination with the municipalities, designate a couple of event-free weekends over the summer.
5. Based on a review of known events and DRReC permitting history, events are occurring at the marinas that do not receive a DRReC permit. Evaluate requiring a permit for events within the DRRRA that historically have not received a permit, but are subject to DRReC jurisdiction (e.g., sand castle competition at Frisco Bay Marina, Rock the Dock Party at Frisco Bay Marina, etc.).
6. Consider an event permit impact fee, based on impacts stated by the event permittee around parking, the natural resources, displacement of other users, and law enforcement. The fee could be lessened by service hours or other volunteer labor.
7. Set up a communications channel with the DRRRA commercial operators and bike rental shops to communicate about events. This enables these businesses to advise customers on how to avoid the event or potential parking issues.
8. Require incentives for transit use or biking/walking to access larger events. Potential incentives include reduced registration fees, raffle entries, or giveaways.
9. Require the event permittee to work with local tourism agencies and municipalities on outreach and public information about upcoming events and impacts to recreational amenities and access points.

## 8.3 User Experience, Education, and Etiquette

1. Continue to prohibit personal watercrafts and towed uses (jet skis, water skis) on the reservoir to preserve the character of the reservoir recreation experience.
2. Place additional signage on sections of the Recpath with a high mix of uses (i.e., Silverthorne, Dillon Marina) to warn users and encourage slower speeds.
3. Support the creation of a separated pedestrian-only path through the Dillon marina area. See the image below.
4. Develop materials (video, brochure, social media) to educate users on Recpath and reservoir etiquette and encourage local bike shops, hotels, municipalities, and visitor centers to share the materials.

5. Support efforts to develop bicycle facilities on roadways that encourage higher speed riders to use the roadway rather than the Recpath.
6. Support the development of amenity stations by partners on the Recpath. The amenity stations could include map kiosks, water fountains, benches, or a shelter. Amenities should be located off the path to discourage users from blocking traffic. Possible locations include between Breckenridge and Frisco, on either side of the Dillon Dam, and at the Vail Pass/Fremont Pass junction after the new segment is constructed. Ensure that local partners are responsible for the maintenance of the amenity stations as well.
7. Work with the Sheriff's Department to place signage at all reservoir access points explaining the reservoir rules. Right-of-way information should also be presented during the rental process (for both paddlesports and motorboats) at the marinas and by commercial permittees.
8. Work with the Sheriff's Department, marinas, and commercial permittees to encourage the separation of uses in certain reservoir areas. For example, out of the Frisco Bay Marina, encourage paddlesports to head towards Giberson Bay and motorboats to avoid Giberson Bay using verbal instructions and buoys. Perhaps consider prohibiting motorboats in Giberson Bay and Dillon Bay entirely, creating passive use, non-motorized zones.
9. Continue to monitor visitor and local experiences on the Recpath and Reservoir and conduct further examination to determine how to best meet the needs of all users.

## 8.4 Permitting

1. Develop a jurisdiction map to show who has jurisdiction and requires a permit across the county. This map would be readily available on the county and municipality website so applicants could easily understand what permits are required.
2. Consider additional coordination or permitting for municipal events within the DRRRA that do not contact the reservoir surface or shoreline.
3. Continue exclusively permitting commercial reservoir uses out of the marinas, aside from fishing.
4. Update or create a new DRRReC special event/use application(s) to more clearly describe information required for a relevant use/event request.
5. Develop additional questions for the permit application related to parking. Require applicants to describe parking demand for their events/uses, how they plan to manage the demand, and what education/outreach they will provide around parking and access in advance of the event/use to minimize impacts.
6. Develop a renewal permit application for repeat applicants that addresses how their operations or events are, or are not changing, and how they are addressing challenges of past operations and events.
7. Develop an online version of the permit application.
8. Incorporate other stakeholders into land use and recreation decision making as appropriate.
9. Develop a separate administrative process and/or application for minor photo/film shoots that would not require review by the entirety of the DRRReC.

10. Consider a formal decision-making framework for the DRReC based on the following committee goals: providing positive user experiences, supporting existing commercial operators, ensuring access, and providing for the safety of all involved.



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*An example of a recreation path where cyclists and pedestrians are separated*

.....

# 9 REFERENCES

- Colorado Parks and Wildlife. 2019. The 2019 Statewide Comprehensive Outdoor Recreation Plan.
- Dillon Reservoir Recreation Area Coordination Committee. 1989, amended 2014. Intergovernmental Agreement and Memorandum of Understanding for Management of Recreational Activities at Dillon Reservoir.
- Environmental Resources Management, Inc. 2004. Deep Creek Lake Boating and Commercial Use Carrying Capacity Study prepared for Maryland Department of Natural Resources.
- North Carolina State University and Toole Design Group. 2006. Shared Use Path Flow Analysis Tool: Trail Level of Service Calculator prepared for Federal Highway Administration.
- RPI Consulting. 2012. Dillon Reservoir Recreation Capacity Analysis prepared for Summit County Open Space and Trails.
- Summit Daily. 2016. "Summit County summer months see bumps in lodging and tourism numbers." September 24.
- Summit County, 2017. Lake Hill Master Plan.
- Summit Daily. 2018. "Sales taxes: Summit County closes summer on high note." October 22.
- Summit Daily. 2019. "Late summer lodging tax revenue up across most of Summit County." October 28.
- U.S. Census. 2017. 2013-2017 American Community Survey 5-Year Estimates.

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# APPENDICES



**DILLON RESERVOIR RECREATION AREA COORDINATING COMMITTEE  
INTERGOVERNMENTAL AGREEMENT AND MEMORANDUM OF UNDERSTANDING  
FOR MANAGEMENT OF RECREATIONAL ACTIVITIES AT DILLON RESERVOIR**

This Intergovernmental Agreement ("Agreement") is made by and among the City and County of Denver, acting by and through its Board of Water Commissioners, a Colorado municipal corporation ("Denver Water"), the County of Summit, a body corporate and politic ("Summit County"), the Town of Dillon, a Colorado municipal corporation ("Dillon"), and the Town of Frisco, a Colorado municipal corporation ("Frisco"); and a Memorandum of Understanding ("MOU") is made among the aforementioned entities and the United States of America, acting by and through the United States Department of Agriculture, Forest Service ("US Forest Service") (collectively "the Parties"). Unless otherwise specified, use of the term Agreement throughout this document encompasses both the Intergovernmental Agreement and the MOU.

**RECITALS**

**WHEREAS**, pursuant to Sections 29-1-203 and 30-11-410, C.R.S., Denver Water, Summit County, Dillon and Frisco may cooperate or contract with one another to provide any function or service lawfully authorized to each of the cooperating or contracting units when such agreements are authorized by each Party to the agreement with the approval of the governing body and are encouraged to cooperate to promulgate regulations regarding the use and provision of law and regulatory enforcement for land within their respective jurisdictions; and

**WHEREAS**, each of the Parties owns and/or manages property in the vicinity of Dillon Reservoir in Summit County; and

**WHEREAS**, Denver Water is the owner and operator of Dillon Reservoir; and

**WHEREAS**, the purpose of this Agreement is for the Parties to establish a framework of shared management of recreational activities on and around Dillon Reservoir and a common set of rules and regulations for the benefit, enjoyment and safety of the visitors and residents of Summit County, as authorized by Sections 29-1-203 and 29-7-101, C.R.S.; and

**WHEREAS**, the Parties recognize that tourism and recreation are important components of the local economy; and

**WHEREAS**, the Parties recognize that unified planning and coordinated administration of the Dillon Reservoir Recreation Area is generally desirable and in the public interest; and

**WHEREAS**, Summit County, Frisco and Dillon are interested in establishing a means for close and frequent communication with Denver Water and the US Forest Service regarding

the management of recreational activities occurring both on the surface of Dillon Reservoir and on Denver Water lands and US Forest Service lands surrounding the reservoir; and

**WHEREAS**, Frisco has established the Frisco Bay Marina for the enhancement of recreational opportunities on the surface of the reservoir and on Denver Water lands and US Forest Service lands surrounding the reservoir; and

**WHEREAS**, Dillon has established the Dillon Marina for the enhancement of recreational opportunities on the surface of the reservoir and on Denver Water lands and US Forest Service lands surrounding the reservoir; and

**WHEREAS**, Summit County has benefited from recreational opportunities on Dillon Reservoir, has invested in the development of recreational trails on Denver Water-owned lands, and has provided law enforcement services on the surface of the reservoir; and

**WHEREAS**, the US Forest Service seeks coordination and cooperation with the other Parties in the management of its lands, Denver Water-owned lands, and the surface of the reservoir; and

**WHEREAS**, the primary purpose of Dillon Reservoir is to supply water to the customers of Denver Water in the Denver Metropolitan Area and since the water from Dillon Reservoir becomes part of the potable water supply, Denver Water is concerned with the quality of the water, the kinds and volumes of recreation allowable on the reservoir, public safety, and the continuing prevention of contamination to Denver Water's water supply; and

**WHEREAS**, Denver Water recognizes that its reservoirs and surrounding lands offer the public an opportunity for recreation, and Denver Water has historically contracted with governmental agencies to supervise that recreation; and

**WHEREAS**, the Parties entered into the "Dillon Reservoir Coordinating Committee Intergovernmental Agreement" dated April 21, 1989, which established the means to collectively manage the recreational activity at Dillon Reservoir and which expires in 2014; and

**WHEREAS**, the Parties wish to continue the collective intergovernmental management of recreational activity at Dillon Reservoir.

## **AGREEMENT**

**NOW THEREFORE**, the Parties hereby execute this Agreement in accordance with, and in consideration for, the above recitals and the following mutual promises, terms and conditions. It is expressly understood and agreed to by the Parties that this Agreement is subordinate to state statutes governing municipalities and counties.

1. The Parties agree to administer and manage activities for the lands within the Dillon Reservoir Recreation Area (DRRA), as generally shown in the attached and incorporated

Exhibit A, in a manner that is consistent with the policies, principles, and recommendations of the Dillon Reservoir Recreational Area Plan (DRRAP), as adopted by the Parties and amended from time to time.

2. By this Agreement the Parties form the Dillon Reservoir Recreation Area Coordinating Committee (Committee). Each of the Parties will appoint a representative to serve on the Committee. The Committee will recommend management and regulatory responsibilities to each of the Parties in order to ensure conformance with the DRRAP. In order to accomplish this task the Committee may:
  - a. Monitor and review the management and regulatory actions of each of the Parties with respect to this Agreement to determine compliance with the DRRAP.
  - b. Regularly review the DRRAP and recommend amendments, when appropriate.
  - c. Determine a budget for the annual costs of administration of this Agreement. Funding of the budget will occur as described in Section 12.
  - d. Regularly review master plans for each Party for lands within the DRRA and recommend amendment to them if needed.
  - e. Recommend guidelines for the administration of special event permits and special use authorizations.
  - f. Regularly review and recommend changes to the administrative procedures and guidelines for special events permits and special use authorizations.
  - g. Recommend rules and regulations pertaining to the DRRA to Summit County, Frisco, and Dillon for promulgation.
3. Wherever this Agreement refers to the Committee's responsibility to administer or issue permits and authorizations for special events and special uses, for administration of the DRRAP, and for administration of the Weed Control Plan, it is understood that staff members of Summit County will perform those duties on behalf of the Committee, separate from the distinct obligations of Summit County under this Agreement.
4. The Committee will meet as needed or at least quarterly, and will keep minutes and records. Public notices announcing Committee meetings will be posted in the local newspaper of general circulation 24 hours in advance of the meetings. All meetings will be open to the public. A unanimous vote of the Committee regarding a particular recommendation or action shall be required only if explicitly required by this Agreement. Prior to a Committee vote on any special event or special use proposal, any Party's representative may request that the vote be tabled until he or she has had the opportunity to consult with his or her respective organization.
5. Events and activities on and uses of land within the DRRA are hereby classified as follows:
  - a. A SPECIAL EVENT is a planned, organized, or publicized activity of short duration not involving construction of permanent structures, buildings, physical improvements, or material alterations to property. Special events are events engaged in usually by a total of ten or more participants and include but are not

limited to one or more of the following activities: races, recreational and casual events, social events, instructional activities and series events.

- b. A SPECIAL USE allows occupancy, use, rights or privileges for a specified period, does not involve the permanent construction of structures, buildings, physical improvements or material alterations to property, and includes but is not limited to one or more of the following activities: commercial tours, outfitters and guides, and commercial photography and filming. Special uses may be periodic, seasonal, or continuous in nature and may involve competition, entertainment, or training.
6. If a Party receives a proposal for a special event or special use on unincorporated property within the DRRA, that Party shall refer the proposer to the Committee for a determination on Committee permit issuance. If a Party receives a proposal for a special event or special use on incorporated property within the DRRA, that Party shall refer the proposer to the Committee for a determination on Committee permit issuance and for a recommendation as to the applicable local authority's permit issuance. Nothing in this Agreement shall be construed as exempting persons proposing a special event or special use from compliance with land use regulations, development regulations, other regulations, or permit requirements of the applicable local permitting authority or of the applicable Parties.
7. Except as set forth in this Section 7, Denver Water reserves the right to approve or reject all proposed special events on and special uses of Denver Water-owned lands and property, including the reservoir surface. Denver Water hereby agrees to abide by the following procedures regarding special events on and special uses of Denver Water-owned lands and property within the DRRA.
  - a. Whenever a special event or special use on Denver Water land or property within the DRRA is proposed, it must be presented to the Committee for review and comment, and it may not be approved without the affirmative vote of at least four of the five representatives on the Committee, which must include the affirmative vote of the Denver Water representative. If the special event or special use is approved as described above, the Committee may issue a permit for the specific special event or authorize the specific special use.
8. Summit County hereby agrees to the following County responsibilities:
  - a. Sheriff's enforcement of Summit County-promulgated rules and regulations, and State laws, on the surface of the reservoir in unincorporated areas, on Denver Water lands within the DRRA in unincorporated areas, and on Denver Water lands within the DRRA in incorporated areas as may be provided by separate mutual aid contract or intergovernmental agreement.
  - b. On behalf of the Committee, manage and otherwise administer special event permits and authorizations for special uses on the reservoir surface and on lands within the DRRA in accordance with the DRRAP and Section 7.a. of this Agreement. As set forth in Section 6, the applicable local permitting authority



shall issue, manage, and otherwise administer special event permits and authorizations for special uses for lands lying within its respective incorporated area.

- c. Implementation of the Weed Control Plan adopted by the Committee and compliance with all state noxious weed laws in unincorporated areas within the DRRA.
9. The US Forest Service hereby agrees to the following US Forest Service responsibilities:
    - a. Enforcement of US Forest Service rules and regulations on National Forest System lands within the DRRA.
    - b. Planning and management of National Forest System land within the DRRA. Planning and management will be consistent with the DRRAP and all approved amendments and supplements, and in accordance with the White River National Forest Land and Resource Management Plan as may be amended.
    - c. Issuance of permits required by federal regulations for use of National Forest System lands.
    - d. To undertake all duties pursuant to the MOU to the extent permitted by applicable federal law.
  10. Dillon and Frisco hereby agree to the following Town responsibilities, respective to each Town:
    - a. Police Department enforcement of Town rules and regulations on lands within the DRRA and within the corporate limits of each appropriate Town.
    - b. Implementation of the Weed Control Plan adopted by the Committee for the areas lying within the Town's jurisdiction.

Neither Dillon nor Frisco shall be required to take any action under this Agreement that conflicts with the terms of its lease with Denver Water.

11. The Parties shall be collectively responsible for weed control efforts within the DRRA. The Committee is authorized to establish a Weed Control Plan, to be amended from time to time as deemed appropriate. The budget and allocation of responsibility for the plan shall only be approved and implemented upon the unanimous vote of all Parties. The budget requirements for the Parties shall be subject to the terms and restrictions set forth in Section 12.c. Nothing in this section prevents or prohibits any Party from contracting separately with Summit County or another entity for implementation of the Weed Control Plan within its respective jurisdiction.
12. It is the intent of the Parties that Summit County should recover from the Committee the costs Summit County incurs for: 1) Summit County's enforcement of rules and regulations on the reservoir surface and Denver Water property within the DRRA; 2) administration of special event permits and special use authorizations on behalf of the Committee; and 3) administration of the Weed Control Plan. Summit County shall separately account for these costs, which it shall recover subject to the following conditions:

- a. Summit County shall submit to the Committee all fees collected pursuant to its permitting duties under this Agreement. The Committee shall approve and allocate to Summit County an annual budget based upon the amount of hours Summit County staff spend on administering Committee rules and regulations, managing Committee permits, and any other duties as assigned and budgeted by the Committee.
  - b. Denver Water shall contribute to the Committee the recreational lease revenue and other recreational income it receives for activities on Denver Water property within the DRRA. Recreational lease revenues shall not include lease revenues that originate from non-recreational activities (including but not limited to mercantile or restaurant operations).
  - c. Dillon, Frisco and Summit County will contribute funds to cover the Committee's remaining costs on an equal basis to the extent that such funds are appropriated and budgeted annually by each Town and Summit County. Nothing herein shall obligate any Party to any payment or debt commitment extending beyond its then current year's approved budget. Nothing contained herein shall create a multi-year financial obligation on the part of a Party.
13. Each Party shall be liable for the errors and omissions of its agents and employees under this Agreement. Notwithstanding, the parties to the IGA are relying upon, and have not waived, the monetary limitations and all other rights, immunities and protections provided by the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, et seq., as it may be amended from time to time.
14. The Parties mutually agree that amendments to this Agreement may be proposed by any Party and shall become effective upon the unanimous vote of all Parties and full execution of such amendment.
15. This Agreement shall become effective only upon execution by all Parties, and it shall remain in force for twenty-five years from its Effective Date (as defined herein, below, in Section 21), subject to the following conditions:
- a. It may be terminated at any time upon mutual written agreement of all Parties, or as provided in Section 15.c.
  - b. Any Party may withdraw from this Agreement after giving one year's written notice to all other Parties. Upon the effective date of a Party's withdrawal, that Party's responsibilities and obligations under this Agreement shall cease. Withdrawal from this Agreement shall in no way prejudice or impair a Party's contract rights or entitlements arising out of future agreements between or among the Parties hereto.
  - c. The Agreement shall terminate automatically if three or more Parties elect to withdraw from participation in the Agreement, provided that each withdrawing Party provides one year's written notice to all other Parties. Such termination shall become effective one year following the third withdrawing Party's notice.



16. The Parties shall contact the persons listed below for all matters related to administration of this Agreement. All notices required or given under this Agreement shall be in writing and shall be deemed effective: (a) when delivered personally to the other Party; or (b) seven (7) days after posting in the United States mail, first-class postage prepaid, properly addressed as follows.

If to Denver Water: City and County of Denver,  
acting by and through its Board of Water Commissioners  
Manager of Recreation  
1600 W. 12<sup>th</sup> Ave.  
Denver, CO 80204

If to Summit County: County Manager  
PO Box 68  
Breckenridge, CO 80424

If to Town of Dillon: Town Manager  
P.O. Box 8  
Dillon, CO 80435

If to Town of Frisco: Town Manager  
P.O. Box 4100  
Frisco, CO 80443

If to US Forest Service: Development and Recreation Manager  
P.O. Box 620  
Silverthorne, CO 80498

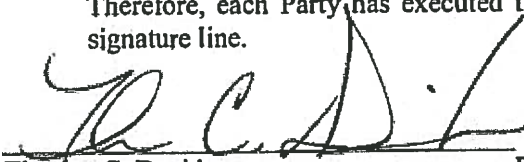
or such other persons or addresses as the parties may have designated in writing.

17. This Agreement is made under and conformable to Article X of the Charter of the City and County of Denver, which controls the operation of the Denver Municipal Water System. The Charter provisions are incorporated by this reference and supersede any apparently conflicting provisions otherwise contained in this Agreement.
18. If any provision of this Agreement is determined by a court having jurisdiction to be unenforceable to any extent, the rest of that provision and the rest of this Agreement will remain enforceable to the fullest extent permitted by law.
19. This Agreement shall be governed by and construed under the laws of the State of Colorado.
20. This Agreement constitutes the entire agreement among the Parties and replaces all prior written or oral agreements and understandings.

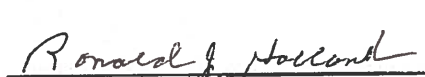
21. The Parties agree that this IGA shall become effective upon the mutual execution of this Agreement by all parties to the IGA, with the date of execution by the final party executing to be determined to be the effective date of the IGA ("Effective Date"). The Parties further agree that as of the Effective Date, the "Dillon Reservoir Coordinating Committee Intergovernmental Agreement" dated April 21, 1989, shall be terminated and no longer in effect. The MOU will be considered to be effective at the time the representative for the US Forest Service signs the Agreement.

22. This Agreement may be executed in several counterparts and/or signature pages, and all counterparts and signature pages so executed shall constitute one agreement binding on all Parties hereto, notwithstanding that all the Parties are not signatories to the original or the same counterpart or signature page.

Therefore, each Party has executed this Agreement as of the date set forth next to its signature line.

 October 23, 2013  
Thomas C. Davidson DATE  
Chair  
Board of County Commissioners  
Summit County, Colorado

\_\_\_\_\_  
Gary Wilkinson DATE  
Mayor  
Town of Frisco

 3/4/2014  
Ronald J. Holland DATE  
Mayor  
Town of Dillon

\_\_\_\_\_  
Scott Fitzwilliams DATE  
Forest Supervisor  
White River National Forest

21. The Parties agree that this IGA shall become effective upon the mutual execution of this Agreement by all parties to the IGA, with the date of execution by the final party executing to be determined to be the effective date of the IGA ("Effective Date"). The Parties further agree that as of the Effective Date, the "Dillon Reservoir Coordinating Committee Intergovernmental Agreement" dated April 21, 1989, shall be terminated and no longer in effect. The MOU will be considered to be effective at the time the representative for the US Forest Service signs the Agreement.
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\_\_\_\_\_  
Thomas C. Davidson  
Chair  
Board of County Commissioners  
Summit County, Colorado

\_\_\_\_\_  
DATE

  
\_\_\_\_\_  
Gary Wilkinson  
Mayor  
Town of Frisco

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Ronald J. Holland  
Mayor  
Town of Dillon

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Scott Fitzwilliams  
Forest Supervisor  
White River National Forest

\_\_\_\_\_  
DATE

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\_\_\_\_\_  
Thomas C. Davidson  
Chair  
Board of County Commissioners  
Summit County, Colorado

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Gary Wilkinson  
Mayor  
Town of Frisco

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Ronald J. Holland  
Mayor  
Town of Dillon

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Scott Fitzwilliams  
Forest Supervisor  
White River National Forest, Dillon RD

\_\_\_\_\_  
DATE

*Jan Cutts*  
*Jan Cutts*  
*District Ranger*

*January 14, 2014*

ATTESTED:

By: Mrs. S. McMillan  
Secretary



APPROVED:

By: Robert J. McHenry  
Director of Engineering

APPROVED:

By: Tom [Signature]  
Director of Operations and Maintenance

APPROVED AS TO FORM:

By: Michael [Signature]  
Legal Division

CITY AND COUNTY OF DENVER,  
acting by and through its  
BOARD OF WATER COMMISSIONERS

By: [Signature]  
President

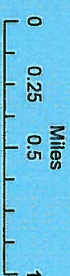
DATE: NOV 13 2013

REGISTERED AND COUNTERSIGNED:  
Dennis J. Gallagher, Auditor  
CITY AND COUNTY OF DENVER

By: [Signature]  
Deputy Auditor



## An aerial photograph of Dillon Reservoir, a large body of water in the center of the image. A red line traces the shoreline of the reservoir. The surrounding land is a mix of green (grassland or forest) and brown/tan (developed areas or roads). In the upper left, there is a dense residential or commercial area with many buildings and roads. In the lower right, there is another developed area with a large building and parking lots. A label 'Dillon Reservoir Recreation Area (DRRA)' is placed in the middle of the reservoir, oriented vertically.



This map is for display purposes only.  
Do not use for legal determinations.  
Not necessarily accurate by surveying standards and  
does not comply with National Mapping Accuracy Standards.  
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## **DRReC RECREATION CAPACITY ANALYSIS**

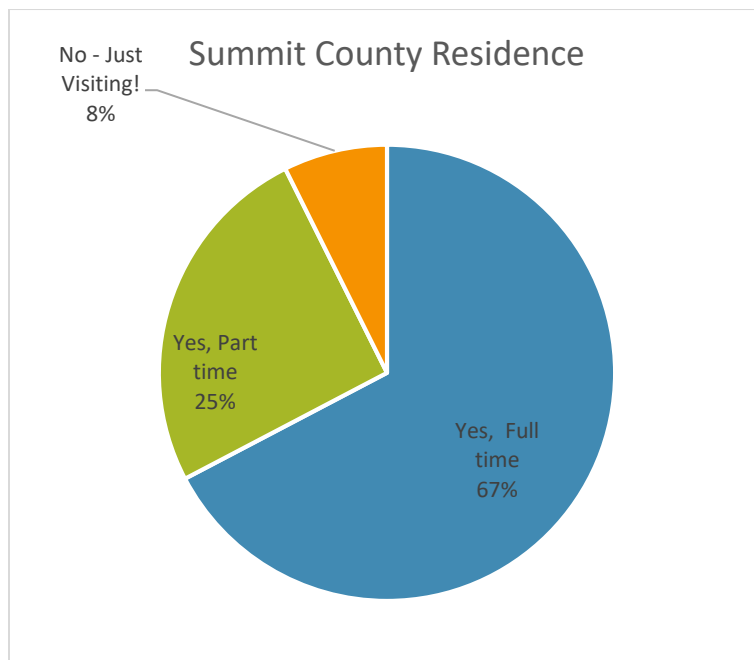
### **ONLINE SURVEY RESULTS SUMMARY**

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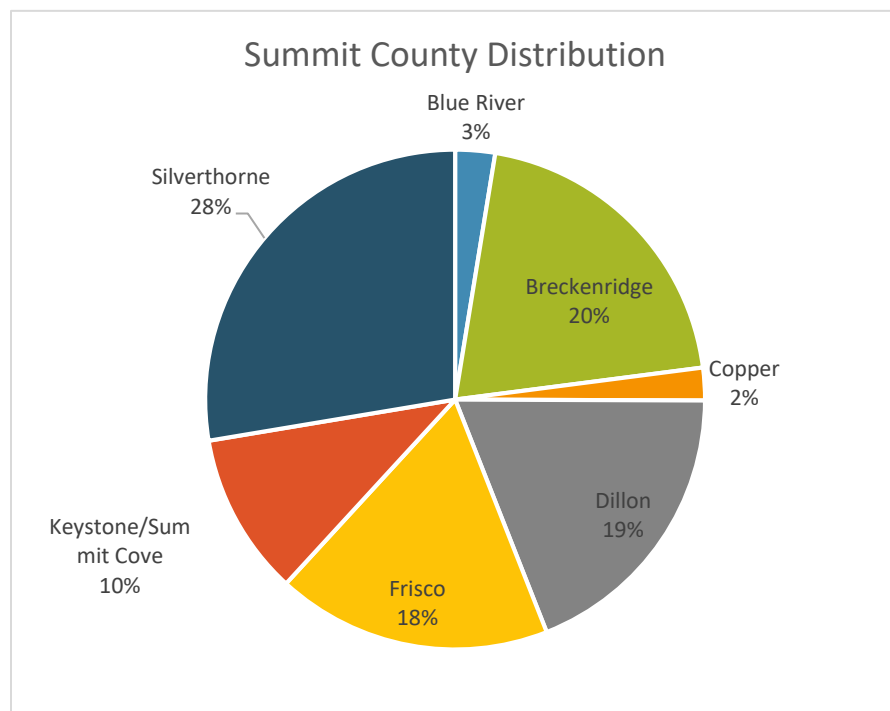
An online survey on use and experience on the Summit County Recpath and the Dillon Reservoir Recreation Area (DRRA) was conducted as part of the Recreation Capacity Analysis of the DRRA and Recpath. The survey was open from July 31, 2019 through September 30, 2019. The survey received 379 complete responses, with 464 respondents answering at least one question.

### **RESPONDENT DEMOGRAPHICS**

The majority of survey respondents live in Summit County, at least part time. Therefore, the results and findings here largely represent the sentiments of the both full-time and part-time residents and not visitors. In addition to this survey, users of the Recpath and Dillon Reservoir were surveyed on-location over the summer in order to incorporate the sentiments of county visitors into this analysis. The results of that survey are available as the Intercept Survey Summary memo.



Survey respondents who lived in Summit County part and full time were asked where in the County they lived. Respondents were relatively evenly distributed between the Summit County municipalities and unincorporated communities.



Of the 34 respondents not from Summit County, 41% were from Denver/Front Range, 18% were from elsewhere in Colorado, and 41% were from out of state. Almost 50% visit Summit County relatively frequently (6+ times per year). The remaining respondents visit less frequently, with 41% visiting 1-3 times per year.

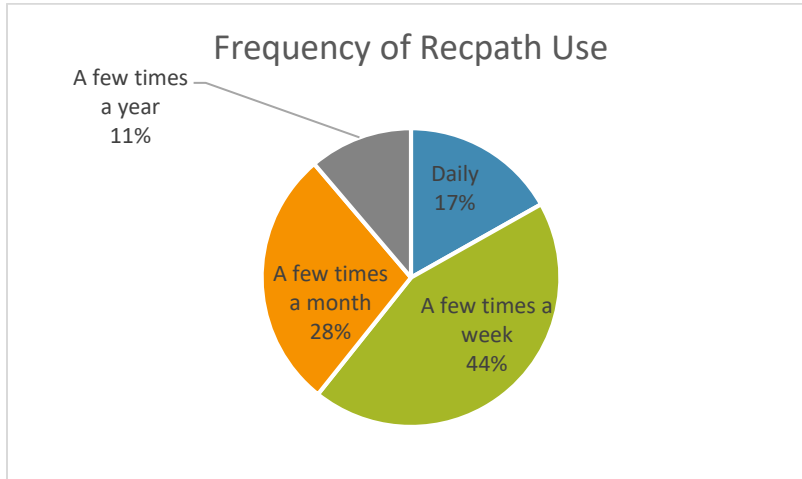
Survey respondents were asked whether they wanted to answer survey questions about the reservoir, Recpath, or both. Most respondents chose to answer both sets of questions (72%), with 22% only answering questions about the Recpath, and 6% exclusively answering for the reservoir.

The survey question set(s) respondents chose to answer did not vary significantly based on where respondents lived. About 74% of full-time residents chose to answer both sets, 21% chose to answer only about the Recpath, and 5% chose to answer reservoir questions only. Part-time residents were very similar, with 72% answering both, 22% answering Recpath, and 6% answering reservoir only. Visitors were less likely to answer both sets of questions, with 62% answering both, 29% answering Recpath only, and 9% answering reservoir only.

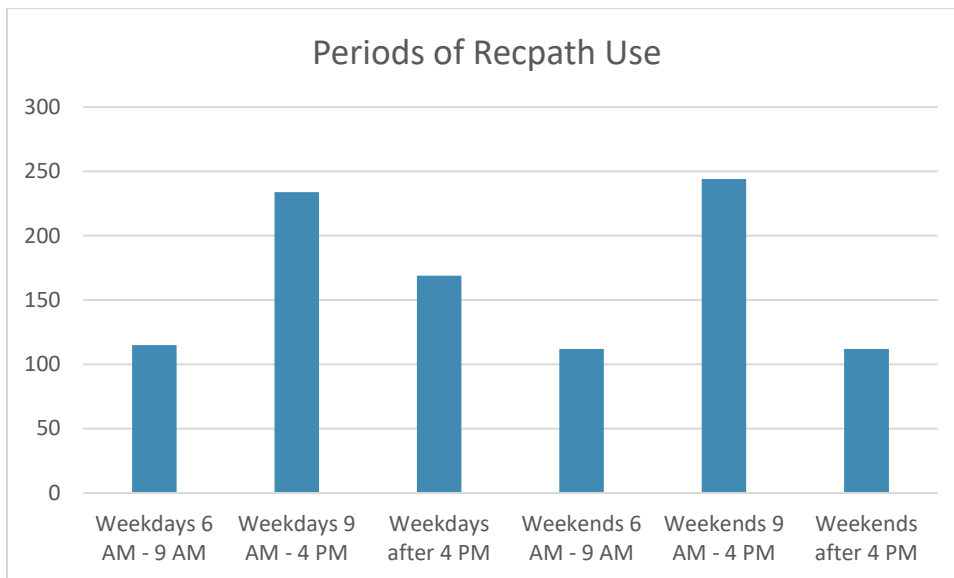
In total, the Recpath survey received 437 responses and the reservoir survey received 357 responses.

## RECPATH SURVEY RESULTS

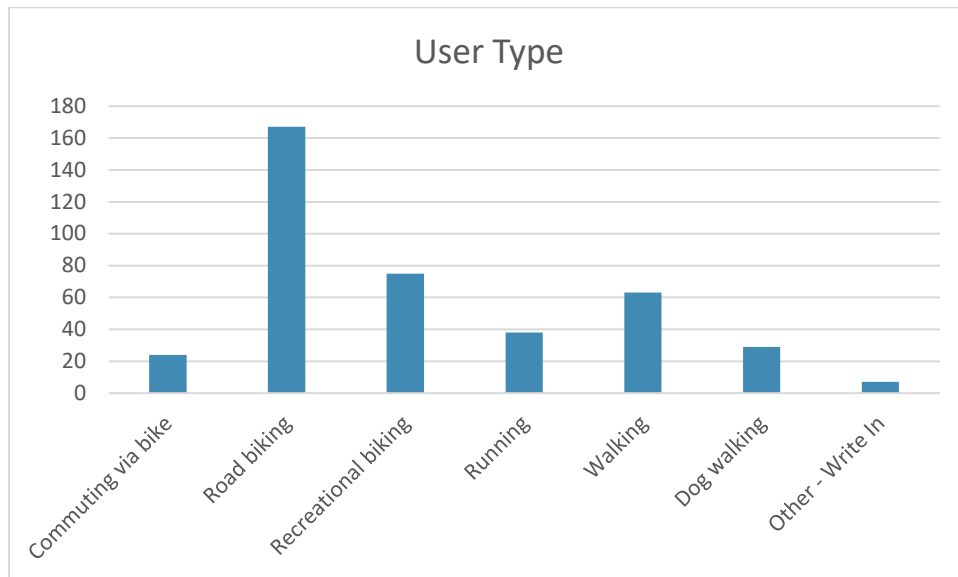
Survey respondents tend to use the Recpath frequently, with 61% using the Recpath daily or a few times a week. The survey and how it was publicized likely appealed to more frequent users of the Recpath. Full time Summit County residents, the majority of survey respondents, tend to use the Recpath most frequently, with 69% using it daily or a few times a week, compared to 47% of part time residents and 19% of visitors.



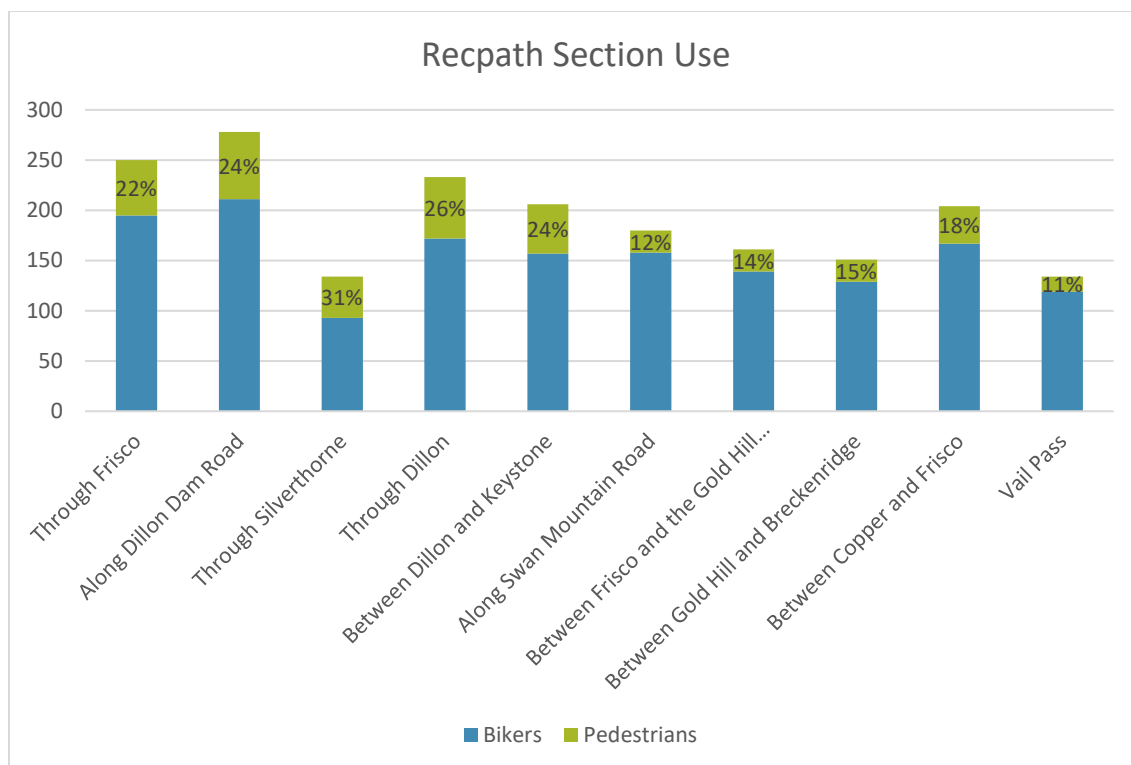
Respondents were asked to select all periods where they use the Recpath. Between 9 AM and 4 PM, on weekdays and weekends, was the most popular time to use the Recpath. While many respondents and stakeholders stated they avoid the Recpath on weekends during the day, it remains the most popular time even among the largely local respondents.



The survey received responses from a variety of Recpath user types, primarily road bikers. Only 10 respondents reported using an e-bike.



Respondents selected all sections of the Recpath they typically walk/ride on. Through Frisco, along Dillon Dam Road, and through Dillon were the most commonly used sections of the Recpath. The section through Silverthorne saw the lowest number of users, but the highest percentage of pedestrian users (walkers, runners, and dog walkers). The percentage of users who are pedestrians is on the green section of each bar in the graph.



The survey respondents were asked to name where they accessed Recpath. Many respondents rode/walked from their home to the Recpath. The most frequently mentioned access points were Zach's Stop in Frisco, the Dillon Marina, the Silverthorne outlets, and Summit Cove.

Respondents were asked how they typically accessed the Recpath. Biking was the most common method of accessing the Recpath, with 65% of respondents riding to the path. Only 11% of respondents drove to the Recpath and 24% walked/ran to the Recpath. Runners and dog walkers were the most likely to drive to the Recpath, with 31% of runners and 25% of dog walkers driving. Across all three types of cyclists (road bikers, commuters by bike, and recreational cyclists), only 6% responded that they typically drive to the Recpath. Note that this survey largely represents the habits of local resident Recpath users, and non-locals may be more likely to drive to the Recpath.

Respondents were asked to rate their typical experience accessing the Recpath. Most respondents find it easy to access the Recpath (66%), with 30% finding it moderate, and only 4% finding it challenging. There was little variation between access mode in ratings given. Those who biked to the Recpath were slightly more likely to rate their experience as moderate, but only 4% of those riding to the Recpath rated it as challenging.

The survey asked respondents about their encounters with other user types. Respondents rated their encounters with skateboarders most negatively, with 40% reporting a typically negative or somewhat negative encounter. Other user types with high negative and somewhat negative ratings include e-bikes (35%), dog walkers (30%), and road and recreational cyclists (each at 28%). These ratings are influenced by the user types of the survey respondents, as most users did not rate their experience with their own user type negatively. For example, when excluding road cyclists, 42% of respondents rated their typical encounter with road cyclists as negative or somewhat negative.

Respondents were also invited to name other user types that they encountered. Most respondents brought up user types with whom they typically had a negative encounter for this question. Vail Pass bike tours, large groups (of both walkers and bikers), homeless people, and those stopped on the path were mentioned repeatedly.

Respondents were asked to rate their experience on the Recpath for each of the times when they use the system. The Recpath experience was rated most highly (either excellent or good ratings) during the morning periods. On weekdays, 94% rated their pre-9 AM Recpath experience as good or excellent, and 85% did so on weekends. During the day, ratings tended to be lower, with 77% rating it as good or excellent from 9 AM – 4 PM during the week and only 47% rating it as such during that time period on the weekends. For the weekend period between 9 AM – 4 PM, 21% of respondents rated their Recpath experience as poor. Experiences were more positive in the evenings (after 4 PM), with 83% of weekday users and 69% of weekend users rating their experience positively.

	<b>Weekdays 6 AM - 9 AM</b>	<b>Weekdays 9 AM - 4 PM</b>	<b>Weekdays after 4 PM</b>	<b>Weekends 6 AM - 9 AM</b>	<b>Weekends 9 AM - 4 PM</b>	<b>Weekends after 4 PM</b>
<b>Excellent/Good Rating</b>	94%	77%	83%	85%	47%	69%

Respondents were then asked for each time when they used the Recpath if it was uncrowded, crowded but not detracting from their experience, or such that crowding is an issue. There was a strong overlap between people's experience rating and the level of crowding rating. The following chart shows the percentage of users who stated that Recpath crowding is an issue during each time interval. Notably, a very high percentage of users (64%) say that crowding is an issue on the Recpath on weekends between 9 AM – 4 PM.

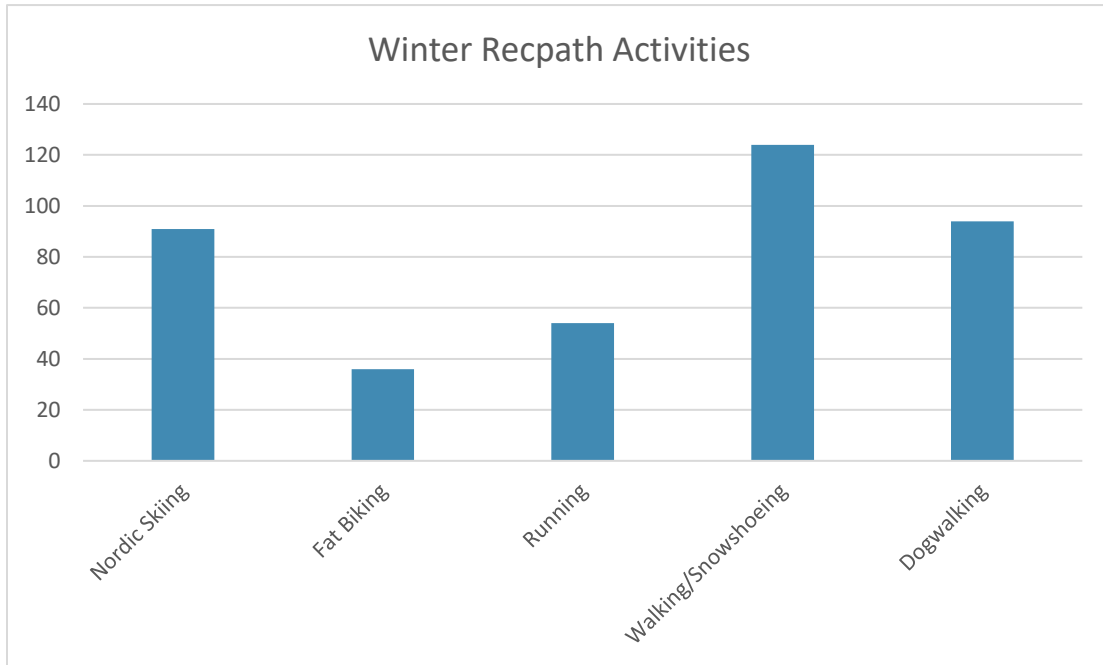
	<b>Weekdays 6 AM - 9 AM</b>	<b>Weekdays 9 AM - 4 PM</b>	<b>Weekdays after 4 PM</b>	<b>Weekends 6 AM - 9 AM</b>	<b>Weekends 9 AM - 4 PM</b>	<b>Weekends after 4 PM</b>
<b>Crowding is an issue</b>	5%	19%	7%	11%	64%	21%

The following chart shows the percentage of each user type stating crowding was an issue between 9 AM and 4 PM on weekends. Notably, dog walkers were most likely to call the crowding an issue, while recreational cyclists were the least.

<b>User Type</b>	<b>% Crowding is an issue</b>
Commuting via bike	59%
Dog walking	77%
Recreational biking	52%
Road biking	68%
Running	66%
Walking	58%



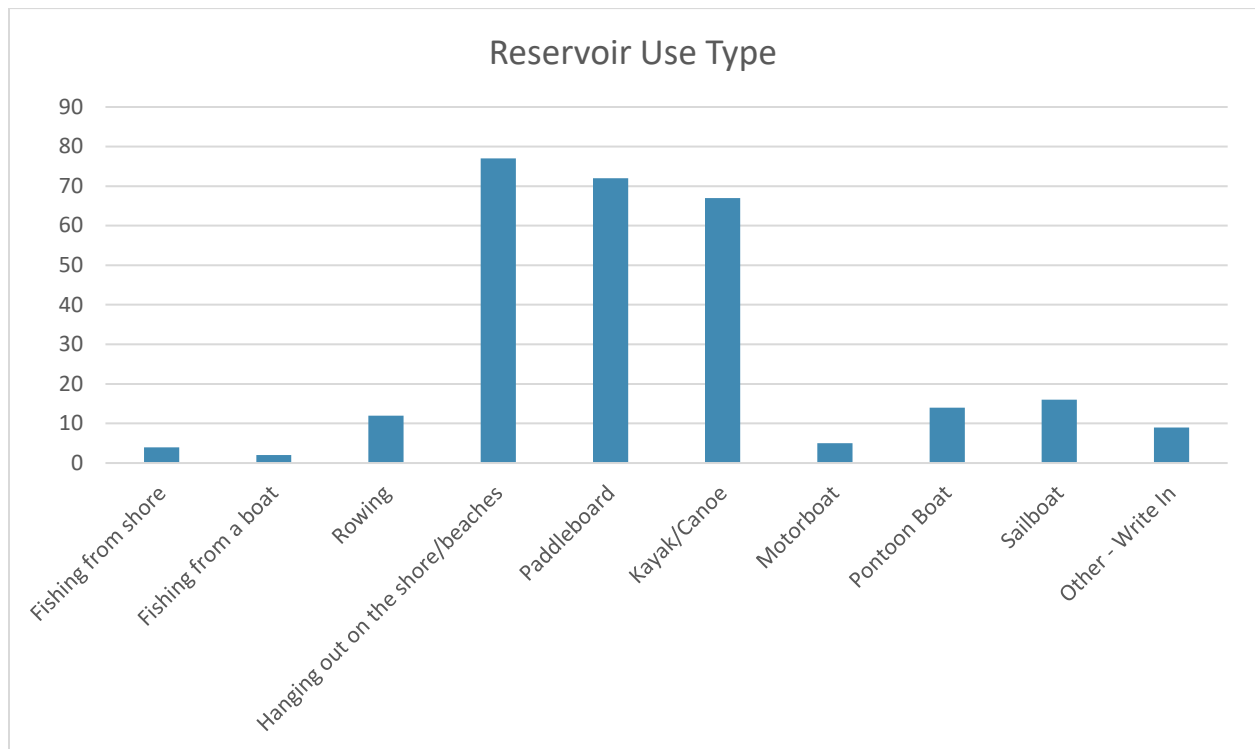
Survey respondents were also asked about using the Recpath in the winter. Of respondents, 54% stated they use the Recpath in the winter. Respondents who used the Recpath in the winter stated high use of each of the surface treatments, with 103 using the groomed section, 82 using the plowed section, and 89 using the ungroomed section. Activities done on the Recpath in the winter are shown in the chart below. Walking/Snowshoeing and dog walking are the most popular, but many people use the Recpath for Nordic skiing as well.



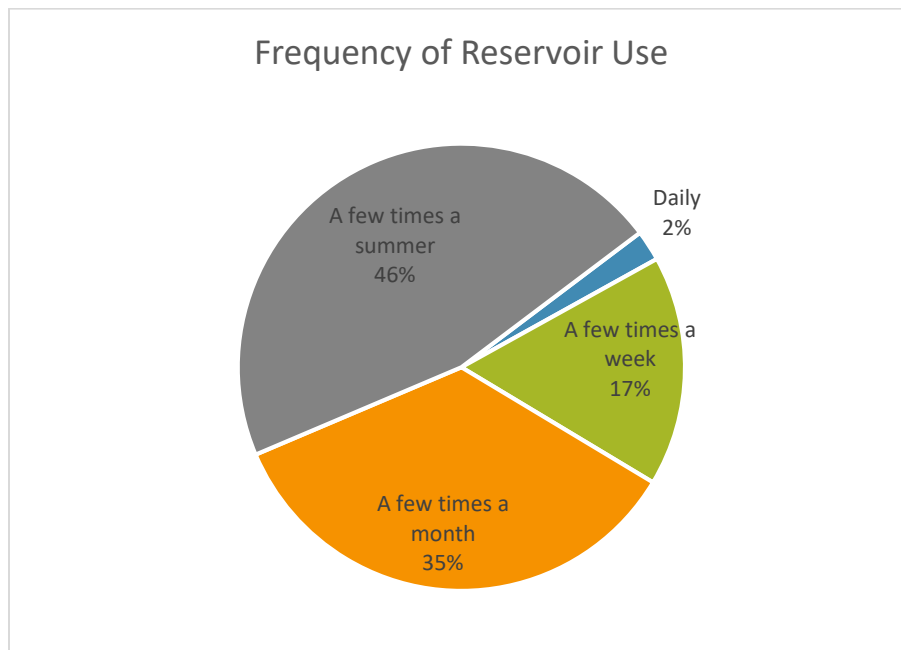
## RESERVOIR SURVEY RESULTS

The survey received responses from a variety of user types. Notably, the largest group of respondents to the survey does not necessarily go out on the water but list their primary activity as hanging out on shore/beaches. Paddleboarders and kayakers/canoers were the next most popular activity groups and combined, they represent 50% of reservoir survey responses. The survey received fewer responses from other user types.

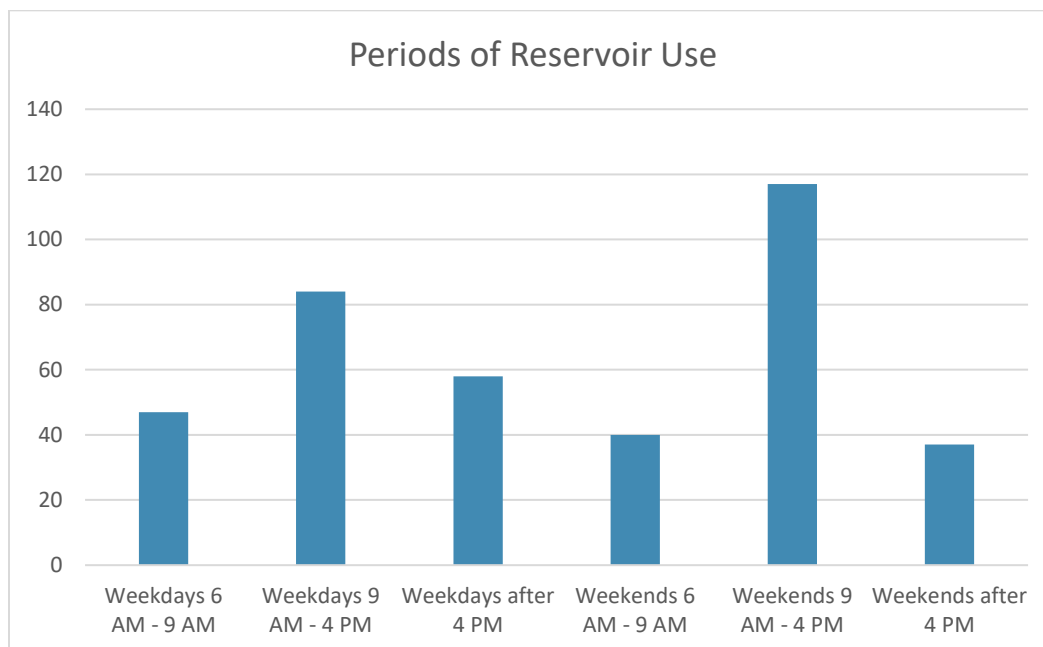
27 respondents stored a boat at the marinas, or 14% of those who answered that question.



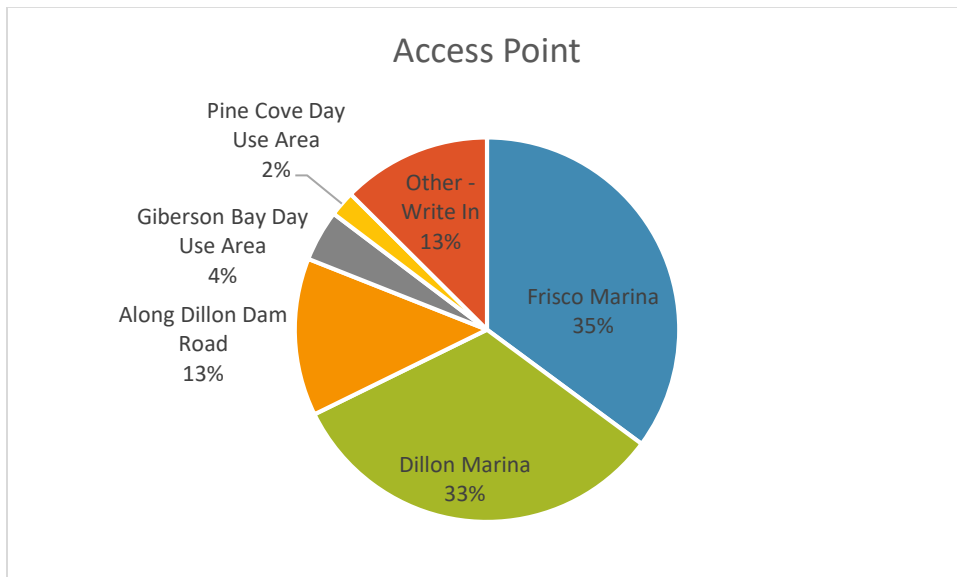
The majority of respondents use the reservoir relatively infrequently. Almost half of users use the reservoir a few times over the summer and only 19% use the reservoir daily or a few times a week.



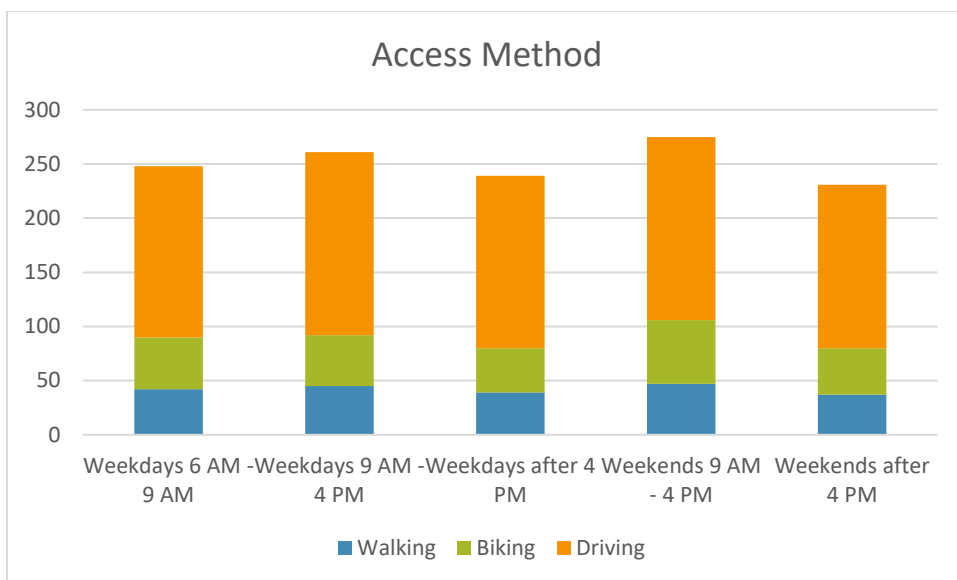
Reservoir users indicated the following times when they use the reservoir. Weekends between 9 AM and 4 PM is the most popular period by a significant margin. The level of use of this period varied slightly by user group. At the peak period (weekends 9 AM – 4 PM), 69% of responding sailors and over 50% of kayak/canoe and pontoon boats use the reservoir. In comparison, 8% of rowers, 34% of those who hang out on shore, and 38% of paddleboarders use the reservoir at this time.



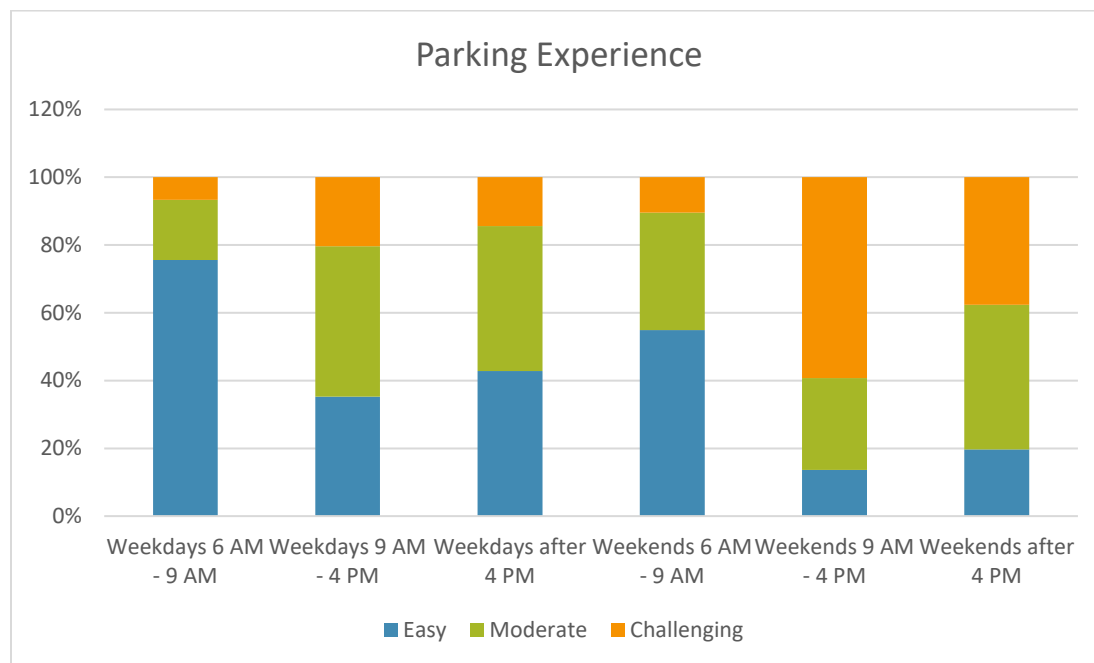
The majority of respondents (68%) primarily access the reservoir out of the two marinas. Dillon Dam Road was also a popular spot, and few respondents reported using either of the Forest Service Day Use areas. Other access points mentioned include the Snake River inlet and condos near the marinas in Frisco and Dillon. Many of the other responses likely refer to Recpath access.



The following chart shows how marina users access the reservoir during each time period. Across all time periods, driving is the most popular method. Even on weekends between 9 AM and 4 PM when parking can be difficult, the percentage of those driving only drops slightly, to 61%, compared to about 65% at all other times.



Respondents were asked to rate their experience finding parking at each of the times they drive to the reservoir. In the mornings on both weekdays and weekends, over fifty percent of respondents rated their experience finding parking as easy. At all other times, over half of respondents said that finding parking was moderate or challenging. On weekends during the day, about 60% of respondents stated that finding parking was challenging.



Parking experience ratings for weekends between 9 AM and 4 PM was broken down by access location. At each location, a high percentage of respondents rated the experience as challenging, with some variation. Of the popular areas, Frisco Marina users were most likely to rate the experience as challenging, Dillon Dam Road were next most likely, and Dillon Marina users were least likely. The parking experience question only received 9 responses from those who access via the Giberson Bay Day Use Area and 6 from those who accessed via Pine Cove.

	Along Dillon Dam Road	Dillon Marina	Frisco Marina	Giberson Bay Day Use Area	Pine Cove Day Use Area	Other – Write in
<b>% Rating as Challenging</b>	57%	43%	75%	56%	67%	58%

Few respondents rated their encounters with other watercrafts negatively, with a 4% negative or lower rating for each type of watercraft. However, 21% of respondents rated their typical experience with motorboats as somewhat negative and 15% rated their typical experience with pontoon boats as somewhat negative. Of note, a very high percentage of survey respondents were kayakers/canoers and paddleboarders, but the small sample size of pontoon boaters and motorboaters did not rate their encounters with paddleboarders and kayakers/canoers negatively. Respondents were asked to mention and rate any other user types they encountered using the reservoir, and a few people brought up issues with those renting boats who may need additional education.

Respondents were asked to rate their experience on the reservoir for each of the times when they use it. The reservoir experience was rated very highly (either excellent or good ratings) on weekdays at all times (above 90%). Weekend morning ratings are also very high (88% as excellent/good). During weekend day-time hours, ratings tended to be lower, with 67% rating it as good or excellent from 9 AM – 4 PM and 77% rating it as such after 4 PM on weekends. For the weekends between 9 AM – 4 PM, 11% of respondents rated their experience as poor. For each time period, the reservoir experience received a comparatively higher rating than the Recpath did.

	<b>Weekdays 6 AM - 9 AM</b>	<b>Weekdays 9 AM - 4 PM</b>	<b>Weekdays after 4 PM</b>	<b>Weekends 6 AM - 9 AM</b>	<b>Weekends 9 AM - 4 PM</b>	<b>Weekends after 4 PM</b>
<b>Excellent/Good Rating</b>	96%	90%	91%	88%	67%	77%

The following chart shows the percentage of respondents who said that crowding was an issue during each of the time periods. Respondents generally do not feel that crowding was an issue for most of the time periods, except for weekends 9 AM – 4 PM, when 35% of respondents stated that it is an issue. However, a relatively high percentage feel that is crowded but not detracting from their experience at other times, with 44% of respondents saying so for weekdays 9 AM – 4 PM, and 52% for weekends after 4 PM.

	<b>Weekdays 6 AM – 9 AM</b>	<b>Weekdays 9 AM – 4 PM</b>	<b>Weekdays after 4 PM</b>	<b>Weekends 6 AM – 9 AM</b>	<b>Weekends 9 AM – 4 PM</b>	<b>Weekends after 4 PM</b>
<b>% Crowding is an Issue</b>	6%	9%	6%	10%	35%	19%

The crowding perception was also broken down by user type. The following chart shows the percentage of each user type saying that crowding is an issue on weekends from 9 AM – 4 PM. For most user types, the percentage saying crowding is an issue is roughly in line with the 35% found overall (kayak/canoe, paddleboard, pontoon boat, and sailing). Rowers were significantly more likely to say crowding was an issue (71%), while motorboaters and those who hang out on the shore/beaches were less likely to (0% and 19%).

<b>User Type</b>	<b>% Crowding is an Issue</b>
Fishing from a boat	50%
Fishing from shore	25%
Hanging out on the shore/beaches	19%
Kayak/Canoe	38%
Motorboat	0%
Paddleboard	37%
Pontoon Boat	33%
Rowing	71%
Sailing	43%



## **WRITE-IN COMMENTS – KEY THEMES**

The survey received 168 write-in comments. Key themes that emerged through these comments were:

- Appreciation for the Recpath system
- Concerns about safety on Vail Pass segment and blind curves between Dillon and Frisco
- Parking is an issue at marinas, but on water, it is generally pleasant
- Need for better Recpath education, etiquette, and signage. Many respondents complained about people who don't notify when passing and others called for greater enforcement.
- Desire for extension of the Recpath system (over Swan Mountain, to Blue River, and to Fremont Pass)
- Desire for more grooming and plowing of the Recpath in the winter
- Frustration with number of events, lack of coordination between towns
- Complaints about road bikes, skateboards, headphones, e-bikes, and pedestrians. Many respondents also expressed gratitude that e-bikes were now allowed.
- Desire to see the reservoir allow swimming.

## **DRREC RECREATION CAPACITY ANALYSIS**

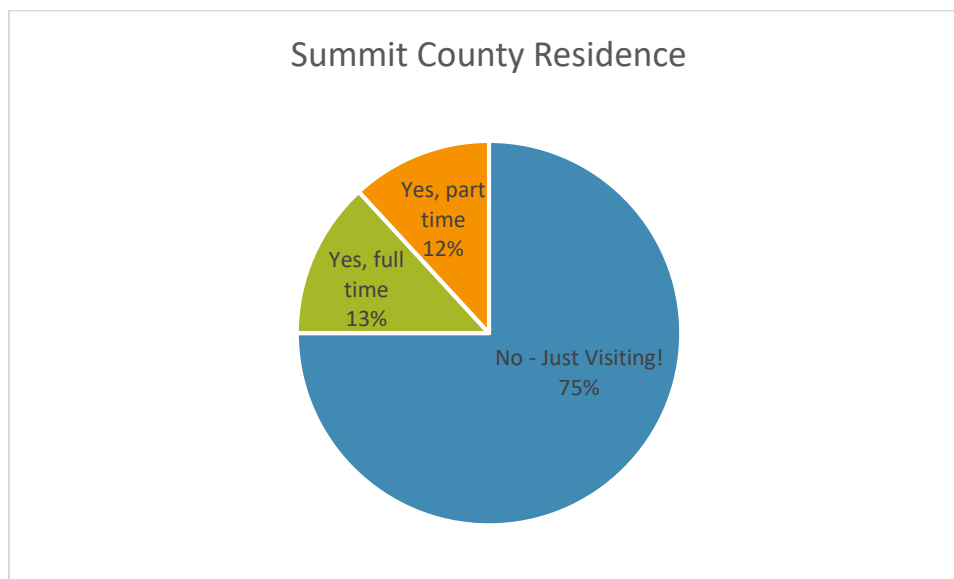
### **INTERCEPT SURVEY RESULTS SUMMARY**

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An intercept survey on use and experience on the Summit County Recpath and the Dillon Reservoir Recreation Area (DRRA) was conducted as part of the Recreation Capacity Analysis of the DRRA and Recpath. Surveys were conducted on Saturday August 3, Sunday August 4, Saturday August 10, Sunday August 11, Thursday August 15, and Saturday August 24. These surveys were all conducted during the middle of the day, or peak use periods. Surveys were conducted by SE Group staff and Friends of the Dillon Ranger District volunteer rangers. Surveys were conducted at the Dillon Marina, Frisco Marina, along the Recpath in Silverthorne, the Frisco Kayak lot, Breckenridge Gondola station, and at the Snake River inlet. Overall, 73 surveys were conducted, with 42 users of the Recpath and 33 users of the Reservoir.

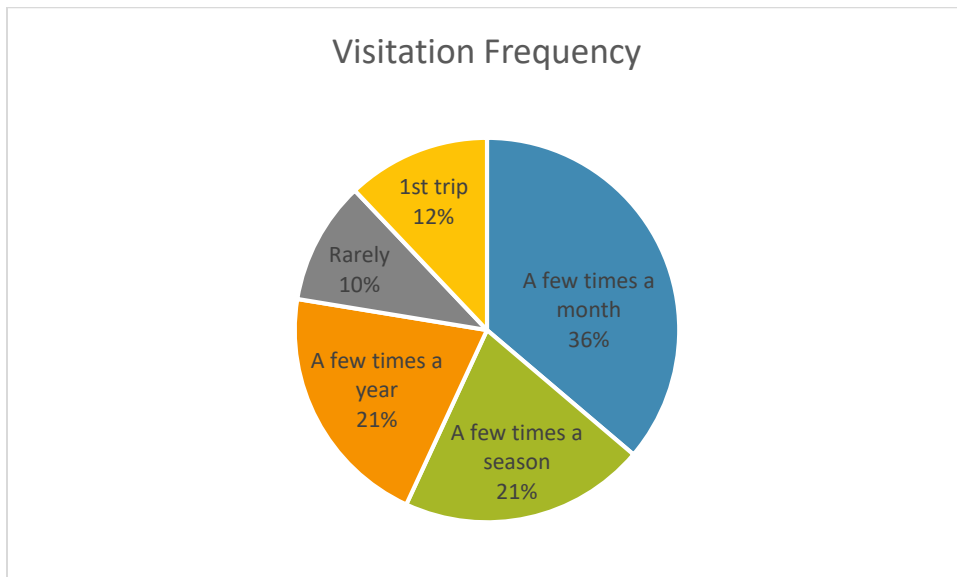
### **RESPONDENT DEMOGRAPHICS**

The majority of survey respondents were visitors to Summit County. These results are very different from the results of the online survey, whose respondents were primarily residents of Summit County.



Of those visiting Summit County, 68% were from Denver/Front Range, 18% were from elsewhere in Colorado, and the remaining 14% were from outside of Colorado. Many of the Denver/Front Range visitors were making a day trip to the area. Among all visitors staying overnight, there was a mix of vacation rentals, hotels, and second homes. Of visitors from Denver/Front Range, 55% were Recpath users and 45% were Reservoir users.

Over half of those visiting Summit County visit at least a few times a season, likely correlated to the high percentage of visitors from Denver/Front Range.



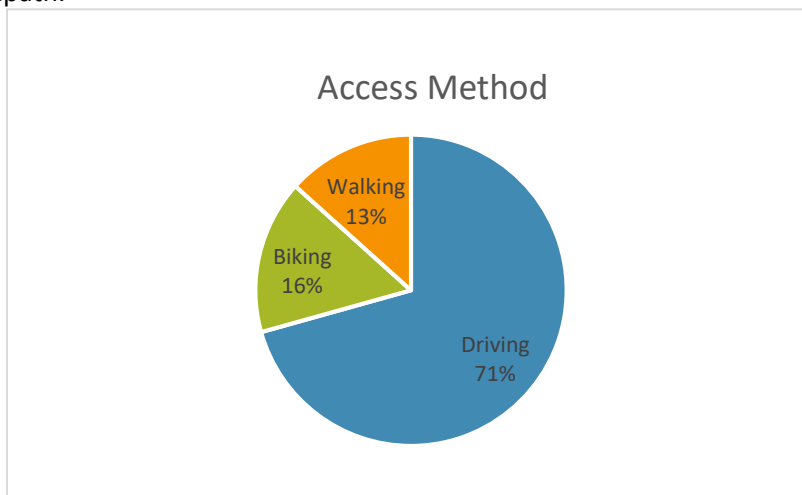
## USER EXPERIENCE

Overall, survey respondents reported very positive experiences. Of Recpath users surveyed on weekends, 77% reported an excellent experience and 20% reported a good experience, with one individual reporting a fair experience. Of reservoir users, 80% reported an excellent experience and the remaining 20% reported a good experience. In commenting on their experience, only one respondent mentioned congestion/etiquette issues on the Recpath/Reservoir.

Of those surveyed during the week, five reported an excellent experience, and one reported a good experience.

## ACCESS AND PARKING

Most survey respondents drove to the Recpath or Reservoir. Among Recpath users, 53% drove to walk or bike on the Recpath.



Most respondents (83%) rated their experience accessing the Recpath and Reservoir as easy. The five respondents rating their access experience as moderate/challenging were a mix of those biking and driving.

Of those who drove to the Reservoir/Recpath on weekends, 67% rated their parking experience as easy, 18% as moderate, and 14% as challenging. The parking experience rating varied somewhat by location. At Snake River Inlet, everyone rated their parking experience as easy, while at Frisco Marina about half of weekend users rated their experience as moderate/challenging.

Survey respondents reported an average vehicle occupancy (AVO) of 2.69. An AVO over 2.5 is considered high and indicates good carpooling habits. Average group size was slightly higher, 3.32, with some large groups of 20+ using the Reservoir. There were a few larger groups where respondents arrived in single or low occupancy vehicles.

## RECPATH-SPECIFIC QUESTIONS

Recpath users surveyed were using all segments of the path system: up Vail Pass, to Breckenridge, around the lake, to Keystone, and through Silverthorne. Of those surveyed, 22% were walkers, 37% were recreational cyclists, 37% were road cyclists, and 5% were dog walkers.

Recpath users were asked to rate their encounters with other users (road cyclists, recreational cyclists, e-bikes, walkers, runners, dog walkers, skateboarders). Respondents tended to be fairly positive, with over 90% respondents rating their encounters with road cyclists, e-bikes, runners, and skateboarders as “positive.” In terms of negative encounters, only one person rated their encounters with another user group as a negative, with most people using somewhat negative.

	<b>Road Cyclists</b>	<b>Recreational Cyclists</b>	<b>E-bikes</b>	<b>Walkers</b>	<b>Runners</b>	<b>Dog walkers</b>	<b>Skateboarders</b>
<b>% rating as negative/somewhat negative</b>	10%	24%	0%	0%	6%	16%	0%

Of those using the Recpath on weekends, 71% said that it was crowded but not detracting from their experience. Only one person said that crowding was an issue, and 24% said it was uncrowded.

## RESERVOIR-SPECIFIC QUESTIONS

Reservoir users surveyed were primarily participating in paddlesports (kayaking/canoeing and paddle boarding). About 30% of those surveyed were paddlesport renters, and another 30% stored their kayak/paddleboard off-site and drove it to the reservoir. No respondents stored a kayak/canoe or paddleboard at the marinas. 21% of those surveyed were hanging out at the shore, 13% were renting a motorized boat or sailboat, and 8% were marina slipholders.

On average, respondents were spending just under three hours at the reservoir. Respondents rated the dock/marina experience positively, with 91% of respondents rating it easy, and the remaining 9% rating it as moderate.

Respondents rated their encounters with other users on the water extremely positively. Of 18 responses on reservoir encounters, everyone rated each encounter as positive, except for one person who rated their experience with motorboats as neutral.

Respondents generally felt that the reservoir was crowded but it didn't detract from their experience (78%). The remaining 22% said it was uncrowded and no respondents felt that crowding was an issue.

## **OPEN-ENDED COMMENTS**

Respondents open-ended comments were generally very positive about the Recpath as a recreational amenity and reason to visit Summit County. A few respondents commented on the need for additional signage and better etiquette.

## **ONLINE AND INTERCEPT SURVEY CONTRAST**

The responses to the intercept survey varied significantly from those to the online survey. Notably, the respondents to the online survey were predominantly full-time and part-time residents of Summit County, while intercept survey respondents were predominantly visitors. Online survey respondents were asked to provide answers about the different time periods when they use the Recpath/reservoir and intercept surveys were conducted on weekends in the middle of the day. Therefore, the responses contrasted below are for online survey responses about weekends from 9 AM – 4 PM.

	Intercept Survey		Online Survey	
	Recpath	Reservoir	Recpath	Reservoir
<b>Overall Experience (Excellent/Good)</b>	97%	100%	47%	67%
<b>Parking Experience (Challenging)</b>	14%		N/A	60%
<b>"Crowding is an issue"</b>	5%	0%	64%	35%
<b>Encounter: E-bike (Negative/Somewhat Negative)</b>	0%	NA	35%	NA
<b>Encounter: Recreational Cyclist (Negative/Somewhat Negative)</b>	24%	NA	28%	NA
<b>Encounter: Motorboats (Negative/Somewhat Negative)</b>	NA	0%	NA	24%

**RESOLUTION NO. 2002 - 92****BOARD OF COUNTY COMMISSIONERS  
OF THE  
COUNTY OF SUMMIT  
STATE OF COLORADO**

A RESOLUTION APPROVING THE AMENDED RULES AND REGULATIONS FOR LANDS AND WATERS WITHIN THE DILLON RESERVOIR RECREATION AREA (Applicant: Dillon Reservoir Recreation Committee)

**WHEREAS**, pursuant to Colorado Recreational Facilities Act, as codified at C.R.S. 29-7-101, the Board of County Commissioners of Summit County, Colorado is authorized to promulgate rules and regulations to regulate and control public recreation lands and facilities that lie within its jurisdiction; and

**WHEREAS**, according to C.R.S. §§ 30-11-101, 30-15, 201, 30-15-301, 30-15-401, the Board of County Commissioners of Summit County, Colorado is authorized to promulgate rules and regulations within the unincorporated areas of Summit County for the preservation of the public health, safety and welfare, including, without limitation, for the purposes of regulating the use of campfires, the discharge of firearms, and the movement and parking of vehicles and motor vehicles on public property; and

**WHEREAS**, on February 26, 1990 the Board of County Commissioners adopted Resolution No. 90-12 approving the rules and regulation for the Dillon Reservoir Recreation Area; and

**WHEREAS**, the Board of County Commissioners entered into the Dillon Reservoir Coordinating Committee Intergovernmental Agreement on April 21, 1989 recognizing that unified planning and coordinated administration of the Dillon Reservoir Recreation Area is desirable and in the public interest; and

**WHEREAS**, the Intergovernmental Agreement details Summit County's responsibilities to enforce County promulgated rules on the surface of the reservoir and on Denver Water Board lands within the unincorporated areas of the Dillon Reservoir Recreation Area, and within incorporated areas as may be provided by mutual aid contract, intergovernmental agreement, or under the law; and

**WHEREAS**, the purpose of these Rules and Regulations is to protect, preserve and manage recreational lands and waters for the benefit and enjoyment of the citizens and visitors to the county, as authorized by the Colorado Recreational Facilities Act; and

**WHEREAS**, the Intergovernmental Agreement further details the County's responsibilities to issue, manage, and otherwise administer recreation event permits and special use activities on the reservoir surface and Denver Water Board lands outside incorporated town limits, on private land within the unincorporated area within the Dillon Reservoir Recreation Area, or whenever the area proposed for use is located in more than one local governmental jurisdiction; and,

**WHEREAS**, the Dillon Reservoir Recreation committee has reviewed and recommended approval of the proposed amended Rules and Regulations for the Dillon Reservoir Recreation Area.

**NOW, THEREFORE**, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF SUMMIT, STATE OF COLORADO THAT, pursuant to the authority provided hereunder by the Colorado Recreational Facilities District Act, as codified at C.R.S. §29-7-101, et. seq., and in accordance with the Dillon Reservoir Coordinating Committee

Intergovernmental Agreement dated April 21, 1989, all areas within the Dillon Reservoir Recreational Area, as such area is designated pursuant to said Intergovernmental Agreement, that lie within the jurisdictional boundaries of the Summit County Government, shall be subject to the following rules and regulations:

## **DILLON RESERVOIR RECREATION AREA**

### **RULES AND REGULATIONS**

#### **I. BASIS AND PURPOSE**

The purpose of these regulations is to protect, preserve and manage recreational lands and waters within the Dillon Reservoir Recreation Area, hereafter referred to as the “DRRA”, for the benefit and enjoyment of the citizens and visitors to the County. These regulations shall apply to and be enforceable on all public recreation lands, water and facilities within the DRRA managed under the authority of the Dillon Reservoir Recreation Committee (“Committee” or “DRReC”), in accordance with the provisions of the Dillon Reservoir Coordinating Committee Intergovernmental Agreement, dated April 21, 1989, as amended from time to time. A map indicating the DRRA jurisdictional boundaries is attached as Exhibit A of these rules and regulations.

These regulations are intended to set out specific guidance as to the scope of prohibited activities within the DRRA jurisdictional boundaries, in an effort to preserve and promote the general natural mountain character for the area affected herein. Activities not specifically prohibited or restricted herein, including without limit hiking, picnicking, and amateur photography, are not affected by the scope of these regulations.

#### **II. DILLON RESERVOIR RECREATION AREA LANDS AND WATER RULES AND REGULATIONS**

##### **SECTION 1: GENERAL REGULATIONS**

###### **SEC. 1.10 Definitions**

- **Committee** – the Dillon Reservoir Recreation Committee, as established pursuant to the DRReC IGA.
- **Commercial** – uses or events for profit to benefit a company, organization or corporation.
- **Closure** – to restrict or prohibit ingress, egress, and standing on, over, or through any area to the public, or to limit such access to designated groups or individuals, for any reasons deemed appropriate and in accordance with the applicable provisions herein.
- **DRRA** - the area operated and administered by the Committee, as set forth in the DRReC IGA generally and set forth more specifically in Exhibit A attached hereto and subject to modification from time to time.
- **Fireworks** – means any article, device, or substance prepared for the primary purpose of producing a visual or auditory sensation by combustion, explosion, deflagration, or detonation which meets the description of fireworks as set forth in the United States Department of Transportation Hazardous Materials Regulations, Title 49, Code of Federal Regulations, Parts 173.88 and 173.100.
- **Launching** – the act of loading or unloading a vessel to or from the water surface.
- **Hazardous Materials** means any waste or other material, alone, mixed with, or in combination with other wastes or materials, which because of its quantity, concentration, or



physical or chemical characteristics, as defined in greater detail under the Colorado Criminal Code, CRS §18-13-112(2)(b)(1).

- **IGA or “DReC IGA”**, as such terms are utilized herein, means the Dillon Reservoir Coordinating Committee Intergovernmental Agreement, dated April 21, 1989, as amended from time to time, which is a contract between the relevant governmental agencies of the DReC Committee, regarding the collaborative administration of the area within the DRRA jurisdictional boundaries.
- **Mooring** – the act of rendering any vessel attached to any structure or apparatus besides a designated public dock, or leaving a vessel beached or shored or otherwise unattended in any manner under any circumstances.
- **Motor Vehicles** –A motorized vehicle is defined as any self-propelled vehicle which includes, but may not be limited to automobile, truck, motor bus, motorcycles, all terrain vehicles, mopeds and motorized bicycles. Provided, however, such term shall not include self-propelled wheelchairs and other such similar devices, and expressly excludes snowmobiles from the scope of this definition as well.
- **Parking** –parking includes stopping, standing, parking, or leaving unattended in any other manner any motor vehicle under any circumstances.
- **Personal Watercraft** – motorboat that uses an inboard motor powering a water jet pump as its primary source of motive power and is designed to be operated by a person sitting, standing, or kneeling on the vessel, rather than the conventional manner of sitting or standing inside the vessel. "Personal watercraft" includes a motorboat known as a "specialty prop-craft", which is similar in appearance to a personal watercraft but powered by an outboard or motor driven propeller.
- **Motorized Trails** means trails for the use of motorized vehicles where designated in the trail plan and as posted on the trail, as may be required by law.
- **Non-motorized Trails** means riding, hiking, bicycling, and other recreational trails for the use of the public on which motorized vehicles are prohibited except in emergencies.
- **Recreational Towing** – towing of any object by a vessel for the purpose of recreational enjoyment, or activity, including but not limited to waterskiing, wakeboarding, paraskiing, paragliding, parasailing. Said definition shall not encompass the towing of any object for purposes of the performance of duties by authorized personnel, or the towing of vessels or other necessary objects for the purposes of retrieval of such objects due to legitimate incidents of emergency retrieval.
- **Recreational Trail** means a trail which is used for a recreational purpose, such as hiking, horseback riding, snowshoeing, cross-country skiing, bicycling, or the riding of motorized recreational vehicles along routes of scenic, natural, historic, geologic, or water-oriented interest.
- **Roadway** means that portion of a street, road, freeway or highway improved, designed, graded or ordinarily used or maintained for vehicular travel.
- **Special Event** means an event that includes but is not limited to one or more of the following: races, recreational or casual events, social events & instructional activities and series events.
- **Special Use** means a use of the DRRA for an extended duration of time that includes but is not limited to one or more of the following activities: commercial tours, outfitters and guides, and commercial photography and filming.
- **Snowmobile** means a self-propelled vehicle primarily designed or altered for travel on snow or ice when supported in part by skis, belts, or cleats. "Snowmobile" does not include machinery used strictly for the grooming of snowmobile trails or ski slopes.
- **Water Contact Activities** –any action which allows bodily contact with the water in any manner, including without limitation swimming, diving, wading, scuba diving, and wading

fishing, windsurfing as well as any activities which require wearing a full body wet or dry suit.

- **Water Pollution/Contamination** – The point source discharge of any pollutant or contaminant into any waterway or body of water within the DRReC Area, which has the direct or indirect effect of degrading the chemical, physical, biological or radiological integrity of the water.
- **Vessel** – every description of watercraft used or capable of being used as a means of transportation of persons and property on the water, other than single-chambered air-inflated devices or seaplanes.

#### **SEC. 1.20      Closed Areas**

- A. It shall be unlawful and a violation of these regulations for any person to enter, traverse, or utilize, for any purposes not expressly authorized by the Committee, any recreational land or water area located within the DRRA boundaries which is either:
  - 1. Designated as a no trespass area by the appropriate signage, notice, designation, or otherwise.
  - 2. Designated as a temporary or permanent closure area, for the purposes of maintenance, hazardous conditions, law enforcement closure, or any other closure deemed necessary by the appropriate authorities, by the appropriate signage, notice, designation, or otherwise.
- B. Any area within the DRRA boundaries may be unilaterally closed, restricted, or limited to any or all users or to a limited number of users by any or all of the following entities, under the following circumstances:
  - 1. The Committee, upon majority vote of the Committee
  - 2. The Summit County Sheriff, the Dillon Police Department, the Frisco Police Department, and the United States Forest Service, within the appropriate jurisdiction of each such entity, when such entity deems such closure to be necessary for the protection of the public health, safety, or welfare.

#### **SEC. 1.30      Fires and fireworks**

- A. It shall be unlawful to build or light any fire of any nature on any lands in the DRRA, including without limitation all shoreline areas of the Reservoir, except where fireplace grills or fire rings have been provided, or by express permit.
- B. When fire bans are in effect by BOCC resolution, US Forest Service Supervisor Order, or any other appropriate authority, no person shall build or light a fire on any DRRA lands violation of the fire ban, regardless of whether such area contains fireplace grills, fire rings, or typically permits fires.
- C. It shall be unlawful to use, light, or ignite fireworks or explosives of any type, except by express permit of the DRReC.
- D. All fires permitted under the scope of these regulations shall remain attended to at all times, and all fires must be completely extinguished prior to leaving the location of the fire unattended.
- E. Careless burning or other combustion of any materials, at any location including but not limited to burning at the location of a fire ring or fire grill, is expressly prohibited at all times and is a violation of these regulations.

**SEC. 1.40      Motorized Vehicles and Snowmobiles**

- A. It shall be unlawful to operate any motorized vehicle, within the DRRA, except on roadways expressly designated as open to public use with the exception of authorized vehicles. All motorized vehicles operated on designated roadways must be properly licensed.
- B. It shall be unlawful to operate any motorized vehicle or snowmobile in the shore areas of the reservoir, below the high water mark.
- C. Snowmobiles may only be operated in the DRRA on routes expressly designated for such snowmobile use, and all such use in said areas must be in accordance with all applicable state and local law or ordinance regulating the use of snowmobiles.

**SEC. 1.50      Parking**

- A. It shall be unlawful to park any motor vehicles or trailers within the boundaries of the DRRA except where expressly permitted and designated by the appropriate signage, notice, designation, or otherwise.
- B. Parking any motor vehicle, snowmobile or trailer in such a manner as to create an obstruction or a potential hazard to vehicular, pedestrian, equestrian or bicycle traffic is expressly prohibited.
- C. It shall be unlawful to park a vehicle on any public boat ramp. Vehicles are subject to removal at the owner's expense.

**SEC. 1.60      Firearms**

- A. Shotguns used exclusively for waterfowl hunting, in areas expressly designated, are exempt from the prohibition in subsection B of this section.
- B. No discharge, use, or allowance of the use of firearms or weapons is permitted within the DRRA boundaries.

**SEC. 1.70      Hunting and Wildlife**

- A. It shall be unlawful to feed, hunt, pursue, trap, molest, harass or kill any wildlife within the DRRA boundaries at any time with the exception of fishing and waterfowl hunting.
- B. No person shall disturb any wildlife habitat within the DRRA boundaries at any time.
- C. Fishing is allowed in the DRRA boundaries strictly in accordance with all applicable State and local regulations.
- D. Waterfowl hunting is allowed in the DRRA boundaries strictly in accordance with all applicable federal, state, and local regulations.

**SEC. 1.80      Camping**

It shall be unlawful to camp overnight or park a trailer or camper for overnight camping purposes, within the jurisdictional boundaries of the DRRA, except in areas expressly

designated for camping by appropriate signage, notice, designation, or otherwise, or if allowed by special use permit issued by the Committee.

**SEC. 1.90      Sanitation**

- A. It shall be unlawful to leave fish, fish entrails, human excrement, wastewater, cans, bottles, plastic or paper cartons, or other litter or free particulate matter of any type on lands or in water within the DRRA.
- B. It shall be unlawful to discharge water closets or to discharge any form of human waste into the waters of Dillon Reservoir.
- C. It shall be unlawful to use refuse containers provided for public use for dumping of any household or commercial refuse generated or transported outside the DRRA.

**SEC. 1.100      Hazardous Materials**

- A. It shall be unlawful to introduce, transport, generate, create, or extract any hazardous materials into the DRRA for any purposes.
- B. Any such unlawful treatment, use, or disposition of hazardous materials may result in referral for prosecution under the law.

**SECTION 2: BOATING RULES AND REGULATIONS**

**SEC. 2.10**      In accordance with C.R.S. §33-13-113, the Committee hereby adopts, by reference, the Colorado (Watercraft) Vessel Code, as codified at Title 33, Article 13, Part 1, sections 101 through 116, Colorado Revised Statutes, as amended from time to time, in its entirety, as if fully set forth herein, as regulations applicable to the DRRA and to be adopted and enforced by the Committee, the Summit County Sheriff, and all other authorized law enforcement agencies as regulations hereunder.

**SEC. 2.20**      In accordance with C.R.S. §33-13-113, the Committee hereby adopts, by reference, the Colorado Boating Regulations, as codified at Colorado Code of Regulations, , promulgated and published as such by the Colorado Department of Natural Resources, Division of Parks and Outdoor Recreation, as amended from time to time, in its entirety, as if fully set forth herein, as regulations applicable to the DRRA and to be adopted and enforced by the Committee, the Summit County Sheriff, and all other authorized law enforcement agencies as regulations hereunder.

**SEC. 2.30      Motorboat Exhaust**

Except in the case of a motorboat competing in a permitted race or regatta, it shall be unlawful to have a vessel on the water surface of Dillon Reservoir within the DRRA that is equipped with an above transom exhaust. An above transom exhaust is defined as a boat exhaust above the planking forming the stern of a square-ended boat. Said restrictions on exhaust are intended to be equal to or greater than those restrictions set forth by the State of Colorado. Under no means shall such restrictions be interpreted to

permit exhaust levels that are more permissive than the maximum levels established by the State of Colorado at any time.

**SEC. 2.40      Safe Speed**

- A.        All vessels must operate at a speed level which may be deemed objectively safe and prudent given all circumstances and conditions on the water surrounding such operations at all times.
- B.        It is unlawful for any vehicle to travel at speeds in excess of thirty miles per hour (30 MPH) at any time under any circumstances, excluding law enforcement and emergency response operations.
- C.        The Committee by express authorization, may allow exceptions to the speed limit regulations as described in SEC. 2.4A and SEC. 2.4B.

**SECTION 3: RESERVOIR USE – RULES AND REGULATIONS**

**SEC. 3.10      Water Contact Activities**

It shall be unlawful to engage in water contact activities on the reservoir, except for those activities approved in advance by the Committee.

**SEC. 3.20      Night Activity**

- A. It shall be unlawful to use boats for overnight sleeping quarters on Dillon Reservoir, except in specifically approved and designated areas within the DRRRA. Coast Guard regulations for potable water and waste disposal shall be followed.
- B. It shall be unlawful to camp outside designated camping areas as posted.

**SEC. 3.30      Fishing**

- A. It shall be unlawful to fish at the end of a boat ramp in a manner obstructing any access through such ramp.
- B. It shall be unlawful to fish on the upstream side of the dam structure, or from the abutments and spillways.

**SEC. 3.40      Prohibited Water Craft**

- A. It shall be unlawful to operate a hovercraft, seaplanes or amphibious craft on Dillon Reservoir, except by express authorization by the Committee.
- B. It shall be unlawful to operate personal watercraft, except specialty propcraft, on Dillon Reservoir, except by express authorization by the Committee.

- C. It shall be unlawful to waterski, wakeboard, paraski, paraglide, parasail, or perform other forms of recreational towing on Dillon Reservoir, except by express authorization by the Committee.

#### **SEC. 3.50      Boat Launches**

It shall be unlawful to launch any vessel in any area not expressly designated for such launching activities. Notwithstanding the foregoing, inflatable rafts, canvas boats and other portable craft not operated through the use of any motorized propulsion may be launched from the reservoir's shoreline.

#### **SEC. 3.60      Docking and Mooring Regulations**

- A. It shall be unlawful to tie any vessel to a public dock for longer than the posted allowable docking time.
- B. It shall be unlawful to tie any vessel to any marina dock without authorization from the appropriate marina.
- C. It shall be unlawful to moor or attach any vessel to a buoy or navigational aid at any time.
- D. It shall be unlawful to moor or attach any vessel to a marina mooring without authorization from the appropriate marina.
- E. Night mooring shall only be permissible by permitted campground campers, at the following areas, and only at specified locations within those areas:
  - 1. Heaton Bay Area;
  - 2. Peak One Area;
  - 3. Pine Cove Area; and
  - 4. Windy Point Area.
- F. Overnight storage at the campgrounds is not to violate Sections 1.8 Camping and 3.2 Night Activity.

### **SECTION 4: RECREATION USE PERMITS AND COMMERCIAL ACTIVITY**

#### **SEC. 4.10      Special Event Permits**

- A. Special events within the jurisdictional boundaries of the DRRA may only be conducted as authorized in advance pursuant to a DRRA special event permit issued by the Committee in accordance with the procedure and standards set forth herein.
- B. All special events must be appropriate for the proposed location, compatible with adjacent land uses, provide or arrange all necessary facilities, amenities and support services (such as parking, sanitary, and traffic control), secure adequate liability insurance, and preserve the public health, safety and welfare, including reasonable public use and enjoyment of the DRRA.
- C. Permit applications must be received by DRReC staff at least 90 days and not more than 18 months prior to the use. Dates will not be reserved until the

completed permit application is received. Event sponsors are encouraged to submit applications as early as possible.

#### **SEC. 4.20 Special Use Permits**

- A. Special uses within the jurisdictional boundaries of the DRRA may only be conducted as authorized in advance pursuant to a DRRA special event permit issued by the Committee in accordance with the procedure and standards set forth herein.
- B. All special uses must be appropriate for the proposed location, compatible with adjacent land uses, provide or arrange all necessary facilities, amenities and support services (such as parking, sanitary, and traffic control), secure adequate liability insurance, and preserve the public health, safety and welfare. Moreover, such special uses shall not be of such a duration or extent as to interfere with other reasonable uses of the DRRA.
- C. All special uses shall be conducted in accordance with these regulations, and all policies and procedures also adopted by the Committee. The Committee reserves the right to exercise its discretion in determining what proposed special uses are appropriate in the DRRA.
- D. Permit applications must be received by DRReC staff at least 90 days and not more than 18 months prior to the use. Dates will not be reserved until the completed permit application is received. Use sponsors are encouraged to submit applications as early as possible.

#### **SEC. 4.30 Permit Fee Schedule**

All permit fees provided for herein shall be attached hereto as Exhibit A and referenced as if incorporated herein, subject to Committee modification from time to time.

#### **SEC. 4.40 Application Fees for Permits**

- A. All applications for **special event permits** shall be submitted with an application fee as set forth in the Permit Fee to cover the costs of review and processing of the application. Such fees are non-refundable, regardless of the ultimate determination on the granting of the permit.
- B. All applications for **special use permits** shall be submitted with an application fee as set forth in the Permit Fee Schedule, to cover the costs of review and processing of the application. Such fees are non-refundable, regardless of the ultimate determination on the granting of the permit.
- C. Special event and special use applications will be processed in a timely manner only upon submittal of a complete application and the full application fee.

#### **SEC 4.50 Performance Bonds for Approved Permits**

- A. All permits for **special events** may be subject to express conditions of approval as to assurances for maintenance, safety, support services, or any other necessary arrangement for the orderly and safe holding of such event.
- B. All permits for special uses may be subject to express conditions of approval as to assurances for maintenance, safety, support services, or any other necessary



arrangement for the orderly and safe holding of such event. Moreover, such conditions of approval may address measures designed to ameliorate the continued effects of such a special use over the duration of such use.

- C. The Committee may, in the exercise of its discretion, require a performance bond to ensure the conditions established in the permit are fulfilled by the permittee.
- D. The performance bond amount is either a base amount or a percentage calculation depending upon the complexity of the event or the use or the complexity of the conditions specified in the permit.
- E. The performance bond shall be due prior to the issuance of the permit.
- F. The performance bond may be submitted by means of a cash deposit, a certificate of deposit, a letter of credit, or any other means deemed acceptable by the Committee given the circumstances directly surrounding the particular event or use.

#### **SEC. 4.60 Special Event Permit Fees**

- A. All approved special event permits shall be subject to a special event fee which is based upon the type of event to be held, the number of participants, the duration of the event, and all other relevant considerations pertaining to such event, as follows:
  - 1. **Race events** are charged a base permit fee plus a per entry fee, as set forth in the Permit Fee Schedule, for each entry after the 25<sup>th</sup> registration.
  - 2. **Entertainment events** including but not limited to fireworks shows, fishing events, and festival events are charged a base permit fee plus a percentage of the gross revenue collected, as set forth in the Permit Fee Schedule. An estimated total charge based on the permit fee and the projected gross revenue is required to be paid prior to the issuance of a permit. Any remaining balance is required to be paid with one week after the conclusion of the event.
  - 3. **Social Events & Instructional Activities** including but not limited to group picnics, group camping, weddings, receptions, workshops, and instructional classes are charged a base permit fee as set forth in the Permit Fee Schedule, which is required to be paid prior to the issuance of a permit.
  - 4. **Series Events** are charged a base permit fee plus a per entry fee for each entry after the 25<sup>th</sup> registration for the first event, as set forth in the Permit Fee Schedule. For each additional event an additional permit fee, plus a per entry fee for each entry after the 25<sup>th</sup> registration will be charged. A special event divided into such a series of activities extending over several weeks or weekends will be charged specific special event fees for each separate set of events in the series. An estimated total charge based on the permit fees and the estimated total of entries for each event in the series is required to be paid prior to the issuance of a permit.
- B. All amounts due shall be paid in full no later than one week after the conclusion of the special event.

#### **SEC. 4.70 Special Use Permit Fees**

- A. All approved special use permits shall be subject to a special use fee which is based upon the type of use to be held, the number of participants, the duration of the use, and all other relevant considerations pertaining to such use.
- B. Special use fees include a base permit fee, plus a percentage of the permittee's gross revenues for such use, as follows:

1. **Commercial Tours, Outfitters and Guides** or any similar uses are charged a base permit fee plus a percentage of the gross revenues, as set forth in the Permit Fee Schedule.
  2. **Commercial Photography or Filming** is charged a base permit fee as set forth in the Permit Fee Schedule for each day reserved for filming. The total fee for all days reserved must be paid prior to the issuance of a permit.
  3. All other special uses shall be subject to a base fee in consideration of the particular parameters of such approved use, and may be subject to remission of a certain percentage of gross revenues as well, based upon the same considerations.
- C. All special use permittees will be required to follow the payment plan fee as set forth in the Permit Fee Schedule.

**SEC. 4.80 Minor permit modifications**

Requests for minor modifications to outstanding permits may be processed by DRReC Staff on an administrative basis, in accordance with the operations guidelines established by the Committee, provided that staff shall update the Committee of the modifications so approved on an administrative basis at the next regularly scheduled Committee meeting.

**SEC. 4.90 Hold Harmless Provision**

- A. Every permit shall require, as a condition of approval, that the event sponsor indemnifies and holds DRReC harmless from all loss, cost, damage or other claims arising out of the issuance of the permit.
- B. All event sponsors must provide proof of adequate insurance coverage for all injuries to person and property directly or indirectly arising out of the event.

**III. PENALTIES**

Any person violating provisions stated or adopted within these rules and regulations commits a Class 2 Petty offense and, upon conviction thereof, shall be punished by a fine of not more than \$300. At the time any person is arrested for a violation of these rules and regulations the arresting officer may give a penalty assessment notice to the violator. Such penalty assessment notice and associated procedures shall be governed by and in conformance with the provision of C.R.S. 16-2-201. The following graduated fine schedule shall be imposed for violations of these rules and regulations prosecuted under the penalty assessment procedures.

- A. Persons convicted of a first violation under these regulations pursuant to sections 1.00 through 4.70, except sections as noted in subsection B., shall be punished by a fine of not less than fifty dollars (\$50.00).
- B. Persons convicted of a first violation under these regulations pursuant to sections 1.30, 1.60, 1.70, 1.100 shall be punished by a fine of not less than one hundred dollars (\$100.00).
- C. Upon a second violation of a rule or regulation by any person shall result in a summons to appear.

**IV. GENERAL EXEMPTIONS**

These regulations shall not be interpreted to interfere, prohibit or impede in any manner with the exercise of legitimate management or administrative practices by any authorized agency having jurisdiction in the DRR jurisdictional boundaries, including without limitation all law enforcement and wildlife

management activities relating to the use of firearms or otherwise, water quality/water treatment administration, or any other functions properly authorized in the area. Notwithstanding the foregoing, all activities within the DRRA jurisdictional boundaries shall be subject to the permit process provided herein as deemed appropriate by the Committee.

## **V. AUTHORITY**

These regulations are adopted, by the DRRC Committee collectively and to each of its member entities independently, pursuant to and in accordance with all applicable federal, state, and local laws, regulations, and ordinances, including without limitation the Dillon Reservoir Recreation Area Committee IGA dated April 21, 1989, the Recreational District Facilities Act, as codified at C.R.S. 29-7-101 et seq., and all other authority provided by law. The regulations set forth herein are intended to supplement and by no means supersede any state or federal law, rule or regulation, including any Colorado statutes applying to the land and water areas within Summit County's jurisdictional boundaries of the DRRA.

## **VI. EFFECTIVE DATE**

These regulations shall become effective 30 days after the adoption of the resolution by the Board of County Commissioners of Summit County approving these rules and regulations for the DRRA. These rules and regulations shall remain in full force and effective until amended, repealed or superseded by appropriate and authorized action of the Committee.

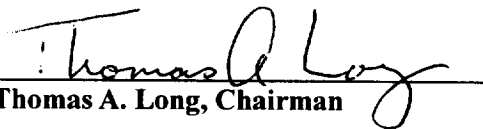
## **VII. SEVERABILITY**

If any provision or portion of these rules and regulations are found to be unconstitutional or otherwise invalid by a court of competent jurisdiction, such decision shall not invalidate this ordinance in its entirety, and to this end the provisions of this ordinance are declared to be severable, and the remaining provisions shall not be affected and shall continue in full force and effect.

**INTRODUCED, READ, ORDERED PUBLISHED IN FULL AND SET FOR PUBLIC**

**HEARING THIS 12<sup>th</sup> DAY OF AUGUST, 2002.**

**BOARD OF COUNTY COMMISSIONERS  
OF SUMMIT COUNTY, COLORADO**

By:   
Thomas A. Long, Chairman

**ATTEST:**

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Cheri Brunvand, Clerk & Recorder

READ, PASSED AND ADOPTED AFTER PUBLIC HEARING AND ORDERED

PUBLISHED BY TITLE ONLY THIS 26<sup>th</sup> DAY OF August, 2002.

COUNTY OF SUMMIT  
STATE OF COLORADO  
By and Through its  
BOARD OF COUNTY COMMISSIONERS

Thomas A. Long  
Thomas A. Long, Chairman

ATTEST:

Cheri Brunvand  
Cheri Brunvand, Clerk & Recorder

## Exhibit A

### Fee Schedule

As provided in Dillon Reservoir Recreation Area Rules and Regulations, February 26, 1990.

#### Sec. 4.3 Fee Schedule

- A. The following fee schedule covers the charges for recreation events and special uses within Summit County's jurisdictional boundaries of the DRRA. Recreation event fees are charged on a per event basis that includes no more than four consecutive activity days. A recreation event divided into a series of activities extending over several weeks or weekends will be charged for each separate set of events in the series. Special use fees include a base permit fee, plus a percentage of the permittees gross revenue.
- B. Summit County Government reserves the authority to assess reasonable fees and charges, in addition to the fees denoted within this fee schedule, to recover costs for services performed beyond the normal scope of a permit.
- C. Recreation Events
  1. Races – Events are charged a \$50.00 permit fee, plus \$1.00 for each entry after the 25<sup>th</sup> registration will be charged for races. An estimated total charge based on the permit fee and the estimated number of entries is required to be paid prior to the issuance of a permit. Any remaining balance is required to be paid within one week after the conclusion of a race.
  2. Special Events including fireworks show, fishing events, and festival events are charged a \$50.00 permit fee, plus 8% of the gross revenue collected. An estimated total charge based on the permit fee and the projected gross revenue is required to be paid prior to the issuance of a permit. Any remaining balance is required to be paid within one week after the conclusion of the event.
  3. Social Events & Instructional Activities including group picnics, group camping, weddings, receptions, workshops, and instructional classes are charged a \$50.00 permit fee which is required to be paid prior to the issuance of a permit.
  4. Series Events are charged a \$50. 00 permit fee, plus \$1.00 for each entry after the 25<sup>th</sup> registration for the first event. For each additional event a \$25 permit fee, plus \$1.00 for each entry after the 25<sup>th</sup> registration will be charged. An estimated total charge based on the permit fees and the estimated total of entries for each event in the series is

required to be paid prior to the issuance of a permit. Any remaining balance is required to be paid within one week after the conclusion of the final event.

D. Special Uses

1. Commercial Tours, outfitters and Guides are charged a \$100.00 permit fee, plus 8% of the gross revenue.
2. Professional Motion Picture Filming is charged \$50.00 permit fee for each day reserved for filming. The total fee for all days reserved must be paid prior to the issuance of a permit.
3. Special use permittees, except for professional motion picture filming, will be required to follow one of the following payment plans:
  - a. Payment of the permit fee, plus the total estimated percentage of gross revenue during the year of the permit must be paid prior to the issuance of a permit. If the actual percentage of gross receipts is more than estimated, the permittee shall pay the difference within one week after the conclusion of the permit period. If the estimate gross receipts payment is more than the payment due, Summit County will refund the difference to the permittee. A performance bond guaranteeing payment of the total estimated percentage of gross revenue can be substituted for the advanced payment. In the event a performance bond is secured, the permittee must provide payments on a monthly basis for the actual percentage of gross revenue. Payments are required to be made within one week after the final day of each month during the term of the permit.
  - b. Payment of the permit fee, plus a deposit equalling the estimated percentage of gross receipts for a one month period must be paid prior to the issuance of a permit. The permittee must provide payments on a monthly basis for the actual percentage of gross revenue. Payments are required to be made within one week after the final day of each month during the term of the permit. The payment for the final month of the permit shall be made utilizing the permittee's deposit. If the actual percentage of gross receipts is more than the deposit, the permittee shall pay the difference within one week after the conclusion of the permit period. If the deposit is more than payment due, Summit County will refund the difference to the permittee.