

# CHAPTER 3. NEEDS ANALYSIS

This chapter provides an overview of the trail user needs for trails in and around Mammoth Lakes, California. The need for improved facilities was originally identified through input from local agencies and the public in response to the existing conditions and the potential to increase the viable transportation and recreation opportunities for visitors and residents. Potential improvements identified in this chapter have been carried forward as recommendations where feasible and within the scope of this Trail System Master Plan.

Significant effort was expended to gather robust data regarding existing use patterns and preferences for trail users in the Mammoth Lakes area. Two major outreach efforts were conducted to capture input on how to improve the conditions for summer and winter activities in and around Mammoth Lakes. The outreach efforts were significant components of the Concept and Master Planning (CAMP) process. CAMP: Summer took place in early November of 2007 and CAMP: Winter took place in early February of 2008. Stakeholder interviews, meetings, tours and two detailed user surveys (summer and winter) were utilized to create an accurate portrait of the needs of Mammoth residents and visitors regarding both summer and winter trail use. Because traffic-related safety was a common concern, we also conducted an analysis of pedestrian and bicycle collisions or injuries. This combination of information was then used to create the following analysis of user needs. The potential improvements listed in this chapter are intended to directly address the issues that have come to light as part of this needs analysis. Detailed documentation of both CAMP: Summer and CAMP: Winter activities are available as appendices of this plan. The analysis will include the following elements (1) a general discussion of the benefits of trails; (2) a summary of stakeholder input from CAMP: Summer; (3) an analysis of the Summer Trail User Survey results; (4) a summary of stakeholder input from CAMP: Winter; (5) an analysis of the Winter Trail User Survey results; and (6) an analysis of bicycle and pedestrian related collisions/accidents.

## ***3.1. Benefits of Trails***

Trails provide considerable benefits to both individuals and the general public, and the expansion and improvement of the Mammoth Lakes trail system will result in increased recreation and mobility options for residents and visitors alike. People who wish to integrate healthy activities into their daily lives will have more opportunities to do so, and in a manner that allows them to enjoy the unique scenic beauty that the Mammoth Lakes region has to offer. Because properly constructed trails have a minimal impact on the environment and are relatively inexpensive to construct they are an excellent investment in the livable future of Mammoth Lakes.

### **Health & wellness**

Widespread concern over sedentary lifestyles and obesity make recreation opportunities increasingly important for individuals, communities, and governmental organizations. Several studies have shown that regular trail users see health benefits from their exercise, and that frequency of trail use is correlated positively to the proximity of a person to trail access points. It logically follows that communities with greater access to trail systems and

recreational opportunities will have healthier populations, as these residents have a lower barrier to entry if they wish to exercise.

### **Access to the natural environment**

There is growing concern among child development specialists that a lack of outdoor activity in undeveloped landscapes is leading not only to obesity but also to a situation where children are becoming disconnected from the natural environment. The result of this isolation from the outdoors is a decreasing appreciation of unique habitats and natural phenomena, and a stunting of any conservation ethic. It is feared that this, in turn, will dissuade future generations from protecting ecologically important lands because they will be unable to appreciate the inherent value of biodiversity.

Because trail systems provide access to natural environments they allow users to better enjoy and appreciate open spaces. Trails provide distinct routes through landscapes, allowing people to safely access areas that they may not otherwise feel comfortable negotiating. A well-designed trail will integrate into the terrain and provide an intimate, unobtrusive, nearly organic immersion into beautiful forests, meadows, and alpine slopes. This ability to access the undeveloped environment will help all trail users, and particularly children, better understand and appreciate the unique wild lands that surround Mammoth Lakes.

### **Reduced emissions**

When people drive “around town” to the store, work, school, or errands, they are contributing disproportionately high amounts of pollutant emissions compared to highway trips. These are precisely the type of trips that can be replaced with walking or bicycling. Since bicycling and walking do not generate air pollution, do not consume fossil fuels, and require reduced infrastructure compared to vehicles, they effectively move people from one place to another with minimal adverse environmental impacts. Trails are an effective and safe method to provide non-motorized transportation and are therefore a critical tool in reducing emissions.

### **Improved property values and civic pride**

More non-motorized trips on trails mean fewer trips by car on roadways, relieving traffic congestion in communities and adding value to properties. A 2005 survey of potential homebuyers by American Lives indicated that 92% wanted low-traffic areas, 79% wanted walking and biking paths, and 78% wanted natural open spaces. This confirmed an earlier American Lives study that ranked “community designs that deliver low traffic and quiet streets” as the most desirable feature in a home, making trails a valuable proposition to any neighborhood.

The preferences expressed in the homebuyer surveys have been acknowledged by studies of residential real estate transactions near trail systems. With regards to the Northern Central Rail-Trail, the Maryland Department of Natural Resources concluded that “if two identical properties are for sale and one is near the trail and the other is not, the trail is used as a selling point and helps many nearby owners sell their property faster.”<sup>4</sup> A study conducted by the Seattle Engineering Department evaluated home sales near the city’s Burke-Gilman

---

<sup>4</sup> *Analysis of Economic Impacts of the Northern Central Rail-Trail*, Maryland Department of Natural Resources, 1994.

Trail and determined “property near... the trail is significantly easier to sell and, according to real estate agents, sells for an average of 6% more as a result of its proximity....”<sup>5</sup>

The extent of bicycling and walking in a community has been described as a barometer of how well that community is advancing its citizens’ quality of life. Streets that are busy with bicyclists and walkers are considered to be environments that work at a human scale, and foster a heightened sense of neighborhood and community. These benefits are difficult to quantify, but when asked to identify civic places of which they are most proud, residents will frequently name locations where walking and bicycling are common, such as a popular greenways, open spaces, or traditional downtowns.

### **Improved local economies**

Increased real estate values are not the only economic benefit of trails; portions of tourism revenue can be attributed to trails, especially in Mammoth Lakes where the Mammoth Mountain Ski Area has both summer and winter trail recreation opportunities. Although it encompasses a much greater population area, a study analyzing the North Shore communities in British Columbia, Canada, determined that mountain bicycling on natural surface trails brought in \$10.3 million (CDN) of tourism revenue during the summer of 2006.<sup>6</sup>

More modest success stories have been documented in a 2006 nationwide online survey of nearly 100 U.S. bicycle retailers whose shops were near newly constructed paths and trails. When asked how these facilities affected their businesses nearly 60% of sports shop owners surveyed said the facilities had a positive impact on equipment sales at their stores, with almost 20% of those saying their sales had increased by 10–25%. It is clear that improving the connectivity, quality, and quantity of local trails will further enhance sustainable tourism opportunities for retail goods and service providers, restaurants, hotels, and others.

Because trails provide alternate transportation opportunities people who walk or bike have disposable income that would otherwise have been used for fuel and vehicle maintenance. Over the course of the year the collective buying power of this money is considerable: in Portland, Oregon, a study by CEOs for Cities estimates that residents save \$1.1 billion annually by reducing their automobile miles by 16% below the national average; of that amount, \$800 million is spent on local goods and services. Non-motorized transportation facilities such as trails can therefore play a significant role in strengthening a local economy.

## **3.2. CAMP: Summer**

CAMP: Summer consisted of a series of tours, listening sessions and workshops which covered a variety of topics related to summer trail use in and around the Town of Mammoth Lakes. The following pages summarize input received as part of key tours, listening sessions and workshops during CAMP: Summer.

### **3.2.1. Existing Paved Facilities Tour**

The existing paved facilities tour focused on the existing segments of the Main Path “loop”. Attendees discussed the need for consistent signage and crossings on the paved multi-use

<sup>5</sup> *Burke-Gilman Trail and Property Values*, Seattle Engineering Department, 1987.

<sup>6</sup> *Sea to Sky Mountain Biking Economic Impact Study*, Western Canada Mountain Bike Tourism Association, 2007.

paths around town. They also discussed the need for a consistent look for all paved multi-use paths. The use of asphalt in some sections and colored concrete in other sections confused some users. Attendees felt that there was a need for improved crossing treatments at schools and the library, and there was a general feeling that most local kids are not using the Town's trails and pathways. Other ideas included more consistent "branding" of each path (i.e. Main Path, Lake Mary Path, etc) through the use of unique naming, signage and/or stencils. Providing better coordination between transit and the Main Path was also brought up as a way to provide families with another option for returning when kids get tired.

### **3.2.2. Main Path Missing Links Tour**

The missing links tour focused on the gaps in the Main Path "loop" system. All attendees agreed that Main Street was the key missing link in the Town's paved bikeway network. There was not a consensus as to whether bike lanes or wide promenades would provide the best solution. A continuous multi-use path was seen as optimal but difficult to implement. Bike lanes and/or sidewalks along Forest Trail were seen as a way to provide backcountry access to the Knolls area. The Waterford crossing of Mammoth Creek was seen as another key missing link and is a project that will be completed in the near-term. Representatives from the Town indicated that upcoming development also provided opportunities to close gaps in the network, especially along Old Mammoth Road. The Town also indicated that the current maintenance budget of \$30k/yr will not be adequate as the system expands. A required fire easement providing access to Snowcreek IV from Majestic Pines was seen as a potential opportunity for bicycle access between Eagle Lodge and the Old Mammoth Business District, especially when the Main Path is covered in snow, but it was also noted that the road through Snowcreek IV is private. Snowcreek meadow was seen as an opportunity for a pedestrian-only alternative to the Waterford extension of the Main Path, but the meadow trail is also on private property and currently managed by the Snowcreek Meadow Committee.

### **3.2.3. Agency Listening Session**

The agency listening session provided an opportunity for Town officials to speak directly with the consulting team about issues surrounding trails and mobility in Mammoth Lakes. Town officials provided consultants with information on background documents and upcoming developments and projects that might impact the trails plan. In general, Town officials expressed recognition of the fact the Mammoth Lakes has a recreation-based economy and that every effort need to be made to ensure a high-quality recreational trails network.

Upcoming developments of importance were the Hidden Creek and Snowcreek VIII development and their respective District Plans. An existing unofficial jump park in the Hidden Creek area brought up the need for an official permanent facility. The Town holds a drainage easement through Snowcreek Meadow that could potentially be used for an "environmental trail". While a paved bikeway would not be appropriate through this area, the easement could be developed in a way that will prevent trail "braiding" (creation of multiple footpaths) while improving access.

The trails plan was also seen as an opportunity to combine fire management with trail access, but the details of how this would be done was not discussed. Concerns—in terms of budget

and manpower—regarding the capacity of the Forest Service to maintain facilities and provide enforcement to reduce potential user conflict at Shady Rest were raised. Signage on the existing paved path segments was seen as a quick way to make a difference.

### 3.2.4. Seniors/ADA Listening Session

The seniors and ADA listening session was an opportunity to discuss the needs of seniors and persons with disabilities. It was moderated by Peter Axelson (ADA consultant) who made the point that “we are all pedestrians” and that universal access is key to accommodating a very broad range of users including seniors, people with disabilities, parents with strollers, and the general public. He also suggested that accessibility is sustainability because accessibility requires a “feet first” approach to mobility, which benefits all users and the natural environment.

Winter snow and ice were seen as presenting serious hazards and obstacles. Main Street was the location of greatest concern to attendees especially because of the lack of sidewalks, high traffic volumes and speeds, and high snow banks during winter that create blind spots for motorists and snow removal crews. The width of Main Street makes it difficult for seniors and persons with disabilities to cross it, even at signalized crossings. The intersection of Minaret and Main was mentioned as one of the most important intersections for improvements.

A six-foot boardwalk through the Snowcreek Meadow was described as a way to make the meadow trail accessible while improving sustainability. This type of treatment is regularly used in sensitive areas, especially wetlands.

### 3.2.5. Businesses & Retailers Listening Session

Business owners and retailers were invited to express their concerns about the existing trail system and their hopes for the future network. Attendees were most concerned that the trail plans lead to some quick improvements in order to prevent stakeholders from losing faith in the process. Signage and wayfinding was seen as the most important missing element in the existing network and something that can be done quickly to improve the user experience. One attendee commented that his goal is “to rent bikes to customers and not have them get lost”. Another suggested “quick win” project was bike racks at businesses by coming up with a standard design and making that rack available for businesses to purchase. Putting signage kiosks at trailheads was seen as another quick win project. Attendees also felt that regularly updating and distributing maps and providing a wider range of trail options for different user types (adventurous, family-oriented, etc) represented an opportunity. Completing the Main Path loop was seen as a key infrastructure project that should receive attention in the short-term. A safe bikeway connection along Old Mammoth Road was seen as a key gap since many users rent bikes and need to use Old Mammoth Road to complete the eastern loop of the Main Path. A need for more adventure-oriented backcountry trails was also identified as important. The development of events at local businesses was seen as a way to fund the bike rack program or other trail system improvements. Businesses could donate a portion of each purchase to a specific trails plan project. Placing comment cards and survey boxes at trailheads so trail users can provide suggestions when the experience is fresh in their minds, was seen as a way to make sure the Town maintained a high-quality user experience. Also, getting local organizations such as MLTPA and Mammoth Nordic to maintain facilities was

seen as a way to take some of the maintenance burden off of the Town and the Forest Service.

### **3.2.6. Road Cyclist Listening Session**

Bike club members and interested cyclists were invited to attend a listening session that focused on road bicycling issues. The local bike club has 125 members and 1-2 events per month during summer and about 50 participants per organized ride. Providing more bike lanes and shoulders on the roadways in town and in the surrounding areas was seen as a way to generally improve road cycling conditions. Main Street and Old Mammoth Road were suggested as key locations for new bike lanes. Adding bike lanes or wider shoulders to Mammoth Scenic Loop Road was seen as a way to provide safety for cyclists on a key corridor outside of Town. Local cyclists have existing “Century” rides that they would like to see on user maps. They would also like to be able to coordinate with Caltrans so that maintenance operations are conducted along their planned route in advance of scheduled events. Bike routes connecting Mammoth Lakes to Devils Postpile and Crowley were seen as important long-distance connections. Crowley is particularly important because many people reportedly commute by bicycle from Crowley to Mammoth Lakes already. The Devils Postpile shuttle was seen as a way to provide cyclists with a ride back to Mammoth if space were provided for bicycles. If demand for such a service were high enough, bike trailers similar to those used by MMSA Bike Park could be used on the buses to Devils Postpile/Reds Meadow. Local cyclists also saw a need for cyclist education, especially educating local adults and children to ride in the direction of traffic. Regularly replacing missing “Bike Route” and “Bike Lane” signage and resurfacing deteriorated streets were seen as important maintenance issues that have not received enough attention. Paving Sherwin Creek Road with bike lanes was seen as a way to create a loop ride near town and connect to Crowley along one of the only flat corridors in the Mammoth area. Several cyclists also expressed concern about the safety of the Lake Mary Road Bike Path, especially with respect to potential conflicts between uphill and downhill cyclists.

### **3.2.7. Paved Trails Workshop**

The paved trails workshop was a way for everyone who had participated in tours and listening sessions (and those who hadn’t) to come together one last time and discuss general ideas for improving the paved trail system. It was reiterated that the key missing links in the paved multi-use path system were the gap in the segment between Main Street and Mammoth Creek Park and Eagle Lodge. Many of the ideas expressed during tours and listening session were also expressed at the workshop. More specific ideas such as consolidating driveways along Main Street and getting Caltrans to relinquish Main Street to the Town also emerged. Funding was seen as the number one constraint to improving and expanding the trail network. Detailed information on available funding sources is provided in Chapter 8.

## 3.3. Summer Trail Use Survey

### 3.3.1. Overview

The Summer Trail Usage Survey had 292 respondents. The survey was promoted by the Town of Mammoth Lakes and MLTPA. Computer workstations were made available at CAMP: Summer so attendees could fill out the on-line survey. Each respondent selected up to five of their most common activities and then responded to detailed follow-up questions about each activity. The activities included in the survey were derived from the activities listed in the GIC database and through discussion with the project partners. **Table 3-1** reports on the popularity and frequency of each activity listed in the survey. The popularity of each activity is determined by the number of respondents who selected it as one of their top five. The frequency of each activity is described using the number of respondents who engaged in each activity at least once a week.

**Table 3-1. Activities by Popularity and Frequency**

Summer Activity	Respondents who selected this activity:		Respondents who engaged in this activity at least once a week:	
	#	%*	#	%**
Hiking (Day Hikes)	245	83.9	132	53.8
Mountain Biking	146	50.0	84	57.6
Dog Walking	106	36.3	89	84.0
Walking (Recreation/Not Dog Walking)	103	35.3	62	60.2
Walking (Work/Errands)	99	33.9	70	70.7
Road Bicycling	87	29.8	44	50.6
Backpacking (Overnight)	82	28.1	6	7.3
Fishing	80	27.4	28	35.1
Trail Running	55	18.8	37	67.3
Bicycle Commuting (Work/Errands)	51	17.5	37	72.6
OHV (Off Highway Vehicle)	47	16.1	15	31.9
Jogging/Running (Paved Surfaces)	36	12.3	25	69.4
Rock Climbing	29	9.9	11	37.9
Bird Watching	21	7.2	10	47.6
Horseback Riding	20	6.8	6	30.0

Note: Survey response rates do not necessarily reflect actual participation rates in each activity.

\* Percentage is based on the total number of respondents.

\*\* Percentage is based on the respondents who selected that particular activity.

Hiking (day hikes), mountain biking, dog walking, walking (recreation), and walking (work/errands) were the most popular summer activities. Dog walkers, bicycle commuters, walkers (work/errands), joggers/runners (paved surfaces) and trail runners tended to participate in these activities most frequently.

The user survey results show that lack of time is a primary reason many people do not participate in their favorite Mammoth summer activities. A majority of users in all but two groups identified this as a key constraint. There was only one user group for which this was not the most significant barrier. Bicycle commuters cited safety concerns as the key barrier. For OHV users, the lack of trail maps was a close second to lack of time.

Many users and stakeholders cited the need for better signage, maps, and general information about facilities. Unlike in winter, not as many comments were directed towards needing signage to modify user behavior. Many different types of summer users mentioned the need for trail maintenance to be performed in order for them to better participate in their activities.

Access to trails and facilities was a common need. Although it was not rated as significantly as other issues, it was fairly consistently rated. Specific stakeholder comments indicated a concern in particular with development precluding existing access options.

Unlike with winter activities (next section), users did not cite a strong need to reduce user conflicts, indicating it may not be as significant of an issue. The notable exception to this was dog walkers who wished to avoid areas with other users out of concern for the safety of their dogs and for those they might encounter (for example, having mountain bicyclists on a trail where dogs are off leash could pose a potential hazard to both parties).

Lack of time is the primary obstacle to significant number of transportation users, but the concern about safety was more prevalent among these user groups. Bucking the trend, safety trumped lack of time for bicyclists wishing to commute or ride to do their errands. Safety concerns were also the second most common reason that walkers did not engage in the activity. Individual comments were focused heavily on the provision of facilities such as sidewalks, paths, and bike lanes. Improving the conditions of the trails was also identified as a significant need for transportation users.

### **3.3.2. Analysis of Summer Activities**

#### **Hiking (day hikes)**

Day hiking was the most popular activity overall. It was also the activity that the most respondents (74.7%) wanted to do more of next season. Lack of time (83.1%) was the primary reason for not taking day hikes more often. A lack of trail maps (12.4%) and difficult access to trails (7.9%) were the other top obstacles to day hiking. Some of the most common other reasons given for not taking more day hikes related to the needs for more trails located closer to home, and trails that are suitable for younger children.

When asked how their day hiking experience could be improved, respondents requested better information in all phases of the day hiking process through more/better trail maps (37.1%), better signage and information at trailheads (35.1%), and better signage along trails (39.2%). Other potential improvements included better maintenance (21.6%) and eliminating conflict with other users (21.6%). The most frequently cited sources of conflict were horses/pack animals (14 mentions), mountain bikers (9) and dogs (5). The two most popular locations for day hikes were farther outside of town in the Lakes Basin (73.9%) and the Devils Postpile/Reds Meadow/Rainbow Falls area (54.3%). The third most popular location was the Old Mammoth/Sherwins area (33.1%) with access closer to town. Not surprisingly, 85.2 percent of respondents drive to reach their day hiking location.

Overall, the survey results indicate a need for more day hiking opportunities that are closer to town and provide opportunities for users of all ages and abilities. The results also indicate a strong desire for improved trail maps and better signage at trailheads and along trails. The results also suggest that providing quality day hiking opportunities closer to town could lead to a reduction in summertime motor vehicle trips.



**Potential hiking improvements:**

- TOML should identify in-town day hiking opportunities close to residences and employment areas.
- TOML should work with the Forest Service to identify new day hiking opportunities on Forest Service lands adjacent to the urban growth boundary.
- New hiking trails should use a stacked loop system to provide a variety of hiking experiences for users of varying abilities.

**Mountain Bicycling**

Mountain bicycling was the second most popular activity overall after day hiking, and it was also the activity that the second highest percentage of respondents (53.4%) wanted to do more of next summer. As with day hiking, lack of time among respondents (59.6%) was the primary reason for not participating more often. On a lesser scale, poor trail conditions (17.6%) and difficult access to trails (16.2%) were the other main obstacles to mountain bicycling. Slightly less important was a lack of trail maps (14%). Finally, trails that were not suited to the respondent's skill level was noted as an issue (14%); based upon the individual comments it appears this applies to users who desire trails that are easier and to users that desire more challenging trails.

When asked how their mountain bicycling experience could be improved, the responses were grouped rather tightly around four main issues: better signage (38.1%), improvement of trail conditions/maintenance (37.1%), better access (34.3%), and more/better trail maps (29.5%). The two most popular locations for mountain bicyclists were on either end of town at the Main Lodge/Mountain Portal (41.1%) and Shady Rest Park (39.0%). The third most popular location is also associated with MMSA and is the North Village/Bike Park Shuttle/Mountain Portal (22.6%). Mountain bicycling is one of the seven activities where a clear majority of users (72.0%) did not drive in order to participate.<sup>7</sup>

The survey results indicate a need for more access to better-quality mountain bicycle trails and the materials (maps and signage) to make it easier to enjoy the system. Individual comments by mountain bicyclists indicate a variety of skill levels present within the cohort and the need for trails that can accommodate users both new and experienced.

**Potential mountain bicycling improvements:**

- Improve signage and maps, including information about difficulty rating and loop opportunities.
- Provide increased maintenance on mountain bicycle trails.
- Improve access to trails.
- Mountain bicycle trails should utilize a “stacked loop system” design to provide a variety of riding experiences from beginner singletrack to advanced technical trails.

---

<sup>7</sup> The activities that most respondents did not drive to included Bicycle Commuting (2.0%), Jogging (8.3%), Walking for Work/Errands (17.7%), Road Bicycling (27.1%), Mountain Biking (28.0%), Walking for Recreation (32.0%) and Dog Walking (37.1%).

## **Dog Walking**

While dog walking was the third-most popular activity overall (36.3%) it was the most frequently performed activity (84.0%), indicating that while dog walkers are not the largest user group, they are dedicated to their activity. Lack of time among respondents (59.1%) was the primary reason for not participating more often. Conflicts with other users (25.0%) was the second most-cited reason; this is noteworthy in that no other user group ranked this factor so highly.

This concern predictably resulted in a desire by a significant percentage of dog walkers to improve their experience by eliminating conflicts with others (47.1%). In a distant second and third place were better access to trails (28.6%) and better signage (27.1%). The Lakes Basin area (50.5%) and Shady Rest Park (43.8%) were the two most popular locations by a clear margin, and most users (62.9%) did not drive to take their dog out for a walk.

With lack of time and user conflicts being the primary issues for dog walkers, the survey results indicate a need for dog-walking facilities that are more accessible and geared towards this group's specific situation regarding use of leashes and deposition of dog feces.

### **Potential dog walking improvements:**

- Provide more opportunities for dog walkers, particularly close in to town.
- Set expectations for all users of dog walking facilities (i.e., removal of feces, signage indicating leash use is to be expected).
- Add dog bag stations to all trailheads used frequently for dog walking.

## **Walking (Recreation/Not Dog Walking)**

Close behind dog walkers in percentage of participants, recreational walking (35.3%) was the fifth most frequent activity (60.2%). A large majority of respondents (74.5%) indicated that a lack of time prevented them from engaging in walking more often. To a lesser degree, poor trail conditions (12.7%) and safety concerns (12.7%) were the other primary obstacles.

When asked how their recreation walking experience could be improved, the responses were similar to those for mountain bicyclists: more/better trail maps (33.3%), better signage (32.0%), improvement of trail conditions/maintenance (22.7%), and better access (22.7%). The two most popular locations for walkers were Old Mammoth Road (35.9%) and the Lakes Basin area (31.1%). The popular Shady Rest Park (22.3%) was the third most frequented location. Nearly two-thirds (65.0%) of this group walked to access their activity location.

The survey results indicate a need for more access to better-quality recreation walking facilities and the materials (maps and signage) to make it easier to enjoy them. A large number of individual comments indicated that the provision of sidewalks—particularly to separate pedestrians from vehicular traffic—were needed to make the system safer and more enjoyable for recreational walkers.

It should be noted that sidewalk improvements are the domain of the Town's mobility planning efforts and sidewalk improvement projects cannot be funded through recreational trail funding sources.

**Potential recreation walking improvements:**

- Develop a more comprehensive sidewalk and in-town path system.
- Improve trail signage and maps.
- Provide increased maintenance on trails.
- Provide more access to trails.

**Walking (Work/Errands)**

As the third form of walking-specific activity on the survey, utility walking for errands or work followed closely behind recreation walking in terms of participation (33.9%), but exceed it for frequency (70.7%), making it the third most frequent activity. Lack of time (54.8%) was the primary reason participants did not walk more, with safety concerns (29.0%) second. Individual comments indicated that the concern for safety was due to a lack of pedestrian facilities separate from motor vehicle use.

The safety issue correlated strongly to the desire of utility walkers to have improved safety measures (44.3%) to ameliorate their experience. Better access to trails (34.4%) and improved trail conditions (32.8%) were also identified. Not surprisingly, the two most popular locations were Main Street (68.8%) and Old Mammoth Road (67.7%), which are densely developed and contain destinations for this group. More than three-quarters of users (77.1%) walked in order to participate in this activity.

Users in this group have a need for walking routes that keep them safe from vehicle traffic, which they currently view as threatening. Increased trail access and improved trail conditions were also identified.

It should be noted that sidewalk improvements are the domain of the Town's mobility planning efforts and sidewalk improvement projects cannot be funded through recreational trail funding sources.

**Potential walking (work/errand) improvements:**

- Develop a more comprehensive sidewalk and in-town path system.
- Provide increased maintenance on trails.
- Provide more access to trails.
- Develop education/signage program to keep drivers alert for pedestrians.
- Increase enforcement to curb hazardous driving activities (speeding, weaving, drunk driving).

**Road Bicycling**

As the second most popular type of bicycling participated in by the respondents, road bicycling had moderate participation levels (29.8%) and frequencies (50.6%). Nearly mimicking the responses for utility walking, lack of time (52.3%) and safety concerns (29.2%) were the primary reasons preventing people from road biking more. The need for dedicated and/or safer bicycle facilities such as bike lanes figures prominently in the individual comments provided by road bicyclists.

Even more so than utility walkers the issue of safety (50.0%) was of the utmost concern to road bicyclists to improve their experience, followed by improved trail

conditions/maintenance (37.9%). While the most popular location for road riding was the Mammoth Scenic Loop (44.8%), the location that received the second highest rating was “Other,” and included a range of responses. Given the mobility of a road bicyclist this is not surprising and points to the diversity of facilities that can be traversed by a user. Other popular specific destinations were the Lakes Basin area (33.3%) and Old Mammoth Road (21.8%). Most riders used their bicycle to access their desired road riding location (72.1%).

Users in this group have a need for road bicycling routes that provide them a measure of safety from vehicle traffic, which they currently view as threatening. While this is one of the few groups that did not identify increased access as an important concern, there is still a stated need for improved trail conditions/maintenance.

**Potential road bicycling improvements:**

- Provide increased maintenance on trails.
- Provide separated bicycle facilities.
- Provide better shared bicycle facilities.
- Develop education/signage program to keep drivers alert for bicyclists.
- Increase enforcement to deter hazardous driving behavior (speeding, weaving, drunk driving).

**Backpacking (overnight)**

While moderately popular (28.1%), overnight backpacking has the lowest frequency of participation (7.3%). This is to be expected considering the time commitment necessary to prepare for and execute an overnight camping trip, and respondents indicated that lack of time is the most significant restriction on participation (78.9%). These statistics match the national trend away from backpacking, which has been declining in popularity over the past decade.

While the reason restricting more backpacking activity was clear, the manners in which to enhance the experience were varied. Eliminating conflicts with other users (30.4%) was rated highest, with equestrians in general and pack outfits in particular being primarily cited. Route and wayfinding information was also lacking as indicated by the need for better signage along trails (25.0%) and more/better trail maps (23.2%).

A large percentage of backpackers visited the Devils Postpile/Reds Meadow/Rainbow Falls area (68.3%), as well as the Lakes Basin area (54.9%). The considerable public lands in the vicinity allow many backpacking options and it is therefore understandable that respondents selected “Other” as the third most popular destination. Driving (82.7%) is the most popular method for backpackers to reach the location of their activity.

Decreasing conflicts with equestrians and improving informational materials (maps and signage) were the primary needs of this group. Individual comments indicated that the process to obtain a backpacking permit was cumbersome and that existing injuries were preventing respondents from participating at a higher rate. The availability of parking areas was also noted several times.

**Potential backpacking improvements:**

- Improve trail signage and maps.

- Manage pack outfits to reduce their impact on other users.
- Improve parking facilities at trailheads.
- Streamline backcountry permit process.

### **Fishing**

Fishing is moderately popular (27.4%) but rates lower than most activities in frequency of participation (35.1%). Lack of time was the primary reason that respondents did not participate (89.3%), nearly to the exclusion of all other factors. The ways in which the fishing experience could be enhanced, however, was varied. Having more/better trail maps (25.7%) ranked the highest, with better signage along trails (22.9%) and better signage and information at trailheads (22.9%) slightly ahead of better trailhead/facilities (20.0%).

Most respondents selected the Lakes Basin area (73.8%) as their primary fishing location. The “Other” category (38.8%) was also popular, and is consistent with the notion that fishing can be dispersed widely across the landscape. Devils Postpile/Reds Meadow/Rainbow Falls (31.3%) also rated highly. Driving (85.2%) was the primary means for anglers to reach their fishing access points.

People engaged in fishing expressed a need for better maps and more information at trailheads and along trails regarding their activity. Enhanced facilities were also desired.

#### **Potential fishing improvements:**

- Include fishing info on trail signage and maps, or produce unique fishing maps.
- Improve trailheads and related facilities.

### **Trail Running**

There is a fairly large drop in participation rates for the remaining activities, starting with trail running (18.8%). Respondents cited insufficient time (74.5%) as the main reason they did not participate more frequently, with lack of trail maps (21.3%) a distant second but still ahead of any remaining factors.

Ways to improve the trail running experience were varied. Better signage along trails (40.4%) led the way, followed by eliminating conflicts with others (29.8%). Improved trail conditions/maintenance (25.5%) and better trailhead/facilities (25.5%) were tied and rounded out the top four issues. The Lakes Basin area (48.4%) Shady Rest Park (44.4%), and Old Mammoth/Sherwins (29.6%) were the most common locations for trail running. Driving (54.7%) was the primary means for runners to access the locations, although walking (35.8%) was also popular.

The survey results indicate a need for better trail information and improved trail conditions and facilities. Regarding the need to mitigate user conflicts it is interesting to note that while the individual comments on the issue were not extensive, nearly every main user group, including other runners, was identified as having conflicted with one of the 13 respondents to the question.

#### **Potential trail running improvements:**

- Improve signage.
- Provide increased maintenance on trails and improve trailheads.

- Design trails to better reduce user conflicts and provide opportunities for other users to divert conflicting use.
- Provide facilities specifically dedicated to trail running and high altitude training, away from areas that are crowded with other uses. Whitmore Park is a potential location.

### **Bicycle Commuting (Work/Errands)**

While utility bicycling had a moderate participation rate (17.5%), it had the second highest frequency rate (72.6%) after dog walking. This indicates that although this group is not large, it is dedicated. Safety concerns (52.8%) topped the list, making it one of the only activities where lack of time (27.8%) was not the primary constraint. Poor trail conditions (22.2%) were also a factor preventing use.

The two most important methods to enhance the utility bicycling experience were improved trail conditions/maintenance (41.7%) and improved safety measures (36.1%). Similar to utility walking, the two most popular locations were Old Mammoth Road (66.7%) and Main Street (64.7%), which are densely developed and contain destinations for this group. Given the nature of the activity it is logical that almost all users chose bicycling (96.1%) as the means to access their bicycle commute.

Users in this group have a need for bicycling routes that provide them a measure of safety from vehicle traffic, which they currently view as threatening. There is also a stated need for improved trail conditions/maintenance.

#### **Potential bicycle commuting (work/errands) improvements:**

- Provide increased maintenance on trails.
- Provide separated bicycle facilities.
- Provide better shared bicycle facilities.
- Develop education/signage program to keep drivers alert for bicyclists.
- Increase enforcement to deter hazardous driving behavior (speeding, weaving, drunk driving).

### **OHV (Off-Highway Vehicle)**

OHV participation rates (16.1%) make it only slightly less popular than utility bicycling, but it had one of the lowest frequency rates (31.9%). Lack of time (43.9%) was the primary reason people did not participate more often, followed by no trail maps (39.0%) and difficult trail access (29.3%). Better signage along trails (45.0%) more/better trail maps (40.0%), and better access to trails (35.0%) were the top methods identified to improve the OHV experience. Several individual comments identified the need to create and retain singletrack OHV trails, which is likely a reference to minimizing the presence of quads and full-size off-road vehicles.

Mammoth Scenic Loop (54.3%) was the most popular OHV destination, with the “Other” category (47.8%) coming in second and Shady Rest Park (37.0%) completing the top three destinations. Driving (89.1%) was the primary means for OHV users to access their riding opportunities.

Users in this group have a need for increased access to trails and better information (maps and signage) about the trails.

**Potential OHV (Off Highway Vehicle) improvements:**

- Improve trail signage and maps.
- Improve trail access from town.

**Jogging/Running (Paved Surfaces)**

Jogging/running participation rates (12.3%) were not particularly high, but had relatively high frequency rates (69.4%). Lack of time (73.3%) was clearly the main reason people did not participate more, with concerns over safety (20.0%) coming in second. Improved trail conditions/maintenance (36.0%) and improved safety measures (32.0%) topped the list of improvements with better signage along trails (24.0%) also being important. Old Mammoth Road (47.2%) was the most popular jogging/running location, with Shady Rest Park (33.3%) and Mammoth Creek Park (27.8%) were also high on the list. The vast majority of users (72.2%) walked (or possibly jogged/ran) to access this activity.

People jogging or running desired safer and higher-quality pedestrian facilities than currently exist. They are therefore similar to other in-town pedestrian users but they can cover more distance for the same amount of time.

**Potential jogging/running improvements:**

- Develop a more comprehensive sidewalk and in-town path system, particularly to provide loops of varying distances (3 -, 6-, and 10-mile options).
- Provide increased maintenance on trails.
- Improve trail signage to indicate jogging/running routes.

**Rock Climbing**

Rock climbing had low participation rates (9.9%) and moderate frequency rates (37.9%). As with nearly all activities, not enough time (65.9%) was the primary reason preventing people from climbing; unlike most other users, rock climbers gave lack of equipment (26.8%) as the other main impediment. Having more coordinated events (35.7%) received a higher ranking than most as a way to improve the rock climbing experience, with access to better equipment (28.6%), better access to trails (28.6%), and more/better trail maps (28.6%) rounding out the list.

The Lakes Basin area (55.2%) was popular with rock climbers and the “Other” category (44.8%) came in second, indicating that rock climbing is dispersed throughout the area. Based on the variety of options outside of the listed areas it is understandable that most climbers (82.8%) drove to reach their destinations.

Rock climbers expressed the greatest need for better equipment, organized events, more access to trails, and maps for the trails.

**Potential rock climbing improvements:**

- Develop trail systems that better serve climbers’ needs by providing efficient access from the trailhead to climbing sites.

- Improve trail maps to better convey climbing and access information to interested users.
- Study the potential for rock climbing events in the area to attract rock climbers.

### **Bird Watching**

Similar to rock climbing, bird watching has low participation rates (7.2%) and moderate frequency rates (47.6%). While still the top impediment, lack of time (50.0%) did not rate as highly as with other activities, whereas not having partners for bird watching (25.0%) was more of a concern for this group than any other. It is not surprising, therefore, that having more coordinated events related to the activity (69.2%) was rated extremely high by this group. Obtaining more/better trail maps (38.5%) was a distant second in ways to improve the bird watching experience.

The two most popular locations for bird watching were the Lakes Basin area (47.6%) and the Old Mammoth/Sherwins area (33.3%). The “Other” category (28.6%) was a close third, and a majority of participants (65.0%) drove to these locations.

Bird watchers expressed the greatest need for organized events and better trail maps.

#### **Potential bird watching improvements:**

- Improve trail maps to better convey bird watching information to users, or provide stand-alone bird watching guides

### **Horseback Riding**

With the lowest participation rate (6.8%) and the second lowest frequency rate (30.0%), horseback riding is not very popular within the Mammoth Lakes area. Lack of time (56.3%) was the most significant obstacle to riding more often, with better access to trails (41.7%), better trailhead/facilities (33.3%), and better signage along trails (33.3%) listed as the best way to improve the experience. The cost of horseback riding was also cited as an impediment. The Lakes Basin area (50.0%) and the Old Mammoth/Sherwins area (50.0%) were equally popular with equestrians, with most participants (70.0%) driving to their preferred location.

Horseback riders expressed the greatest need for better access and facilities, along with signage.

#### **Potential horseback riding improvements:**

- Improve access to trails.
- Improve facilities and signage.



## 3.4. CAMP: Winter

CAMP: Winter consisted of a series of tours, listening sessions and workshops which covered a variety of topics related to summer trail use in and around the Town of Mammoth Lakes. The following pages summarize key input received from CAMP: Winter.

### 3.4.1. Forest Service Listening Session

The Forest Service listening session allowed the consultant team to meet directly with Forest Service officials to discuss winter trails issues on USFS-administered lands around Mammoth Lakes. Shady Rest trailhead congestion was seen as a key issue for winter recreation in the area. USFS staff regularly receives complaints about dog feces and unleashed dogs on the trails. Separate dog trails are often seen as a solution by some. USFS staff has asked trail users to keep their dog on a leash and until they get away from the trailhead and to carry a bag for feces. USFS staff say that people are very cooperative once they are informed of the rules, therefore signage and an educational campaign may be at least a partial solution. TOML and MLTPA as well as other local organizations could take part in the educational element. It was also suggested that clearing or grooming more of the in-town paved path would relieve pressure from Shady Rest by providing additional dog walking opportunities closer to people's homes.

The current order of priority for USFS snow removal is (1) the Welcome Center, (2) Forest Service Employee Parking, and (3) Shady Rest. People gravitate to Shady Rest first for winter recreational opportunities, but the Welcome Center provides an alternative staging ground for Nordic skiing access and may be a good short-term solution for congestion at Shady Rest. The provision of alternative staging areas for OSV use could also lead to reduced congestion. USFS staff says that when OSV users are told of other staging areas they often opt to use them instead of dealing with the congestion at Shady Rest. USFS staff indicated that the widening of the Scenic Loop Road in 2010 will create new opportunities for motorized winter recreation. The road will be widened and brought up to sight-line standards and new OSV staging areas could potentially be developed as part of that process.

USFS staff indicated that the snowmobile population has been generally very considerate of other users, per USFS observations and surveys and that some skiers have expectations that cannot be fulfilled on a public multi-use winter trail system.

In general, the creation of new opportunities for OSV, cross-country skiing and dog walking in other areas will relieve pressure on Shady Rest. USFS indicated that they would consider recommendations from the Town of Mammoth Lakes regarding Shady Rest.

### 3.4.2. Emergency Services Listening Session

Emergency responders were invited to attend a listening session to discuss trail-related safety issues. The major in-town safety issue discussed was winter pedestrian safety, especially during and shortly after storms. The key pedestrian safety issue is a lack of cleared sidewalks that forces pedestrians to walk in the road. Even where sidewalks exist, the roadway is often cleared before the adjacent sidewalk, which forces pedestrians into the roadway. Attempting to clear sidewalks first or simultaneously with roadways was seen as a potential solution. Evening accidents on Main Street are a problem when bars close. Having a dark time for

snow removal crews during rush hour and when bars close could reduce the potential for accidents, especially on Main Street.

The major out-of-town issue was associated with a lack of signage indicating the geographic location for those in need of emergency services. Providing mile marker signage or GPS coordinates on all trail signage could help emergency responders.

Snowmobile adventures go far out and people get in trouble and don't know where they are because of lack of trail markings. Response time takes 5-10 minutes generally, but can sometimes take longer. Snowmobile adventure folks generally have guides with radios. Unguided snowmobilers need to be aware that they need cell phones (and potentially GPS units).

### **3.4.3. Motorized Listening Session**

Motorized trail users were invited to speak with the consultant team to express their concerns about the winter trail system. A major concern is that the motorized users wanted to make sure that Green Sticker funds go to cover grooming only on trails that allow OSV use. They are also worried that the creation of non-motorized trails using motorized funding has created a situation where non-motorized groups are now trying to kick them out of the Shady Rest area.

Access between the Industrial Park, the RV park and the trailhead is important for snowmobilers because many stay in the RV park or store their vehicles at the Industrial Park. Unless they can drive through the tunnel under Highway 203, they have to pull OSVs on a trailer to Shady Rest or other trailheads farther from town. Ideally, snowmobilers said, they need a big parking lot, bathrooms, access to gas stations that snowmobiles can drive up to, and access to trails near town.

Snowmobilers say they are willing to do much of the trails work themselves. They created the Orange diamond trail system on their own and the Snowmobile Association maintained restrooms at Shady Rest for 10 years. Snowmobilers want access through the Knolls, but realize that some residents are resistant. Motorized residents of the Knolls would like to be able to access backcountry surrounding the Knolls from their homes (private access only).

The Snowmobile Association would like to see trailhead parking at Shady rest triple in size, allowing for a loop road for snowmobile trailer parking only and interior spaces for smaller vehicles and non-motorized users.

There was a general consensus that out-of-town trailheads were not desirable and that higher gas prices create need for snowmobilers to find trailheads closer to town where they are staying (like the RV park).

Sherwin Creek Road was seen as another potential trailhead close to town that could serve multiple users (snowplay, OSV, dog walking, cross-country skiing, etc.)

### **3.4.4. Agency Winter Mobility Meeting**

Representatives from the Town of Mammoth Lakes and other local agencies gathered to provide input on winter mobility issues. One of the first issues discussed was the need for clarification of scopes between trails and mobility plans. A conflict between roads and sidewalks in terms of clearing and storage was seen as a key challenge to providing safe

pedestrian mobility in the winter. Another issue that presents a maintenance challenge is the fact that TOML has to borrow a snowcat from the Water District to do pre-grooming for Mammoth Nordic along the Main Path.

The fact that bike facilities—particularly the ones parallel to a roadway—are currently used for snow storage eliminates the possibility of using them for mobility or recreational purposes.

A lack of in-town snow storage means that snow would have to be hauled away to better accommodate pedestrians. Heated sidewalks are an option but the current cost of propane is prohibitive. Geothermal energy could be the most cost-effective solution, but it is not currently available.

Main Street was seen as a serious safety concern in the winter. It was suggested that turnouts on Main Street at bus stops would prevent buses from being rear ended and protect people waiting at bus stops.

It was also suggested that snow along Lake Mary Road (and potentially the Lake Mary Bike Path) would be easier to clear or groom. Since there is generally nothing on the immediate downhill side of the path, snow maintenance crews can blow snow over the path.

Providing safe access to bus stops was seen as a goal for the Town. Identifying key walking routes to transit was identified as a potential project, but would likely require an origin and destination survey of bus users to identify the most common routes. This could be undertaken as part of the mobility plan. A survey may determine that users arrive at bus stops from multiple directions, making prioritization difficult. In many places there are no underlying sidewalks to clear. Providing sidewalks throughout town and clearing them all during winter is the best solution, but finding sufficient funding for maintenance would be the key obstacle. It should be noted that sidewalk improvements are the domain of the Town's mobility planning efforts and sidewalk improvement projects cannot be funded through recreational trail funding sources.

### **3.4.5. Non-Motorized Listening Session**

Non-motorized users expressed a desire for general winter mobility and safety. They want to be able to access non-motorized opportunities from their homes without driving and without worrying about dangerous roadway conditions. Connecting to SoCal Edison via the bike path and getting people from the Meridian/Minaret area to Sherwins via non-motorized transportation were seen as important non-motorized connections. Access to the Knolls from Town was also seen as important to provide localized recreational opportunities. A vision of a potential cross-country ski loop around town was seen as a potential goal. While this would require decisions about whether to clear or groom pave paths, attendees wanted to make sure the trails plan did not preclude this option.

A lack of signage was a big concern as was getting people out of their cars and off the roads as much as possible. One user commented that the trail system is excellent now, but has been diminishing due to development and lack of maintenance.

Several attendees expressed a desire for a more uniform and cohesive Nordic trail system, where appropriate, and there was a desire to make sure in-town XC trails are far enough away from roads that they are pleasant to ski on. In-town grooming and grooming of trails near schools were seen as ways to give more people access to recreational activities without

driving. Trail access needs to be provided through new developments so the trail system and access to it isn't lost to new development.

Shady Rest was seen as a key area of user conflict and attendees expressed a desire for greater separation of motorized and non-motorized uses. Separation of users was seen as a key way to have everyone's needs equitably and aesthetically met. Shady Rest Park was described as a potential winter recreation staging area. Motorized recreation could stage at the parks north side, non-motorized to the south side and snowplay could occur on the site of the park. Providing separate trail loops that allow dogs and prohibit dogs was seen as necessary to improve user experience in the Shady Rest area.

Some residents in the Lodestar area expressed the concern that the paved path along Lodestar Drive is not cleared or groomed in the winter. There was no consensus as to whether it should be groomed or cleared. Residents and stakeholders need to determine the best and highest use.

Users feel there is a need for a snow play area. Shady Rest Park, Mammoth Creek Park, the ski back trail and the Sherwin Creek Road area were mentioned as potential localized snow play areas for residents and visitors.

Enforcement of motorized restrictions was seen as key to ensuring the safety of non-motorized users and enhancing the non-motorized trail experience. One user said that Minaret Summit used to be an ideal XC area, but is criss-crossed by motorized users even in OSV-restricted areas.

Snowcreek VIII must provide public access to the Sherwins. Residents in Snowcreek V and VII are concerned about noise from motorized users. Fear of motorized use may make Snowcreek residents wary of providing access in general. Providing a motorized restriction in the areas closest to Snowcreek residents may be a solution. This would allow for non-motorized access only at Tamarack Street and Ranch Road/Snowcreek VIII.

### **3.4.6. Forecountry Session**

Stakeholders interested in backcountry recreational opportunities attended a listening session and expressed their ideas for improving backcountry opportunities. Several specific ideas for winter routes and events were brought forward.

Development of a large local cross-country skiing event was seen as a potential way to reap economic benefits from an expanded winter trails network. The Marcia Longa tour in Italy was seen as a model since it holds events year round—skiing, running, and biking.

The Los Angeles Sierra Club Ski Mountaineers section was interested in Coldwater Creek and access to the Mammoth Crest from Lake George.

It was reported that the Sierra Star Golf Course is interested in programming Winter Nordic on top of its golf course.

North facing Sherwins have better snow than south facing Knolls area, making the Sherwins a key focus for backcountry winter access issues. The Knolls and area NW of Town is desirable for flat xc/backcountry skiing, but snowmobile activity makes it less desirable.

An area near the intersection of 203 and Scenic Loop could provide parking and access points for motorized and non-motorized backcountry users.

Use Lake Mary Road path as part of a winter groomed loop trail that connects to the Village, the ski back trail, Mammoth Scenic Loop and shared snowmobile trail.

Biathlon initiative looking for a place that is safe that will have little impact. Mammoth pack station (stables) already has permit and is already impacted. It is a north facing location with berm and few existing skiers. In summertime it could move to the motocross area (old strip mine). Park City, W Yellowstone, Anchorage, Lake Placid, and parts of Minnesota have biathlon area. Up to 40,000 people show up at events. This could be a boost to the local economy.

There was a need expressed for facilities that provide opportunities for adjacent residents, but are far enough away so as not to impact their quality of life.

### **3.4.7. Winter Mobility Workshop**

The Mobility Workshop was intended to bring together people from different areas of interest to discuss winter mobility issues in the Town of Mammoth Lakes. A key benefit of the workshop was that it allowed people of different interests to interact with each other and Town officials and discuss their concerns. Many of the issues discussed had to do with transit and traffic management and would be most appropriately addressed in the upcoming TOML mobility plan.

There was general consensus that if there are going to be more trails around town, they need to be cleared or groomed during winter when they are needed most. Several attendees felt that clearing existing multi-use paths such as the “Tallus” path was most important for winter mobility, but recognized that grooming was also a legitimate use.

The 203/Main Street corridor came up again as a key area for improving winter mobility. While it was recognized that smaller streets don’t necessarily require sidewalks, it was agreed that all major streets need sidewalks on both sides. The need to improve bus stop access and conditions was also mentioned. Some respondents felt that pedestrians walking across streets creates hazard and that bridges or tunnels should be used in key areas, especially along Main Street. Slowing traffic on Main Street was also suggested as a safety measure.

The Lake Mary Road closure was seen as problematic because the snowbank at the end of the road is difficult to climb and practically inaccessible for seniors or parents carrying small children. Steps or a gradual slope were suggested to improve access for people of all abilities.

Creating neighborhood connectors by using existing utility easements or purchasing houses/lots was seen as an important strategy for improving mobility.

Transit was seen as a way to provide general mobility in the winter and summer because it provides an opportunity for users to ride the bus uphill and ski/ride the downhill or flat areas.

Consolidating parking was seen as a way to get folks to park their cars as soon as they get to town. Then they can access all of town’s amenities by transit, foot, etc. This concept was partially addressed in 2006 Mobility Study. There was also a feeling that making it easier to get to bus stops, providing more frequent buses, more bus routes, sticking to the timetable, and having real time “next bus” information, would be successful in getting more folks out of their cars.

Providing directional district guide signs coming into town at 203 and Meridian may relieve unnecessary traffic on Main Street as visitors staying on the south side of Town can access their lodging via Meridian. Better signage identifying the public parking areas such as the existing park and ride lot may reduce traffic created by people searching for parking. Large surface parking lots were seen as problematic for “walkability” and budgetary reasons. The cost to clear Minaret Village parking (trucked out) was \$20,000.

An efficient snow maintenance process was important to some attendees who suggested that all labor and equipment to plow roads should be ready to go when there is a big snowstorm so there is no delay in snow removal.

One resident was concerned about snow storage in Town. He felt that it posed drainage, health and safety issues. He also recommended that snow be moved out of Town as much as possible, recognizing that the associated cost, noise and emissions generated by trucking snow would be an obstacle. The idea of storing snow at Shady Rest to build a snow play park was presented as consistent with the idea of moving the Shady Rest trailhead to the park.

## ***3.5. Winter Trail Use Survey***

### **3.5.1. Overview**

The Winter Trail Usage Survey had 316 respondents. Each respondent selected up to five of their most common activities and then responded to detailed follow-up questions about each activity. The activities included in the survey were derived from the activities listed in the GIC database and through discussion with the project partners. **Table 3-2** reports on the popularity and frequency of each activity listed in the survey. The popularity of each activity is determined by the number of respondents who selected it as one of their top five. The frequency of each activity is described using the number of respondents who engaged in each activity at least once a week.

**Table 3-2. Winter Activities by Popularity and Frequency**

Winter Activity	Respondents who listed this activity in their top five:		Respondents who engaged in this activity at least once a week:	
	#	%*	#	%**
Nordic Skiing on Groomed Trails	154	54.2	79	51.3
Nordic Skiing on Ungroomed Trails	121	42.6	54	44.7
Dog Walking	109	38.4	89	81.7
Backcountry Ski/Snowboard	101	35.6	28	27.8
Snowshoeing	94	33.1	20	21.3
Winter Walking (recreational/not dog walking)	64	22.5	25	39.1
Winter Walking (work/errands)	58	20.4	45	77.6
Winter Hiking (Day Hikes)	58	20.4	22	38.0
Snow play (sledding, tubing, etc.)	52	18.3	11	21.1
Ice Skating	37	13.0	5	13.5
Snowmobile: on Trails	35	12.3	7	20
Snowmobile: in Open Areas	31	10.9	10	32.3
Bicycling	23	8.1	8	34.7
None of the above	14	4.9	10	47.6
Running	12	50.0	17	50.0
Winter Camping	11	3.9	0	0.0
Dog Sledding	6	2.1	3	50.0
Disabled Recreation & Access	4	1.4	1	25.0
Ice Fishing	4	1.4	0	0.0
Equestrian Activities	0	0.0	0	0.0

Note: Survey response rates do not necessarily reflect actual participation rates in each activity.

\* Percentage is based on the total number of respondents.

\*\* Percentage is based on the respondents who selected that particular activity.

Similar to the summer survey, users cited lack of time as the primary reason they do not participate more often in their favorite winter activities. While changing user habits to create more time in their lives to recreate is outside the scope of this effort, analyzing the data indicates that people may benefit by having trail facilities closer to where they live, as proximity would increase usage by decreasing the need for people to transport themselves to a recreation facility or area.

Conflicts among winter recreationists exist in nearly every form, and several unmet needs were voiced by a variety of users. Non-motorized users desire an experience and facilities not shared with motorized users for reasons relating to personal comfort/safety, snow and track conditions, and fumes and noise. Motorized users expressed a particular desire to have more access opportunities close to town to decrease the effort required for them to reach a trailhead.

Regardless of the mix, users expressed a need for more facilities to avoid congestion at popular trailheads and on popular facilities originating from these trailheads. Congestion within parking areas and also on the trails is occurring and was a common concern voiced by stakeholders, particularly at the Shady Rest Campground/Park. This need is also likely expressed in some of the user conflict situations.

The presence of dogs was divisive, and both dog owners and non-owners indicated a need for facilities specifically for dog walkers. This need is considerable in that dog walking is a very popular form of outdoor winter recreation for a significant number of users. The need

therefore exists both for more facilities in general for dog walkers, and for facilities that are separated from other users. Regarding the latter the concerns are for the safety and enjoyment of the dog walkers as well as for non-dog walkers.

Improved connectivity between existing winter recreation facilities was identified by several user groups as being important to increasing their ability to undertake their preferred activity. This need is likely both for recreation and transportation purposes. For the former, it is assumed that providing these connections will allow increased use and a diversity of experience, thus fulfilling multiple needs.

Although not rated highly by any one group, the need for better trail information was identified consistently by not only user groups but by land managers and emergency medical service (EMS) providers, as well. This need encompasses information provided through improved trail maps and signage to allow people to navigate the trail system so they may have a safer and more enjoyable experience. Signage is also needed to provide information about use and behavior, and to assist Emergency Medical Services (EMS) with location and recovery efforts.

The primary transportation need among users is safe pedestrian and bicycle routes during winter, and several user groups and stakeholders identified the current snow removal program as being an impediment to that situation. When streets are plowed the snow banks either cover sidewalks and paths or create walls that prohibit “escape” by cyclists/pedestrians where they are forced to share the road with vehicles.

The survey results indicate that increased safety and better facilities are needed to induce more people to walk and ride their bicycle during the winter. Specific needs included plowing of paths and sidewalks, removal of snowbanks along roadways to increase visibility and mobility, and coordination of plowing activities to ensure that plowed non-motorized facilities are not covered by snow-clearing activities on roadways.

As with recreation users, improved connectivity between existing amenities was identified by stakeholders as being important to increasing livability and activity. Particular needs were identified to connect neighborhoods, existing paths and trails, activity hubs, and transit facilities.

## **3.5.2. Analysis of Winter Activities**

### **Nordic Skiing on Groomed Trails**

Nordic skiing on groomed trails was the most popular activity overall (52.4%) with the second highest frequency rate (51.3%), and classified highly as an activity that respondents wanted to do more of next season (39.4%). Not having enough time (52.4%) was the primary reason for not Nordic skiing more often, with conflict with other trail groups (16.5%) running a distant second. The conflict most commonly cited was with snowmobilers, followed by complaints about dogs.

Nordic skiers’ groomed trails experience could be enhanced by improved trail conditions/maintenance (38.0%); having more time (35.2%) was a close second. This points to the need that this group has for improved quantity and quality of facilities in order to enjoy their sport. Eliminating conflicts with other trail users (26.9%) was also an issue. The most popular groomed locations for Nordic skiing were Shady Rest (51.9%) and Tamarack Cross Country Ski Center (51.3%); the Lakes Basin area (18.2%) was third by a wide margin.



The tight grouping of the two most popular locations is not surprising because this activity by definition must take place on a modified surface, and opportunities are therefore limited. This also influences the situation where most users (78.1%) indicated they drove to reach the groomed Nordic skiing area.

Overall, the survey results indicated a need for more groomed Nordic skiing opportunities closer to town to allow people to take better advantage of their favorite winter activity. Providing these trails separately from motorized users, dogs, hikers, and others was strongly emphasized, in part to avoid noise and fumes and also to preserve the quality of the groomed tracks.

**Potential Nordic skiing on groomed trails improvements:**

- Provide groomed Nordic skiing opportunities close to town. The locations should be dispersed in order to reduce crowding at current sites, potentially by grooming continuous segments of the Main Path, and taking advantage of underutilized winter open spaces such as golf courses and city-owned properties.
- Take measures to separate Nordic skiers from snowmobilers and dog walkers, where possible.

**Nordic Skiing on Ungroomed Trails**

Nordic skiing on ungroomed trails was the second most popular winter sport (42.6%), and rated relatively high as an activity that respondents wanted to do more of next season (31.3%). It also had a high frequency rate (44.7%). Lack of time (54.3%) was the primary reason for not going skiing more often, and it led by a clear margin, with the second most common reason being conflict with other trail groups (19.8%), specifically snowmobilers.

When asked how their ungroomed trails experience could be improved, Nordic skiers indicated that more time (40.7%) and eliminating conflicts with other trail users (24.7%) were their primary concerns. More/better trail maps (22.2%) and better access to trails (22.2%) also rated highly. The most popular locations for skiing were Shady Rest (34.7%), outside of Mammoth (31.4%), and Mammoth Scenic Loop (28.9%). Given the preference for Shady Rest it is not surprising that this group identified conflicts as an issue, as the area is popular with a variety of users in the winter. The vast majority of users (79.2%) drove to reach their preferred skiing area.

Similar to the previous category, the survey results indicated a need for more ungroomed Nordic skiing opportunities close to town, particularly where they can be provided separately from snowmobile areas. The results also indicate a desire for improved trail maps.

**Potential Nordic skiing on ungroomed trails improvements:**

- Provide ungroomed Nordic skiing opportunities close to town. These trails should be in areas closed to snowmobiles.
- Develop better trail maps to let users know of the opportunities that exist for Nordic skiing on ungroomed trails, particularly close to the developed areas of Mammoth.

## **Dog Walking**

As with summer, dog walking was the third-most popular activity overall (38.4%) and it was the most frequently performed activity (81.7%) by a large margin. This indicates that while dog walkers are not the largest user group, the nature of their activity requires year-round dedication. Lack of time among respondents (35.7%) was the primary reason for not participating more often, although conflicts with other user groups (33.9%) ranked a close second. Individual responses denoting conflicting user groups showed the divisiveness of this issue: snowmobilers, cross-country skiers, people who don't like dogs, people who let their dogs off leash, and people who don't want dogs off-leash were all mentioned.

These concerns predictably resulted in a desire by a near-majority of dog walkers to improve their experience by eliminating conflicts with others (50.0%). When asked "with which user group" could conflict be reduced, the responses were again diverse: nearly all other snow users (snowmobilers, cross-country skiers, snowboarders, paraskiers), people who are not "dog-friendly," and both off- and on-leash dog walkers. Having more time (26.9%) was the second most popular concern, but it ranked clearly behind the issue of user conflict.

Considering that most dog walkers participate in their activity at Shady Rest (59.6%) it is not surprising that there are conflicts, as this location is heavily used by many winter recreationists. Old Mammoth/Sherwins (27.5%) was the second most common location but was less than half as popular with users. The split was nearly equal between those who drove (46.7%) to those who walked (49.5%) to take their dog out.

More so than with any other winter user group, dog walkers cite trail conflicts as being the primary need to be addressed. Reviewing results and comments from other users indicated that the concern is from both dog walkers and non-dog walkers: for example, Nordic skiers, people out snowshoeing, dog sledders, and backcountry skiers/snowboarders all noted conflicts they have with dogs. The concern is more acutely expressed by those with dogs, however, and appears to be a minor issue with other users.

### **Potential dog walking improvements:**

- Provide more opportunities for dog walkers that allow off-leash travel while regulating/eliminating such use in other situations.
- Set expectations for all users of dog-walking facilities (i.e., signage indicating off-leash use is to be expected).
- Establish a "dog park" or other areas specifically for dog walking around town.
- Grooming or clearing all paved path segments and sidewalks during winter months will help to disperse dog walking activities around town, relieve pressure on Shady Rest, and reduce the need to drive to a suitable dog walking location.

## **Backcountry Ski/Snowboard**

While backcountry skiing/snowboarding (35.6%) was not the most popular activity it was the one that the highest percentage of respondents (43.3%) wanted to do more of next winter. This was reflected in its moderate frequency rates (27.8%) and the ranking of lack of time (53.4%) as the main reason respondents did not participate more often. Safety concerns (33.1%) were also listed and this is probably related to avalanche danger in the backcountry.

When asked how their backcountry skiing/snowboarding experience could be improved, most respondents requested more time (48.7%). The second most popular issue was better access to trails or backcountry opportunities (27.8%) as that may decrease the necessary time commitment to participate in backcountry skiing/snowboarding. Old Mammoth/Sherwins (51.5%) and the Lakes Basin area (42.6%) were the clear favorite locations for this activity, with Outside of Mammoth (38.6%) rounding out the top three choices. Pursuant to the issues of lack of time and access, a clear majority of users (71.6%) drove in order to backcountry ski/snowboard.

The survey results indicated a need for more access to backcountry areas, especially the Sherwins close to town where existing access is limited. This would alleviate some of the time constraints experienced by participants, and would make it easier to reach high-quality backcountry slopes from in town. Comments regarding safety concerns and the provision of improved avalanche conditions information are not necessarily within the scope of this effort, although they are important to note.

#### **Potential backcountry ski/snowboard improvements:**

- Improve access to backcountry areas from town. This may take the form of maintaining direct access by placing corridors through private property at the perimeter of town, particularly to the south towards Old Mammoth/Sherwins, which contain the most popular backcountry ski/snowboard areas.

### **Snowshoeing**

Snowshoeing is the last of the most popular winter activities, with relatively high participating rates (33.1%) and moderate frequency rates (21.3%). It also had the third highest percentage of respondents (33.5%) who wanted to do more of next winter. Not enough time (47.7%) was cited by respondents as the primary reason they did not snowshoe more frequently, with lack of equipment (22.1%) and no trails maps (19.8%) also being issues.

Like most winter recreationists, snowshoers indicated that their experience could be improved by having more time (39.4%). Unlike the other top activities, the respondents indicated a variety of other concerns: better signage along trails (28.7%), more/better trail maps (28.7%), and better signage and information at trailheads (24.5%), which are all similar issues relating to orientation and navigation. Snowshoeing was fairly evenly dispersed among three primary locations, and this is perhaps indicative of the relative mobility of the sport as it does not rely on any specific type of terrain or track. Tamarack Cross Country Ski Center (30.9%) was the most popular location, followed closely by Shady Rest (29.8%) and the Lakes Basin area (28.7%). Most users (59.1%) drove to their preferred snowshoe area, although nearly a quarter walked (22.6%).

Snowshoers have a clear need for more information about trails both prior to their excursion and while they are out. The desire to participate in the sport more was also expressed both explicitly and implicitly.

#### **Potential snowshoeing improvements:**

- Improve signage at trailheads and on the trail. Trailhead signage should include information about difficulty rating and loop opportunities.

- Improve maps, including information about difficulty rating and loop opportunities.
- Improve access to snowshoe areas from town to decrease time commitment to participate.

### **Winter Walking (recreational/not dog walking)**

Starting with recreational winter walking (22.5%) there is a sharp drop in participation, although the drop in frequency rates (39.1%) is less severe. While not enough time (30.8%) was still the highest scoring issue preventing people from participating more often, poor trail conditions (28.2%) and difficult access to trails (28.2%) were nearly as important.

In keeping with the ranking shown above, winter walkers cited having more time (30.0%) and improved trail conditions/maintenance (30.0%) as being equally important to enhancing their experience. Tightly grouped together were requests for more/better trail maps (27.5%), better access to trails (25.0%), better signage along trails (22.5%), and better signage and information at trailheads (20.0%).

The most popular location for recreational walking was Old Mammoth Road (40.6%), being nearly twice as popular as Main Street (21.9%). Walkers were otherwise fairly dispersed with moderate use at Snowcreek (20.3%), Old Mammoth/Sherwins (20.3%), Tamarack Cross Country Ski Center (18.8%), Mammoth Creek Park (17.2%), Shady Rest (17.2%), Outside of Mammoth (15.6%), and Juniper Ridge/Eagle Lodge/Mountain Portal (14.1%). The diversity of locations is reflected in the fact that most users walked (68.8%) to their desired destination.

Survey results indicate that recreational walkers needed better information about their trail experience, coupled with more and better trail opportunities in general.

#### **Potential winter walking (recreational/not dog walking) improvements:**

- Improve signage at trailheads and on the trail.
- Improve trail maps.
- Improve the quality of the walking opportunities and provide better access to walking areas to decrease time commitment to participate.
- Focus on development of sidewalks and multi-use path facilities along Old Mammoth Road and keep them maintained (cleared or groomed) throughout the winter.

### **Winter Hiking (Day Hikes)**

Winter hiking (20.4%) is only slightly less popular than recreational walking and exhibits similar frequency rates (38.0%). Lack of time (37.7%) was the primary constraint on this activity, followed by safety concerns (21.3%), no trail maps (18.0%), and lack of information at trailheads (18.0%). Respondents believed their winter hiking experience could be improved by having more time (39.0%), but also through more/better trail maps (32.2%) and better access to trails (30.5%),

Two locations were tied for the most popular areas for winter hiking: Outside of Mammoth (39.7%) and the Lakes Basin area (39.7%). Shady Rest (24.1%) rounded out the top three choices. In contrast to recreational walkers, winter hikers typically drove (66.7%) to their preferred hiking location.

The general needs of winter hikers were for safer, more opportune options for hiking, coupled with better maps to let people know about the trails.

**Potential winter hiking (day hikes) improvements:**

- Improve trail maps, including information about difficulty rating and loop opportunities for winter hiking.
- Provide better access to winter hiking trails to decrease time commitment to participate.

**Winter Walking (work/errands)**

Utility winter walking (20.4%) is as popular as winter hiking but is undertaken at a drastically reduced frequency (7.3%). This is the most popular activity where lack of time is not the predominant barrier to increased use; safety concerns (60.5%) are instead the most significant impediment to utility walking. Poor trail conditions (55.3%) were also an issue. Individual comments indicated that the concern for personal safety in the face of motor vehicles was the major factor, in part because sidewalks are either not plowed or not available.

Related to safety, respondents identified improved trail conditions/maintenance (51.5%) and improved safety measures (51.5%) as the two most important methods to improve their experience. This was augmented by such comments as the need for better snow removal techniques, more careful operation of vehicles on the part of drivers, and more sidewalk connections through town. Better access to trails (33.3%) was also listed as a significant issue. Old Mammoth Road (74.1%) and Main Street (70.7%) saw the vast majority of utility walkers, as these locations are densely developed and contain destinations for this group. Most users (86.4%) walked in order to participate in this activity.

Users in this group needed walking routes that kept them safe from vehicle traffic, which they viewed as threatening. Increased trail access and improved trail conditions were also identified as desirable.

**Potential winter walking (work/errand) improvements:**

- Develop a more comprehensive sidewalk and in-town path system.
- Provide increased winter maintenance on sidewalks.
- Develop education/signage program to keep drivers alert for pedestrians.
- Increased enforcement to curb hazardous driving activities (speeding, weaving, drunk driving).
- Snow removal program that does not disadvantage pedestrians.

**Snow play (sledding, tubing, etc.)**

Snow play (18.3%) was moderately popular and undertaken at a moderate frequency (21.1%). Lack of facilities (35.3%) for snow play was the primary reason that people did not engage more frequently in this activity, with individual comments indicating that not having free facilities with adequate parking was a particular concern, as was finding a “safe” area. Lack of time (26.5%) and difficult trail access (23.5%) were also noted.

Better access to trails (29.0%) was identified as the most important way to improve the snow play experience. The request for more parking spaces at popular trailheads (25.8%) was also

noted, and this is the highest ranking that this issue received from any user group. Outside of Mammoth (30.8%) and Mammoth Scenic Loop (23.1%) were the primary specific snow play locations, with the “Other” category (21.2%) close behind. The individual locations listed indicated there is a variety of sites utilized by users, including private residential yards. Although people wanted more parking spaces at trailheads, driving (53.7%) was not emphatically more popular than walking (31.5%) for users to reach their preferred snow play locations.

The survey results indicated that people who engage in snow play needed better, safer sites, particularly where hills do not end in areas trafficked by cars or snowmobiles. Not having to pay for snow play use was also desirable, as was having adequate parking at the sites.

**Potential snow play (sledding, tubing, etc.) improvements:**

- Provide more access to trails that lead to snow play areas.
- Develop snow play areas that are safer and do not conflict with other users.
- Provide more parking at snow play areas.

**Ice Skating**

Ice skating (13.0%) was a moderately popular sport in Mammoth but had low frequency rates (13.5%) compared to other activities. It did, however, rate fairly high as an activity that people wanted to do more (22.5%) While lack of time (41.0%) prevented the greatest number of users from ice skating more often, a lack of facilities (32.8%) garnered many individual comments. Some comments noted that the quality of the rink had been upgraded recently but others described needed improvements regarding modulation of conditions. Not having the proper equipment (27.9%) was also a common concern.

Of the issues identified by ice skaters as improving their experience, more time (62.7%), access to better equipment (23.5%), and more coordinated ice skating events (23.5%) are all difficult to address with improved facilities or related programs. Based upon individual comments, providing better trailhead/facilities (19.6%) seemed mostly directed at covering the existing rink to reduce the snowfall onto it. The “Other” category (51.4%) was the most popular location as 8 of the 19 respondents considered it to include the town’s ice rink. Outside of Mammoth (37.8%) and the Lakes Basin area (35.1%) were also popular as these locations contain lakes that freeze in the winter. Three-quarters of users drove (75.0%) to access their favorite ice skating site.

Ice skaters needed better facilities to enjoy their sport, with a particular emphasis on improving the town’s current ice rink. Users also thought that information about ice skating opportunities and group events would make this activity more popular.

**Potential ice skating improvements:**

- Cover the public ice rink to reduce impact of snow.
- Increase the number of ice skating events

**Snowmobile: on Trails**

Riding snowmobiles on trails was a moderately popular (12.3%) sport and close to snowshoeing and snow play in terms of frequency rates (20.0%). It was one of the few

activities where lack of time (42.4%) was not the primary, but secondary, impediment to engagement. Not having the equipment (51.5%) was the primary reason people did not snowmobile on trails, with the remaining issues being of minor consequence. When asked what could improve their experience, however, snowmobilers flipped the important and cited more time (54.5%) over access to better equipment (36.4%). Having better access to trails (24.2%) was a distant third.

Shady Rest (48.6%) and Outside of Mammoth (48.6%) were equally popular spots for on-trail snowmobiling, with Mammoth Scenic Loop (40.0%) and the Main Lodge/Mountain Portal (40.0%) accounting for almost all the remaining riders. Nearly all participants accessed the trail systems by driving (97.2%).

On-trail snowmobilers did not express a strong need for physical or programmatic improvements, with better access to trails being of marginal importance.

#### **Potential snowmobile: on trails improvements:**

- Increase/improve access to trails and equipment where opportunities exist.
- Provide more room at staging areas.

#### **Snowmobile: in Open Areas**

Snowmobiling in open areas was slightly less popular (10.9%) than on-trail snowmobiling, but was participated in more frequently (32.3%), and also had a higher percentage of people who wanted to do it more often (32.3%). These factors point to a small but fairly dedicated group. Also similar to on-trail snowmobiling, these users cited not having the equipment (54.8%) as their primary impediment, followed by lack of time (52.4%), with the remaining issues being nearly inconsequential compared to the two primary reasons.

When asked what could improve their experience snowmobilers cited more time (56.4%) as most important and tied on access to better equipment (20.5%) and better access to trails (20.5%). Individual comments often focused on the cost to snowmobile in open areas. Outside of Mammoth (61.3%) and Mammoth Scenic Loop (51.6%) were the most popular open area riding sites, with Shady Rest (35.5%) back in third. Most users drove (87.5%) to the trailhead in order to go snowmobiling in open areas.

Based upon the unmet desire for more participation and for better access, open area snowmobilers needed more riding opportunities, preferable in fee-free areas.

#### **Potential open area snowmobiling improvements:**

- Provide more access to riding areas, preferably without associated use fees.

#### **Bicycling**

The survey results indicated bicycling in the winter was not popular (8.1%) in Mammoth, but people participate in it with moderate frequency (34.7%), and only a small percentage of bicyclists indicated they would like to ride more often (6.7%). Poor trail conditions (47.4%) prevented most people from riding more, followed by weather implications (31.6%), although it is possible that the first issue is related to the second as snow and ice could be creating poor trail conditions for riders.

In keeping with their stated concerns, bicyclists requested improved trail conditions/maintenance (43.8%) to improve their experience, followed by more time (37.5%). The largest percentage of bicyclists listed Outside of Mammoth (43.5%) as their primary riding spot, with Mammoth Scenic Loop (26.1%) and Old Mammoth Road (26.1%) tied for second. Although most users drove (48.0%) to access their winter riding location, a significant number used “Other” means of transportation (36.0%), presumably their bicycles.

Bicyclists have a need for facilities that are maintained to allow them to better enjoy their activity in the winter. Individual comments refined the need by requesting better snow removal from bicycle routes. Only a small number of survey respondents stated that they would like to cycle more often in the winter, but it is important to consider those who require a bicycle for year-round mobility. While the number of year-round bicycle commuters may currently be relatively small, it should be expected that the number will rise as a result of higher gas prices.

**Potential bicycling improvements:**

- Develop an enhanced snow removal program for streets with bike lanes.
- Consider snow removal on multi-use paths that serve common employment destinations. (Could be used by bicyclists, pedestrians, dog walkers, etc.)

**Running**

Only slightly less popular than on-trail snowmobiling was running (12.0%), although it has the third highest frequency rate (50.0%), tied with dog sledding. This indicated that although it is not particularly popular, this group is dedicated to their sport. As with on-trail snowmobiling, this group ranked lack of time (34.8%) the second most common reason they did not run more, with the first being poor trail conditions (56.5%). Making its first showing in a while, the category of safety concerns (26.1%) was tied with weather implications (26.1%) in having kept runners from their activity.

Of the issues identified by runners as enhancing their experience, improved trail conditions/maintenance (45.0%) was clearly out front. Individual comments indicated that much of this is related to poor roadway conditions and the presence of motor vehicles in areas clear enough for running. Having more time (30.0%) and better access to trails (30.0%) were also important to runners, with the access issue perhaps related to the request to groom trails for running purposes. Shady Rest (41.2%) was a popular spot with runners as was Old Mammoth Road (38.2%), with preferences for the other locations much lower across the board. The majority of users walked (54.3%) (or possibly ran) to their favorite location, while driving (34.3%) was the second most popular method to access running areas.

Runners needed better facilities with respect to winter conditions, and separation from motor vehicles was desired. This group wanted access to both urban improved facilities (sidewalks, pathways) and groomed snow running areas.

**Potential running improvements:**

- Develop a more comprehensive sidewalk and in-town path system.
- Provide increased winter maintenance on sidewalks, multi-use paths, and trails.
- Develop education/signage program to keep drivers alert for pedestrians and runners.



- Increased enforcement to deter hazardous driving behavior (speeding, weaving, drunk driving).
- Develop a snow removal program that prioritizes pedestrian safety.

### **Winter Camping**

Winter camping had very low participation rates (3.9%) and was tied with other activities for lowest frequency (0.0%). Lack of time (62.9%) and lack of equipment (25.7%) were the primary impediments to participation, with the request for more time (63.9%) the clear leader in ways to improve the experience. The vast majority of users chose Outside of Mammoth (72.7%) for winter camping, with the Lakes Basin area (36.4%) coming in a distance second. While most drove (75.0%), it is worth noting that some users walked (16.7%) to their winter camping location.

The survey results clearly indicated that users need more time to participate in winter camping and that the most popular winter camping opportunities currently exist outside of the Mammoth Lakes area.

#### **Potential winter camping improvements:**

- Create better winter camping opportunities closer to where people live to decrease the effort necessary to participate.

### **Dog Sledding**

Very low participation rates (2.1%) coupled with high frequency rates (50.0%) make dog sledding a unique winter activity that is practiced by a small, dedicated group. Lack of equipment (40.0%) is the critical impediment, although not enough time (33.3%) and not knowing others who dog sled (33.3%) were also factors. Comments by users indicated that skiers associated themselves with this group and they indicated that their sport is poorly understood and not adequately accommodated, which limited their use.

Having more time (38.5%) and coordinated events (38.5%) for dog sledding were the primary methods to improve the experience. The most popular locations for dog sledding were Outside of Mammoth (50.0%), the Lakes Basin area (33.3%), Shady Rest (33.3%), and Mammoth Scenic Loop (33.3%). Most users drove (50.0%) to their favorite location, although the “Other” category (33.3%) was sufficiently represented to perhaps indicate that dog sledding was used as a transportation method.

Dog-sledders need more time and better associations in order to further their sport in Mammoth. A small need existed for skijoring trails/facilities.

#### **Potential dog sledding improvements:**

- Study the potential for dog-sledding opportunities and events.

### **Disabled Recreation & Access**

Disabled recreation occurred at very low levels (1.4%) and had moderate participation rates (25.0%). Participants scored three factors equally high in terms of restrictions on their involvement: poor trail conditions (33.3%), not enough time (33.3%), and not knowing others who participate (33.3%). The factors that could improve the user experience were

even more diverse: more time (33.3%), better access to trails (33.3%), more/better trail maps (33.3%), and more coordinated events related to disabled recreation (33.3%).

The Main Lodge/Mountain Portal (50.0%) was the highest scoring location, with eight other locations also having received mention including an individual comment for Chair 2. The majority of disabled recreationists drove (60.0%) to their desired access location.

Disabled recreationists needed better trail opportunities and the maps to accompany them to allow them to enjoy their sport. There was also a desire to network more among this user group to find other interested participants.

**Potential disabled recreation & access improvements:**

- Provide more trail opportunities for disabled recreationists.
- Provide better trail maintenance.

**Ice Fishing**

On par with dog sledding for participation (1.4%), no one (0.0%) indicates that they go ice fishing at least once a week. Lack of time (66.6%) scored twice as high as any other impediment to more frequent participation. The same held true for methods to improve the experience, with more time (66.7%) clearly more important than any other issue. The Lakes Basin area (50.0%) was the most popular site for anglers, with driving (83.3%) being the common method for users to access their ice fishing locations.

People participating in ice fishing need more time to better enjoy their activity.

**Potential ice fishing improvements:**

- Provide ice fishing opportunities closer to town so that people can more readily access their sport.

**Equestrian Activities**

No respondents indicated that they partook of equestrian activities during the winter (0.0%).

**Biathlon**

Neither survey captured information on winter biathlon (cross-country skiing and riflery), but it was discussed during the CAMP Winter process as an activity that could potentially be accommodated in the Lakes Basin. It was suggested that sponsored biathlon events could draw significant numbers of visitors. If an appropriate location is established, a variant including cross-country trail running and riflery could be supported in summer months.

**Potential biathlon improvements:**

- Work with the Forest Service to determine the feasibility of establishing a biathlon facility on USFS land.
- Study the potential economic benefits of hosting biathlon events.

## 3.6. Safety / Collision Analysis

In our surveys and discussions with users and Town officials, safety discussions consistently revolved around protecting residents and visitors from being struck by motor vehicles. The listening sessions and survey results revealed that residents are most concerned about safety when walking or bicycling on or near roadways. Concerns for pedestrian safety were particularly high in winter when snow, ice and a lack of sidewalks create additional hazards. Main Street was consistently called out as an area of concern by CAMP participants. The Mammoth Lakes Fire Department and the Mammoth Lakes Police Department were not available to participate due to previous commitments.

### 3.6.1. County of Mono Division of Emergency Medical Services

A memo from Mark Mikulicich – Mono County Paramedic Fire Rescue Chief – was provided as a follow-up to a CAMP: Winter listening session involving local law enforcement and emergency responders. Mr. Mikulicich reviewed statistics from the Mono County Fire/Rescue Department, in order to ascertain information that may identify “hot spots” or areas within the Town roads or trail systems that consistently produce calls for emergency services. The information was based on a five-year period (2003-2007). He determined that the only “hot spot” that can be identified is on the Main Path, between Sherwin Meadows and the exit of the trail at the south end of the industrial park. That area of trail includes steep sections with curves that have—in the past—produced several accidents (2-4) per summer season. However, he felt that the recent addition of warning signs (curve ahead, slow speed, etc.) have proven helpful in reducing both the consistency of accidents as well as the severity of injuries. Other areas of concern were major intersections in general, the lack of sidewalks on Main Street, and the crosswalks at the North Village. He felt that recently improved bus stops and signalized pedestrian crossing on Main Street had improved conditions significantly, but that sidewalks should continue to be expanded on Main Street. He also still had concerns about the crosswalk at the Village; connecting the Village with the parking lot to the east, his feeling was that it has all the makings of a trouble spot (high vehicular and foot traffic, pedestrians with ski/snowboard gear, and lots of driver visual distractions from Village infrastructure).

As another general rule, Mr. Mikulicich noted that pedestrian severity of injury goes up as speed goes up which is an indicator of the importance for sidewalks along major roads; which are busier and carry higher speeds. This is also an indicator of the importance of reducing in-town vehicular speed—especially in areas with high levels of pedestrian activity—through use of traffic calming design and law enforcement.

### 3.6.2. California Statewide Integrated Traffic Records System (SWITRS)

In order to supplement the safety information we received from stakeholders and local officials, we have obtained information on bicycle and pedestrian collisions from SWITRS. This dataset only includes collisions that have been reported and generally only captures collisions that occur on a public roadway and involve a motor vehicle. Collisions that have not been reported to the California Highway Patrol (CHP) do not show up in the database.

Despite its limitations, this data can help understand basic trends in bicycle and pedestrian safety and identify geographic trouble spots (i.e. Main St and Minaret Road).

The SWITRS data also conforms to public perception that pedestrian safety is a greater concern in the winter. Reported pedestrian/motor vehicle collisions between 2003 and 2007 primarily occurred in the winter months, suggesting that pedestrian safety is a greater issue during winter. This data does not include pedestrian injuries that have been sustained due to slipping and falling, though anecdotal evidence suggests that falling injuries may also be high during these months. While winter is clearly the most hazardous time for pedestrians, pedestrian/motor vehicle collisions have also occurred in July when snow and ice conditions are not present, suggesting that pedestrian safety needs to be addressed year-round.

The only bicycle/motor vehicle collisions reported to the CHP have occurred between May and September. Only one bicycle collision—in May 2003—occurred during “snowy or icy” roadway conditions. This should not be interpreted as evidence that bicycling is safer during winter months. Surveys suggest that concerns about winter bicycle safety lead to significantly reduced levels of on-street bicycle commuting during winter months. In addition to the reduced numbers of winter cyclists, any existing wintertime bicycling will likely be done only by experienced riders and with extreme caution. Since bicycle rentals are available only during summer months, the few cyclists who ride in the winter will also tend to be on familiar equipment, which also reduces the probability of injury.