
Secondary Research – Mountain Biking Market Profiles

Final Report

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Parks Canada
PAR001-1020

Prepared for:

Parks Canada

March 2010



www.cra.ca

1-888-414-1336



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Introduction

Corporate Research Associates, Inc. (CRA) is pleased to provide the results of the **Secondary Research – Mountain Biking Market Profiles study**, conducted for Parks Canada.

Parks Canada wishes to better understand the mountain biking sector both in North America and other markets, including Europe, Australia, and New Zealand. In addition, four unique mountain biking disciplines have been identified and will be examined in this report: cross country, downhill, freeride, and dirt jumping. Bike skills parks, while not a discipline, will also be examined in this report.

The purpose of this market profiling study is to conduct a market assessment and trend analysis of mountain biking sectors. More specific objectives include to:

- 🚲 Determine the current mountain biking market, including size, profile of participants, trends in participation, and emerging forms of mountain biking;
- 🚲 Assess current mountain biking operators, both private and public;
- 🚲 Calculate the cost of participating in mountain biking, both for the individual and for the operator;
- 🚲 Document the rules and regulations participants must abide by; and
- 🚲 Determine safety incidences and current infractions.

To this end, CRA conducted a thorough Internet scan, and contacted selected current operators in the mountain biking industry in Canada and the United States.

The following report includes an executive summary, detailed information about the mountain biking markets in four markets (Canada, United States, Europe, and Australia/New Zealand), a summary of the fact sheet responses from operators, and information about participation, trends, costs, regulation, and safety.

Executive Summary

Mountain Biking is a popular sport in many countries, with new participants starting every year. This sport is considered an *adventure* sport, although like hiking or skiing, participants can choose the level of difficulty. Indeed, cross country mountain biking may be considered a mainstream sport, with other disciplines considered to be niche, but with devoted participants and followers. This leads to a wide range of participants, from young children to seniors, and everyone in between. Start-up costs can be minimal, although this may not be the perception among the general population, as the cost of participation is reflected in the more affluent profile of participants, and participants can spend thousands of dollars on a bicycle, other equipment, and trail access.

Cross country is by far the most popular type of mountain biking, which is related to the number of trails available, and the ease with which participants can access cross country trails. While mountain biking attracts a wide range of athletes, active participants tend to be male, younger, have higher levels of



education and income, and travel with others of similar interests. Additionally, frequent mountain bikers will often travel to seek new trails, and belong to associations or clubs.

Mountain biking is popular in many parts of the world, with the United States, Canada and Australia/New Zealand having higher participation rates than other locations. Mountain biking is an ever expanding sport, with new types of riding emerging. Indeed, the adoption of downhill mountain biking has led to a number of downhill ski operators offering summer mountain biking activities, and the popularity of freeriding and dirt jumping is resulting in parks specifically designed for this purpose.

As with any growing sport, there are challenges faced by participants and operators. Some participants who do not have ready access to managed trails can face backlash from landowners and parks that may not be developed with mountain bikers in mind. Meanwhile, operators are facing safety concerns, trail development and land access issues. User conflict is also an area of concern, although evidence suggests that through trail design and appropriate training and signage, these conflicts can be decreased.

Each market has many organizations devoted to the development and promotion of mountain biking, and tourism relating to cycling and mountain biking in particular is a growing business. Many Canadian mountain biking operators report a large number of participants from outside their province, or even from outside of Canada. Moreover, some American operators, particularly those closer to the border, report high levels of Canadian visitation.

In terms of competitions and racing, there is a well organized competitive circuit in all markets, with governing bodies that develop regulations for these events. Mountain biking, or more specifically, cross country, became an Olympic sport in 1996. Finally, an evaluation of the National Parks Service (NPS) and National Forest Service (NFS) in the US, and the National Parks and Wildlife Service in Australia suggest that these organizations are facing challenges with integrating mountain biking into their existing recreational offering, although progress is being made in this regard. The NFS could be considered the most 'mountain biking friendly' of the three organizations, with a wide range of trails and offerings available.

Sommaire

Le vélo de montagne est une activité populaire dans bien des pays et, chaque année, conquiert de plus en plus d'adeptes. Il s'agit d'une activité dite d'aventure, mais, tout comme pour la randonnée pédestre et le ski, les participants peuvent choisir le niveau de difficulté auxquels ils souhaitent faire face. Le vélo de montagne cross-country peut effectivement être considéré comme une activité à la mode, tandis que d'autres disciplines sont considérées comme des créneaux, chacune avec leurs propres participants et leurs propres adeptes. On y retrouve donc des participants en tous genres, des jeunes enfants aux personnes âgées. Malgré les apparences, commencer ne coûte pas bien cher. Les adeptes les plus prospères dépensent des milliers de dollars pour un vélo, du matériel et l'accès aux pistes, ce qui a un impact sur la perception du coût de pratique de l'activité.



Le cross-country est la pratique de vélo de montagne le plus pratiqué, notamment en raison du nombre de pistes offertes et de leur facilité d'accès. Bien que le vélo de montagne attire des athlètes en tous genres, les participants les plus actifs sont en général des jeunes hommes dont le niveau de scolarité et le revenu sont élevés, et qui voyagent habituellement avec d'autres personnes ayant les mêmes intérêts. Les grands adeptes cherchent également souvent de nouveaux sentiers et font partie d'associations ou de clubs.

Le vélo de montagne est populaire dans bien des pays, mais surtout aux États-Unis, au Canada, en Australie et en Nouvelle-Zélande, où l'on retrouve des taux de participation plus élevés qu'ailleurs. Il s'agit d'une activité en expansion constante auquel se rajoutent sans cesse de nouveaux types de pratique. Ainsi, la popularité de la descente en vélo de montagne a poussé les exploitants de centres de ski alpin à offrir des activités de vélo de montagne en été. Dans le même ordre d'idées, la popularité du *freeride* et des sauts en terre battue a entraîné la création de parcs conçus expressément pour ces pratiques.

Comme pour toute activité en croissance, les participants et les exploitants du vélo de montagne doivent faire face à quelques difficultés. Les participants qui n'ont pas facilement accès à des sentiers gérés peuvent avoir des problèmes avec les propriétaires des terrains et parcs qui n'ont pas été créés pour le vélo de montagne. Les exploitants, de leur côté, doivent faire attention aux questions de sécurité, de conception de sentiers et d'accès aux terres. Les conflits entre les utilisateurs peuvent également poser problème, quoi qu'il semble possible de les éviter en portant une grande attention à la création des sentiers, à la formation et à la signalisation.

Chaque marché est doté de nombreuses organisations consacrées au développement et à la promotion du vélo de montagne. Le cyclotourisme et le tourisme en vélo de montagne sont eux aussi en pleine expansion. Plusieurs exploitants de vélo de montagne canadiens affirment que de nombreux participants viennent de l'extérieur de leur province, voire de l'extérieur du pays. De plus, certains exploitants américains (surtout ceux qui se trouvent près de la frontière) signalent de nombreux visiteurs canadiens.

Pour ce qui est des compétitions et des cours, il existe des organismes de réglementation et un circuit compétitif bien organisé dans tous les marchés. Notons aussi que le vélo de montagne ou, plus précisément, le cross-country, est devenu un sport olympique en 1996. Une évaluation du National Parks Service (NPS) et du National Forest Service (NFS), aux États-Unis, et du National Parks and Wildlife Service, en Australie, a indiqué que ces organisations ont de la difficulté à intégrer le vélo de montagne parmi leur offre d'activités de loisirs existants. Malgré tout, elles parviennent à faire des progrès à cet égard. Des trois organisations, le NFS est possiblement la plus ouverte au vélo de montagne, car elle offre une vaste gamme de sentiers et d'autres possibilités.



Overview

Origin

The sport of mountain biking, as it is known today, began in the early 1970s in Marin County, California. In the early 1970s, the pioneers of modern mountain biking began modifying regular bicycles in Marin County so they could race one another down local hills. Among these pioneers were Joe Breeze, Gary Fisher, Charlie Cunningham, Keith Bontrager, and Tom Ritchey. The bikes they modified came to be known as “clunkers”. This initial group of riders grew to 20 to 30 individuals by 1973. At that time, the cyclists of Marin County made their own bicycles, and downhill racing was a very important component of the riding style. The drive to win these competitions pushed many of the early pioneers to devote much of their energy into developing improvements on their bikes that could give them a competitive edge.

In 1974, rider Gary Fisher crafted a bike with a derailleur, allowing riders to pedal cross country more easily, rather than just ride downhill. Accordingly, the first cross country mountain biking race took place just a few years later in 1977. In the mid 1970s, some of the founding riders began selling their custom-made bikes, although the demand was quite small, with a mere 300 custom-made mountain bikes sold in 1980. Later that year, biker Mike Sinyard founded a company called Specialized Bicycle Components and soon began taking orders for the world’s first mass-produced mountain bike: the Stumpjumper. Regular bicycle manufacturers were reluctant to begin devoting their assembly lines to produce mountain bikes, but as the sport gained in popularity, they soon entered the market. Sales of mountain bikes in the US climbed to 5,000 units in 1982, before leaping to 50,000 in 1983. Mountain biking had become a mainstream sport.

In 1990, the inaugural World Mountain Biking Championships took place. Mountain biking’s popularity continued to grow, as evident when cross country mountain biking became an official Olympic sport at the 1996 Olympics in Atlanta.

Mountain Biking Disciplines

Mountain biking has grown substantially in popularity since its early days. As it has grown, the sport has begun to fragment into unique segments or disciplines. Currently, there are four main mountain biking disciplines: cross country, downhill, freeriding, and dirt jumping. Also, more riders now frequent bike skills parks. Each discipline has a unique set of activities that attracts distinct personalities. In addition, the riding terrain and bicycles themselves differ between these disciplines.

Cross Country (XC)

Cross country is the most well-known and least extreme discipline of mountain biking. In this form, riders bike along long stretches of unpaved paths. Although it receives less publicity than more extreme forms of mountain biking, cross country has the highest rates of participation, both recreationally and competitively.



Cross country racing requires a great deal of endurance on the part of the rider, as the average race may be anywhere from 20 to 30 km. There are even cross country marathon races, which can be as long as 120 km. The terrain for riding is often quite rough, and participants frequently navigate through narrow paths.

For protection, riders wear helmets, but do not usually wear any other body protection. As a result, these riders are prone to injury, although these injuries are usually less severe in nature compared with injuries from other mountain biking disciplines.

Types of Cross Country Races

The Union Cyclists Internationale (UCI) lists several cross country race types on its website:

- 🚴 Cross Country Marathon (XCM): Between 60 and 120 km in length
- 🚴 Cross Country Point to Point (XCP): 25 to 60 km in length, the start and finish are in separate locations
- 🚴 Cross Country Short Circuit (XCC): 5 km or less
- 🚴 Cross Country Time Trial (XCT): timed event, 5 to 25 km in length
- 🚴 Cross Country Team Relay (XCR): team events

Downhill (DH)

Downhill mountain biking is similar to alpine skiing, but on a bike. Riders start at the peak of a hill or mountain and descend at high speeds. It is widely regarded as the most dangerous form of mountain biking, and is also the most high-profile category of competition biking.

Downhill mountain bikers reach high speeds, so thrill-seekers are naturally attracted to this discipline. The terrain is rough, with many jumps and steep drops. Most downhill courses take anywhere from two to five minutes to complete. To improve off-season revenues, many ski hills allow downhill bikers to use their facilities during the summer. Often, these riders are allowed use of the ski lifts to get to the top of the runs.

Very high speeds are reached while riding downhill, and as a result cyclists often wear a helmet, gloves, and armoured jackets.

Freeriding

Freeriding is a relatively new form of mountain biking that incorporates elements of traditional trail riding, big jumps, and technical manoeuvres. Riders are forced to negotiate steep descents, while facing obstacles such as jumps, steps, and drop-offs. Freeriding is generally credited as originating in Vancouver's North Shore region, but its popularity was catalyzed in the mid-1990s, when the X-Games started gaining notice.

The terrain in freeriding is quite unique. Bikers are often not satisfied with natural trails, so they build man-made obstacles, including bridges, teeter-totters, and drop-offs. In fact, some renegade riders have been known to construct their own trails on a landowner's property without first seeking approval.



Freeride parks are a good fit for urban and suburban settings, since freeriding depends less on natural trails compared with other mountain biking disciplines. Freeriders enjoy trails that have “good flow.” According to Scott Linnenburger, IMBA Trail Design Expert, “Flow means one turn leads into the next, and every descent leads into the next rise, creating a rhythm, that mountain biker’s love. Good freeride trails start with flow and add technical challenges such as rock gardens and dirt jumps.”

Protection is very important in freeriding, with bikers usually wearing full-face helmets, goggles, and full-body armour.

Dirt Jumping

Dirt jumping is the practice of riding bikes over shaped mounds of dirt or soil, in an attempt to become airborne for a long period of time. It is similar to BMX biking, but with larger jumps. Competitions are becoming more popular, especially in the UK, but dirt jumping is relatively less well-known than the other mountain biking disciplines. Practitioners are more likely to dirt jump for leisure than for competition.

Dirt jumping riders are primarily focused on performing airborne stunts and tricks, and injury is very common. Many enthusiasts also build their own jumps. There are many different types of jumps that bikers use: double jumps (two separated earthworks – one for a take-off and one for a landing), tabletop jumps (single earthwork with a take-off at one end and a landing at the other), and ski jumps (a take-off with the slope of a hill serving as the landing).

Riders wear helmets, full face protectors, shin pads, elbow pads, and gloves.

Bike Skills Parks

A bike skills park is an area that provides riders in a community the opportunity to hone their bike riding skills in a managed, progressive, and safe environment before tackling the real trails. These parks can include dirt jumps, wooden bridges, wall rides, pump tracks, and teeter-totters. Also, these parks are frequently targeted at new and younger riders. These venues are a place where new riders can build mountain biking skills.

One of the core concepts behind a skills park is progression. That is, they often have beginner areas that feature less difficult obstacles and terrain. As riders increase their skill levels, they can move on to more difficult areas of the park. Skills parks are growing in popularity, particularly in BC, where over 30 of these parks can be found.

Skills parks are often built through a co-operation between public and private interests. As well, they can either be managed by a local mountain biking association in partnership with a city, or by a Parks and Recreation department. Indeed, many municipalities are eager to implement these parks as a means of risk management. These parks give young riders a professionally designed venue, and as a result, they are less likely to use jumps and courses that they have designed themselves, which can be much more dangerous.



Types of Mountain Bicycles

Bikes used for **cross country** are typically lighter in weight (15 to 30 pounds), as the focus is on minimizing pedalling effort. To achieve this low weight, frames are made from aluminum carbon-fiber, or other light bi-metal mixtures. Additionally, these types of bikes have a much lower front suspension and between 60 to 120 mm of travel (the amount of movement that the shock can absorb).

Downhill bikes are built for durability, and are the most expensive type of mountain biking to purchase. The bikes routinely weigh between 40 to 50 pounds and are not intended to be pedalled uphill. As a result, these bikes are only suitable for riding dedicated downhill trails. They also have better braking systems than other types of mountain bikes, wider tires, and one sole chain ring. Because of the popularity of downhill biking, this discipline tends to attract the sponsorship of manufacturers, in an attempt to gain adoption for their new models.

Freeride bikes are very durable, as they are built to withstand large drops and hits. They usually weigh between 40 and 50 pounds and have full suspension, maximum amounts of travel, and a limited selection of gears. They are also not designed for long periods of uphill cycling.

Dirt jumping bikes typically have a smaller frame than other mountain bikes. They usually have one speed, only a rear brake, short suspension travel, and smaller wheels. Dirt jumping bikes are built with strong tubing and components that allow them to better withstand the impact of large drops. Since jumpers routinely achieve heights of more than 10 to 15 feet in the air, safety is very important.

Mountain bikes are just one of the many types of bicycles available; others include **road bikes, hybrids, comfort bikes, cruisers, and recumbents**. Typically, mountain bikes have slightly smaller wheel rims when compared with road-racing or cyclo-cross bicycles, although some cross country riders have recently begun to use ISO 622 mm tires, which have rims that are equal in diameter to most road bikes. Also, mountain bike tires are usually wider than those of other bikes. Given the rough terrain that mountain bikes are typically used to travel on, suspension is another key element of this type of bicycle.

Emerging Trends

There are many trends in mountain biking, ranging from the evolution of mountain biking styles to changes in equipment.



Equipment

Wheel Size

Recent years have seen the introduction of mountain bikes with 29 inch wheels. These larger wheels allow for increased comfort on rough trails, however, this increased comfort is offset by a heavier bike that is more difficult to accelerate compared with the smaller 26 inch bike wheels.

Actions

Slopestyle

Mountain biking aficionados are evolving the sport to encompass greater levels of risk and difficulty. Through experimentation, new forms of mountain biking are being developed. One of these, slopestyle, is an increasingly popular style of freestyle mountain biking. Participants execute tricks and jumps as they navigate the slopestyle course, and are judged on originality, level of difficulty, and style. Slopestyle competitions are held at established mountain bike parks and facilities.

Ice Biking

An interesting take on mountain biking, some mountain bikers are placing studded tires on their mountain bikes and biking on ice and snow. One reason given for undertaking this risky sport is ‘to make the season longer’.

Associations

Mountain biking falls under the broader category of cycling, and some cycling associations include mountain biking as one of a number of different types of cycling activities (such as road, track, and cross). The International Mountain Biking Association (IMBA) is the most widespread mountain biking and trail association, and has branches in many different countries. The Union Cyclists Internationale (UCI) is the official authority on cycling, particularly with respect to professional events and competitions. Below is a list of the main associations across the world, including Canada, the United States, Europe, and Australia/New Zealand.

International

International Mountain Biking Association (IMBA)



www.imba.com

IMBA was created in 1988 when five mountain bike clubs joined together to work against trail closures throughout California. Today, IMBA’s mission is to protect, create and enhance quality trail experiences for mountain bikers worldwide. The organization educates the public about mountain biking, advocates on behalf of the mountain biking industry, and supports land managers with trail management issues. IMBA has affiliate associations in many countries, including Canada, and in 40 US states. In total, the organization’s worldwide membership consists of over 32,000 individuals and 450 clubs.

Union Cyclists Internationale (UCI)





www.uci.ch

UCI is a non-profit association of the National Cycling Federations. Located in Switzerland, UCI covers road, track, mountain bike, cycling-cross, BMX, indoor cycling and paracycling. UCI regulates cycling at the international level, promotes the sport, organizes world championships, promotes ethics, and collaborates with the Olympic Committee for the Olympic cycling events.

Canada

IMBA Canada

www.imba.com/canada



IMBA Canada is the Canadian subsidiary of the IMBA. The primary goals of this organization are to develop the following for Canadian mountain biking: convenient access to appealing trails, trail building expertise, a positive image, and political influence.

Canadian Cycling Association

www.canadian-cycling.com



CCA organizes and promotes cycling in Canada. Similar to UCI, this association is involved with various types of cycling including BMX, cyclo-cross, mountain biking, road, and track.

Mountain Bike Tourism Association

www.mbta.ca



MBTA brings together communities, resorts and industry operators in British Columbia in an effort to unify resources and improve the mountain biking experience in the province. The association focuses on pooling resources to make mountain biking in the area sustainable and accessible. The association has completed a variety of research projects such as the Sea to Sky Economic Impact Study referenced elsewhere in this report, and has partnerships with Tourism BC and Bike Parks of BC, as well as other economic development committees.

North Shore Mountain Biking Association

www.nsmba.bc.ca



The NSMBA is a not-for-profit organization dedicated to the accessibility of trails and support of mountain biking on the North Shore in BC. The organization maintains trails in the area, advocates on behalf of mountain bikers, and promotes respect for the environment through co-operative trail maintenance and education.



Below are other examples of associations in Canada:

| Other Associations in Canada | | |
|--|---------------------|--|
| Name | Province | Website |
| Alberta Bicycle Association | AB | www.albertabicycle.ab.ca |
| Canadian Cycling Association | AB | www.canadian-cycling.com |
| British Columbia Cycling Coalition | BC | www.bccc.bc.ca |
| Cycling BC | BC | www.cyclingbc.net |
| Manitoba Cycling Association | MB | www.cycling.mb.ca |
| Velo NB | NB | www.velo.nb.ca |
| Bicycle Newfoundland Labrador | NL | www.bnl.nf.ca |
| Atlantic Canada Cycling | NL, NB, NS, and PEI | www.atlanticcanadacycling.com |
| Bicycle Nova Scotia | NS | www.bicycle.ns.ca |
| Nova Scotia Bikeways Coalition | NS | www.bikeways.ca |
| Velo Halifax | NS | www.velohalifax.ca |
| Haliburton Highlands Trails and Tours Network | ON | www.trailsandtours.com |
| Ontario Cycling Association | ON | www.ontariocycling.org |
| Association for Mountain Bike Trails Development in Quebec | QC | www.adsvmq.org |
| Club Cycliste Beaconsfield | QC | www.clubcycliste.com |
| Fédération québécoise des sports cyclistes | QC | www.fqsc.net |
| Saskatchewan Cycling Association | SK | www.saskcycling.ca |

United States

USA Cycling
www.usacycling.org



Similar to other overall governing bodies such as the UCI or Canadian Cycling Association, USA Cycling is the national body for competitive cycling in the United States, and is a division of UCI. There are 34 individual associations within USA Cycling across the country, as well as a network of certified coaches. In addition to individual associations that are often state specific, USA Cycling includes the United States Cycling Federation, National Off-Road Bicycle Association, National Collegiate Cycling Association, United States Professional Racing Organization, and the Bicycle Motocross Association.



Southern Off-Road Bicycle Association (SORBA)www.sorba.org

SORBA is a partner with the IMBA, and represents mountain bikers in the southeast United States. The organization is non-profit and promotes land access, and trail preservation and development. Together SORBA and IMBA have over 4,000 members.

Colorado Mountain Bike Association (COMBA)www.comba.org

COMBA is a non-for-profit organization dedicated to protecting and improving mountain biking on the Front Range in Colorado from Buffalo Creek to Coal Creek Canyon. The organization acts as an advocate for mountain bikers, builds and maintains trails, teaches proper trail use, and works with governments on land management decisions.

New England Mountain Bike Association (NEMBA)www.nemba.org

NEMBA is a recreational trails advocacy organization. It is dedicated to taking care of riding locations, preserving open space, and educating the mountain biking community about the importance of responsible riding. The organization has 18 chapters throughout New England.

Michigan Mountain Biking Association (MMBA)www.mmba.org

MMBA exists to promote responsible biking, as well as to work towards common land access and natural resource protection by working with policy makers, the cycling industry, race promoters, mountain bikers, and other trail users. The organization is a charitable non-profit organization that has in excess of 2,500 members and nine chapters throughout the state of Michigan. MMBA develops and maintains mountain biking trails, promotes proper trail use to riders and an active lifestyle to youth, and acts as an advocate for mountain bikers.

Europe**IMBA-UK**www.imba.org.uk

A division of IMBA, this association operates in the UK and Ireland, focusing on supporting trail work, working with trail groups, and ensuring responsible riding. IMBA-UK works together with another cycling association in the UK, the CTC, to integrate processes such as promoting the rights of off-road cyclists, and integrating volunteer networks.



European Cyclists' Federationwww.ecf.com

Founded in 1983, the European Cyclists' Federation has 60 member organizations in 37 countries. ECF promotes cycling through Europe and abroad, lobbies for the interests of cyclists, and collects and disseminates information.

Australia/New Zealand**Mountain Bike Australia Inc. (MTBA)**www.mtba.asn.au

MBTA exists to develop and promote mountain biking in Australia for the benefit and enjoyment of all its members. This organization is Australia's largest mountain biking association, and serves as the country's national governing body for mountain biking.

Bike NZwww.bikenz.org.nz

BikeNZ brings together a variety of New Zealand cycling organizations including BMX NZ, the Bicycle Industry Association of NZ, Cycling NZ, Mountain Bike NZ, and NZ Schools Cycling Association. Membership is open to all New Zealand cyclists, and BikeNZ has 4,000 licensed athletes.

Bicycle Federation of Australiawww.bfa.asn.au

Similar to other national cycling organizations, BFA represents residents who use bicycles for any means, such as recreation, transportation, health and fitness, and tourism. Established in 1979, the BFA has a variety of members such as BicycleNT, Bicycle Tasmania, Cyclists' Action Group, and the Bicycle Institute of SA.

Country Profiles

Mountain biking is a popular activity around the world, with countries as far reaching as Bangladesh and Ecuador promoting mountain biking. Indeed, the IMBA website offers links to affiliated clubs in 40 countries in addition to those in the US and Canada. That being said, some countries have higher mountain biking participation rates than others. This section provides detailed information about four main mountain biking markets: Canada, the United States, Europe, and Australia/New Zealand.

Overview

In general, data on mountain biking activities is fairly limited. One challenge is variation in the definitions of mountain biking as well as the research questions utilized to gauge mountain biking participation. For



example, some research studies ask about use of a mountain bike, regardless of where the mountain bike is used (road, trails, etc.), while other research is more specific about where and when bikers participate in mountain biking activities. Overall, at least three percent of the Canadian, American and New Zealand population participate in mountain biking, and this level of participation is similar for parts of Europe.

| Estimated* Market Size | | | | |
|------------------------|--------------------------|-----------------|-------------------------|-----------------|
| Country | Cycling (for leisure) | | Mountain Biking | |
| | Number | % of population | Number | % of population |
| Canada | 3 million to 7.5 million | 10% to 25% | 1 million | 3% |
| United States | 45 million to 56 million | 15% to 19% | 6 million to 45 million | 2% to 15% |
| United Kingdom | 2 million | 3% | n/a | n/a |
| Australia | 1.9 million | 11.6% | n/a | n/a |
| New Zealand | 750,000 | 19.6% | 200,000 | 6% |

*Estimates based on various data sources from each country.



Canada

Canada has some of the best mountain biking trails in the world, and there is a wide range of trails to choose from across the country. While there are mountain biking trails in all provinces, British Columbia, Alberta, Quebec and Ontario have the most trails and operators. Indeed, Rossland, BC claims to be the mountain biking capital of Canada.

Market Size

Data on mountain biking in Canada is extremely limited, as Statistics Canada does not survey specifically about mountain biking activities, and no other organization conducts widespread research across the country on this topic. There are a number of smaller studies that focus on specific regions or provinces, and many focus specifically on British Columbia. Furthermore, there is some research regarding cycling in general, or cycling while travelling. This research does tend to focus on recreational cycling as opposed to cycling as a means of transportation, meaning this information may be used to provide an idea of the mountain biking market within Canada. In order to assess the mountain biking market, available data on cycling in general, cycling while travelling, and bicycle sales will be analyzed.



Cycling

There is somewhat contradictory information regarding the number of cyclists in Canada, and therefore it is difficult to provide a definite estimate. In addition, in many instances, the most recent data available is from 2005. For example, depending on the data source, anywhere from half a million Canadians actively cycled in 2005, or six million cycled in the last three months in 2005. The Travel and Motivations Survey references “mountain biking”, while other Statistics Canada documents only refer to “cycling”. Below is a more detailed analysis of the various sources on cycling and mountain biking in Canada.

| Overview of Canadian Cycling Statistics | | |
|---|---------------|---|
| Stat | Date | Source |
| 2.5 million (adults aged 18+) cycled while on trips (10%), 750,000 mountain biking (3.0%) | 2005 | Travel and Motivations Survey |
| 20 percent of adult Canadians bicycled in three months prior to survey, which decreased slightly in last four years. 48 percent of youth report bicycling (12 to 19 years of age) | 2003/ 2004 | Community Health Survey |
| On any given day, one percent of Canadians are cycling (2005), compared with 0.7 percent in 1992 | 2005 | Statistics Canada, Who Participates in Active Leisure? |
| 459,000 actively participated in cycling in the last year (aged 15+), decreased compared with 1998 | 2005 | Statistics Canada, General Social Survey, Sport Participation in Canada |
| 23 percent of Canadians 12 and over participated in cycling | 1996/ 1997 | Health Canada National Population Health Survey |

The Statistics Canada General Social Survey from 2005 indicates that on any given day, one percent of Canadians aged 15 and over were cycling as a leisure activity (as opposed to using a bicycle to commute to and from work), and the average time spent cycling was approximately 100 minutes. Furthermore, 24 percent of Canadians aged 15 and over have cycled for leisure at least once in three months, and on average, those who did bicycle for leisure did so at least seven times in a three month period.

The 2005 **Sports Participation Survey** from Statistics Canada estimates that 459,000 Canadians aged 15 and over actively participated in cycling activities (bicycling for recreation or transportation) in 2005, which is approximately two percent of the population. This is more common among men (283,000) compared with women (177,000).

The **National Population Health Survey**, conducted by Health Canada from 1996/1997 suggests that 23 percent of Canadians aged 12 and over (27% of men and 20% of women) participated in bicycling. Regionally, those in British Columbia are most likely (28%), while those in PEI are least likely (15%) to participate in leisure time cycling. Those aged 12 to 24 are more likely to undertake bicycling as a leisure time physical activity, with 45 percent of men of this age, and 32 percent of women reporting that this is the case. Finally, at this time, baby boomers (aged 40 to 54), were less likely to report bicycling (23% for men, and 17% for women of this age).

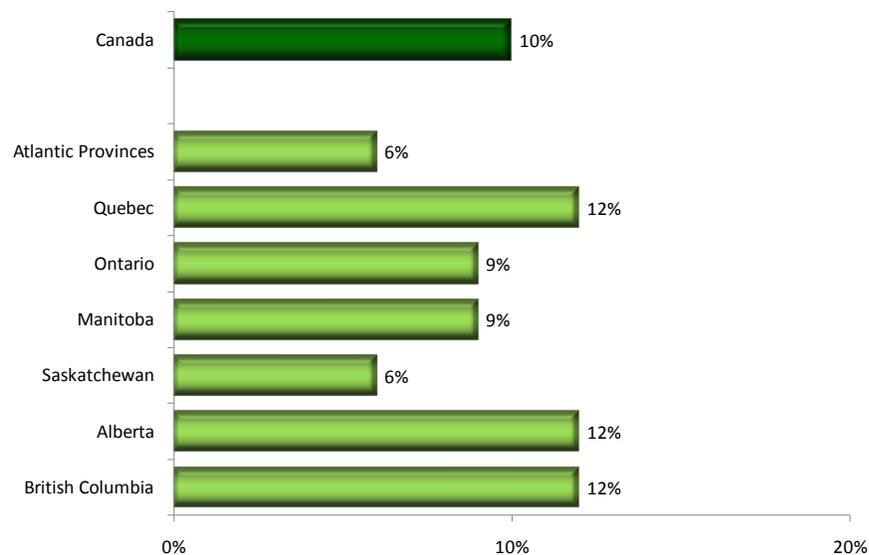


A survey of City of Kelowna residents ranked cycling and biking as the 7th most popular physical activity, with five percent reporting they do this on a regular basis.

Travelling and Cycling

The **Travel Activities and Motivation Survey (TAMS)** is a comprehensive survey conducted by Statistics Canada, and details the recreational activities and travel habits of Canadians and Americans. The survey classifies cycling or biking as recreational biking, mountain biking, and biking on an overnight tour trip, although this is done by self-selection, that is, respondents select which category applies to them. The 2006 study suggests that nearly 2.5 million adult Canadians (aged 18+) went cycling while on a trip, that is, an out of town, overnight trip of at least one night in 2004 or 2005. Examining mountain biking specifically, TAMS data indicates 753,000 adult Canadians participated in mountain biking while on a trip. Across Canada, those in Quebec, Alberta and British Columbia are more likely to cycle while on a trip, which includes both mountain biking and cycling.

Total Regional Population That Went Cycling on a Trip

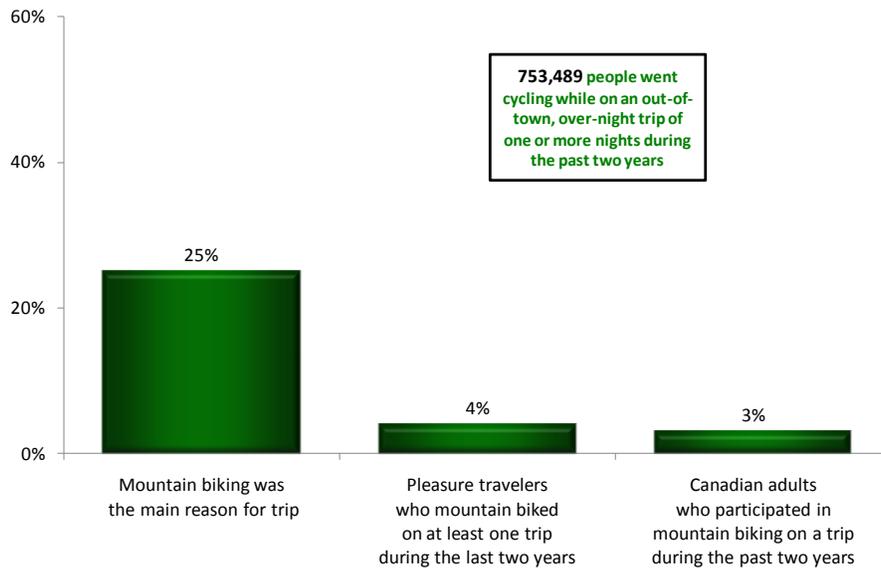


Source: 2006 Travel Activities and Motivation Survey by Statistics Canada

One-quarter of those who mountain bike during an overnight trip indicate that mountain biking was the main reason for the trip. According to TAMS, three percent of the total Canadian population (aged 18+) mountain biked while on a trip in the past two years, and four percent of pleasure travellers (those who have taken one or more trip for pleasure at least once in the past two years) have done so.



Mountain Biking on Trips

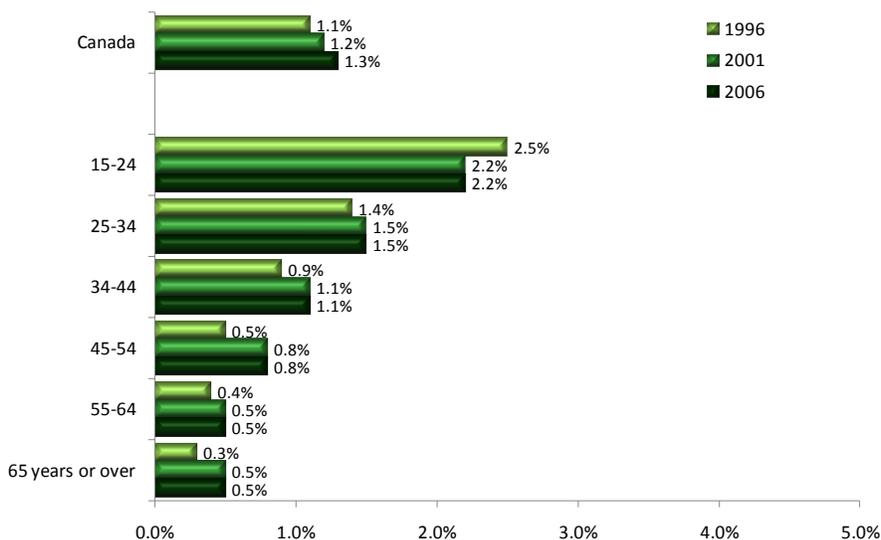


Source: 2006 Travel Activities and Motivation Survey by Statistics Canada

Road Cycling/Commuting

It is difficult to hypothesize if fluctuations in mountain bike sales are the result of shifts in recreational activity, or changes in commuting. Notably, the number of Canadians who commute to work using a bicycle has been fairly consistent over the past 10 years. According to Statistics Canada, 1.3 percent of Canadians travel to work by cycling, compared with 1.2 percent in 2001, and 1.1 percent in 1996. Those aged 15 to 24 are much more likely to use this mode of transportation to get to and from work (2.3%), compared with older Canadians. There is limited data regarding the types of bikes used by commuters.

Commute By Cycling



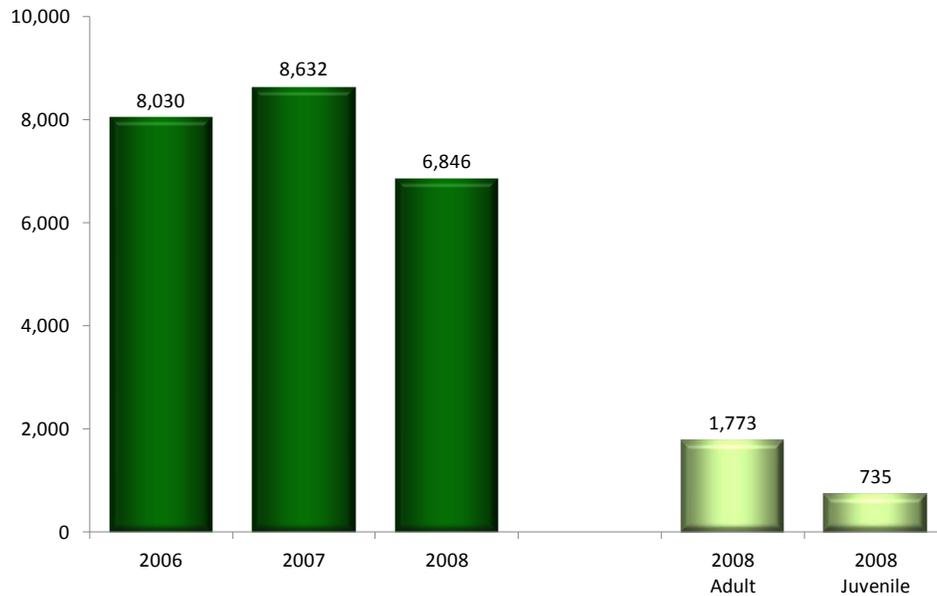
Source: Statistics Canada



Bicycle Sales

Overall, Canadian bicycle and bicycle accessory sales decreased in 2008. According to the Canadian Sporting Goods Association, which surveys 10,000 households via the Internet, the annual bicycle market of both bicycles and accessories in Canada is estimated at approximately 6,846,000 units in 2008. Of these, 1.7 million were adult bicycles, and 735,000 were juvenile bicycles.

Total Bicycles/Bicycle Accessories Market In Canada January-December Estimated Retail Unit Sales (000)



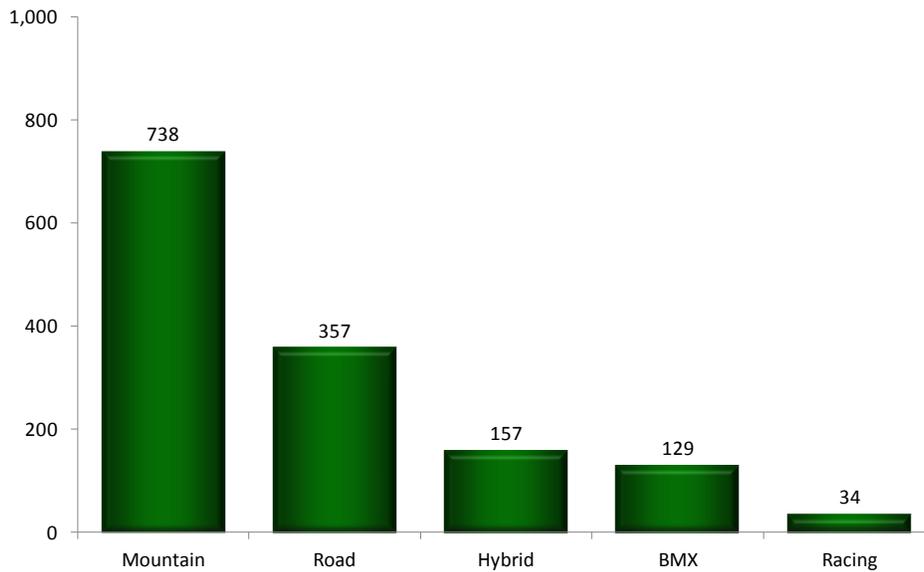
Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2008

In terms of the different types of adult bicycles sold, mountain bikes are by far the most popular, with 738,000 units sold in 2008, compared with 357,000 road bikes and 157,000 hybrids.



Canadian Adult Bicycle Sales

2008 Estimated Retail Unit Sales (000)

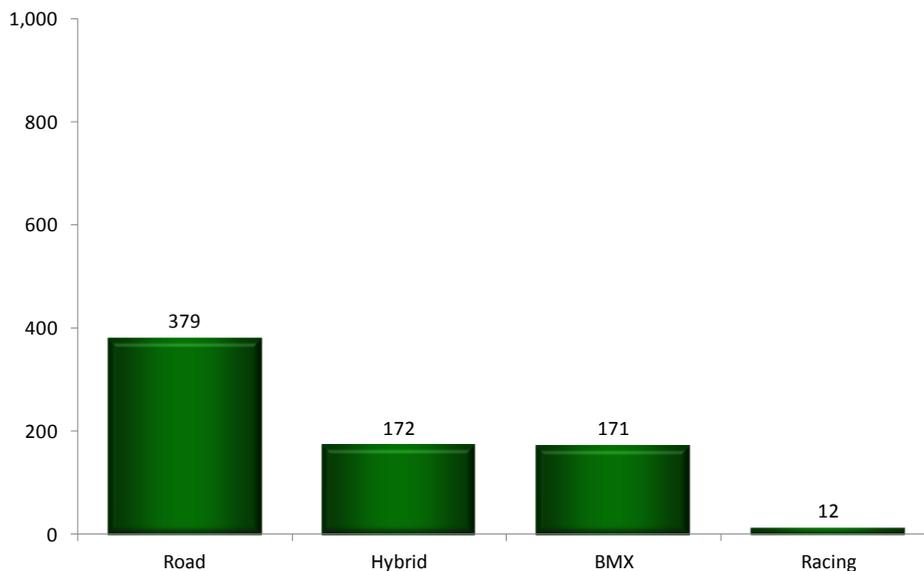


Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2008

In the juvenile bike market, 379,000 road bikes were sold in 2008, compared with 172,000 mountain bikes and 171,000 BMX bicycles.

Canadian Juvenile Bicycle Sales

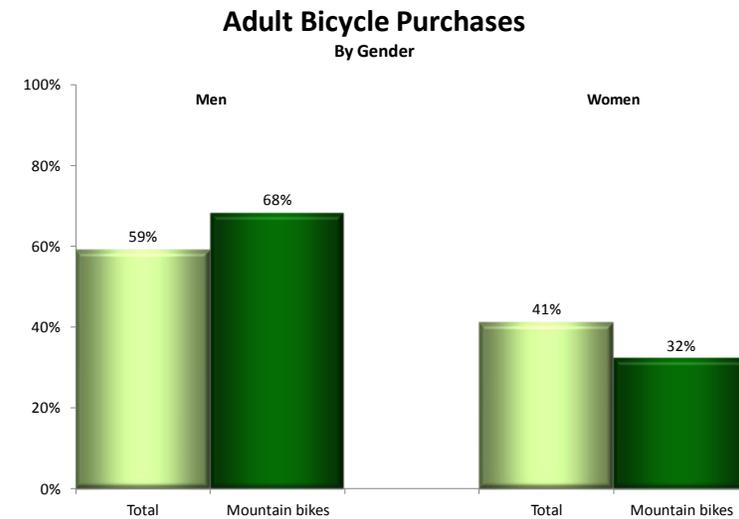
2008 Estimated Retail Unit Sales (000)



Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2008

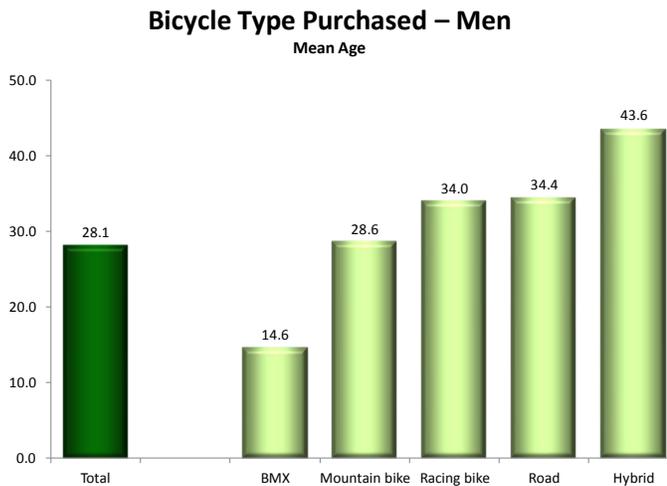


In terms of demographics of bike purchasers, men are more likely than women overall to have purchased **bicycles** in Canada in 2008. Furthermore, men are twice as likely to have purchased **mountain bikes** compared with women.

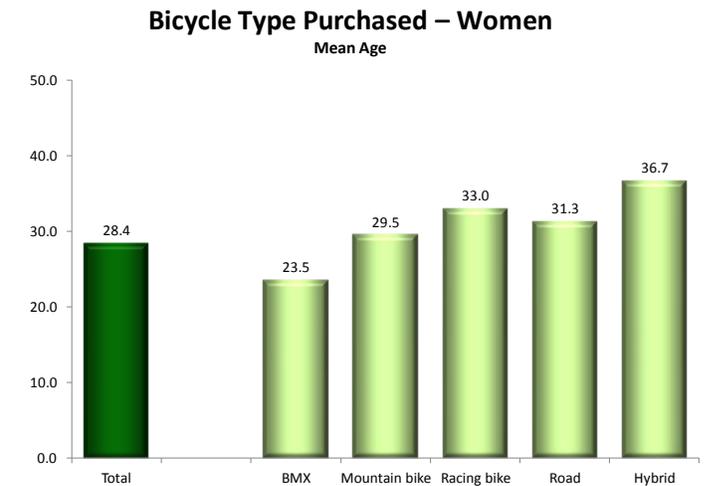


Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2008

The average age of Canadians who were the end user of a purchased adult bike is 28, which is similar for both men and women. Differences emerge when examining bicycle types. Specifically, the average age of men who purchase a mountain bike is 29, compared with other bicycle types such as BMX (15 years), Racing (34 years), Road (34 years), or Hybrid (44 years).



Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2008



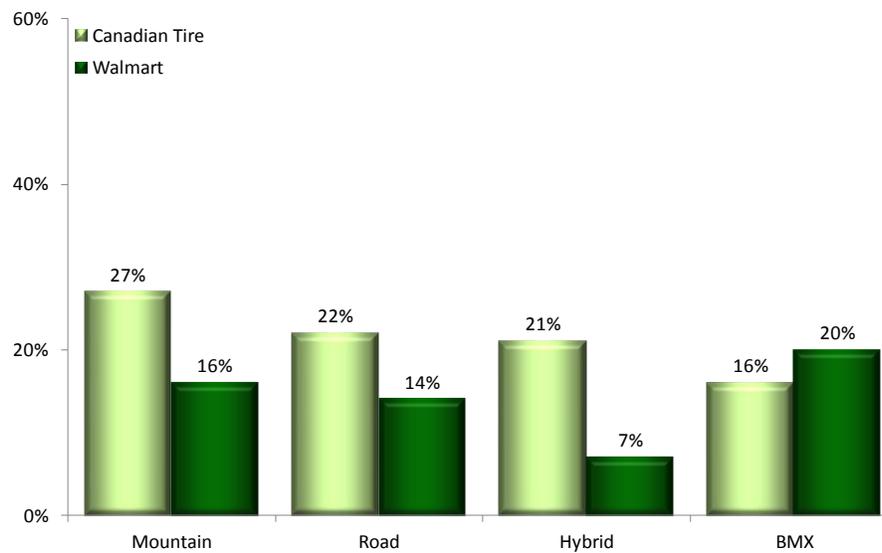
Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2008



Mass Merchants vs. Independent Retailers

Nearly three in ten adult mountain bikes sold in Canada in 2008 were sold at Canadian Tire, followed by Wal-Mart. Notably, Wal-Mart is the more popular retailer for BMX bicycles, followed closely by Canadian Tire.

Largest Retailers of Adult Bicycles in Canadian Market % of Total Units in 2008

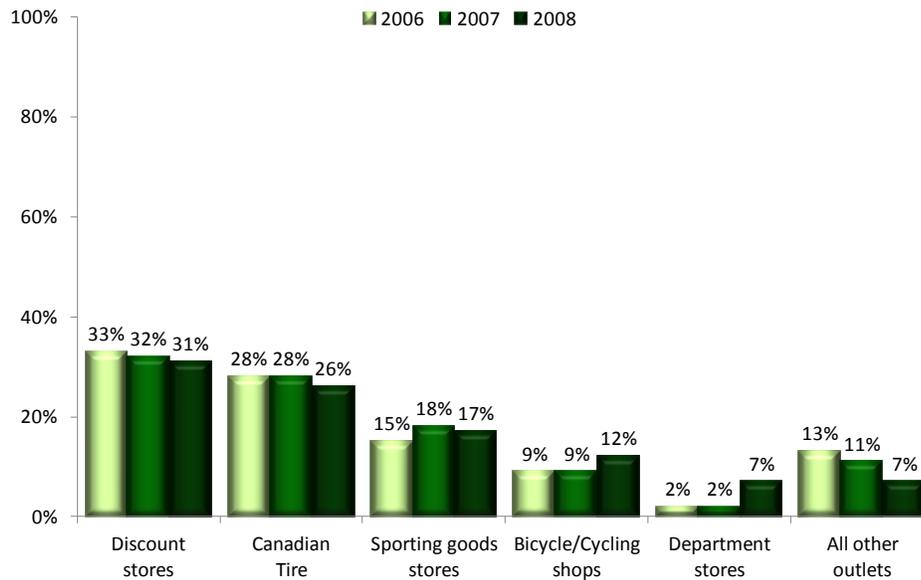


Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2008

The Canadian Sporting Goods Association estimates that 12 percent of all bicycles sold in Canada in 2008 were sold at bicycle/cycling shops, which is approximately 300,000 units.



Canadian Bicycle Sales by Unit By Income

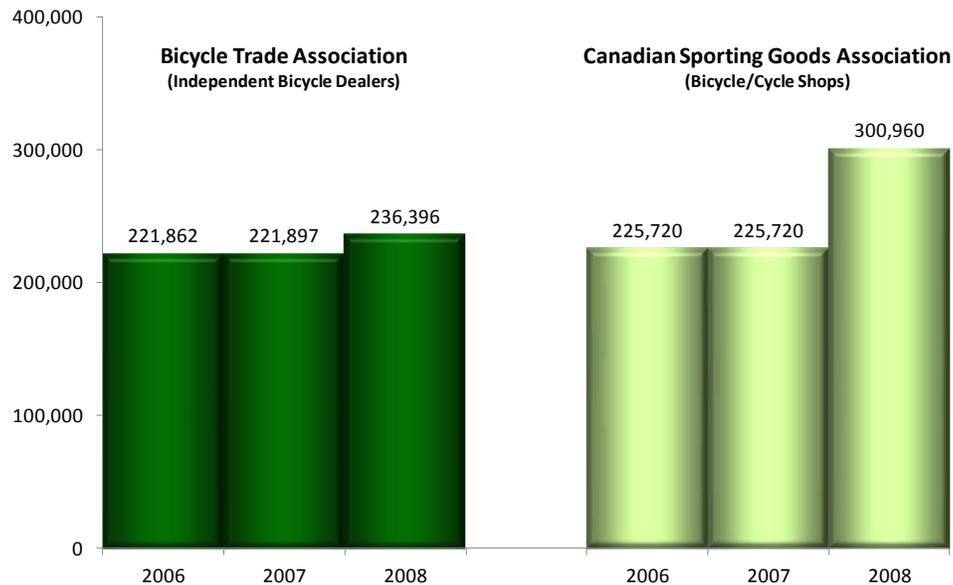


Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2009

More serious or avid mountain bikers are more likely to purchase their own equipment, and to spend more on their mountain bike. In addition, these more expensive bicycles are more likely to be available at independent dealers/bicycle shops than large retailers. Two sources of mountain bike sales data report increases in units sold at independent dealers/bicycle shops. The Bicycle Trade Association of Canada, which reports on data for Independent Bicycle Dealers (IDBs), indicates that approximately 236,000 units were sold at IDBs, and the CSGA reports approximately 301,000 units sold at bicycle/cycle shops in 2008, an increase compared with the previous two years.



Independent Bicycle Dealer Market in Units



Source: Bicycle Trade Association and the Canadian Sporting Goods Association

Profile of Mountain Biking Participants

As is evident from bicycle purchase data, men are much more likely than women to purchase mountain bikes. This is in line with other research which suggests that mountain bikers in Canada are primarily male. Mountain bikers tend to be younger, educated, with higher income levels. Research also suggests a significant proportion of mountain bikers are younger post-secondary students.

A research survey of 650 BC mountain bikers conducted by the **City of Kelowna** and **BC Parks** suggests that younger participants prefer downhill or free riding, while older participants prefer the less rigorous cross country discipline. Over one-half of mountain bikers cycle at least once per week. They prefer to cycle throughout the spring, summer and fall, on weekends or evenings.

Meanwhile, a **BC intercept survey** suggests that mountain biking participants tend to be men between the ages of 19 and 30. The **TAMS study** of cycle tourists reports that those who cycle while on trips are more likely to be male, and be between 18 and 44 years of age. Mountain biking also attracts young couples, young singles, or families with teenage children. These participants are likely to have a higher level of education, and higher household incomes than the average Canadian, and are likely to be residents of locations with a higher number of mountain biking trails or operators, such as British Columbia, Alberta and Quebec. Cyclists rate different locations in Canada as more appealing than others for cycling, with British Columbia most appealing, followed by Quebec and Alberta.

Mountain bikers are quite active, with many participating at least once per week, and some participating several times per week. They are also likely to travel in groups, either as part of a club or association, or with friends, and various sources report party sizes of three or more. Mountain bikers tend to be



predisposed towards outdoor activities in general, and their outdoor interests include visiting national or provincial parks.

Trends in Participation

A 1999 study conducted with private operators and outfitters in British Columbia suggests that mountain biking is becoming a more inclusive sport over time. In addition to appealing to the younger demographic described above, there will be a need to accommodate varying levels of fitness, and to provide education opportunities for participants, as many new participants take up the sport and may need to be educated on the regulations and best practices for mountain biking. At the same time, there is a growing awareness of the environment and the importance of minimizing any negative environmental impacts. This may be a result of increased attention on this topic by land owners, parks, and operators.

The incidence of ski mountain operators providing summer access for mountain biking is increasing. In 1991, 12 percent of BC ski areas had summer lift operations, while in 2000, this increased to 65 percent.

In the summer of 2000, a study was conducted among 548 visitors to the Whistler resort, which included those who were there for non mountain biking activities such as sightseeing, camping, or hiking. Twenty-three percent of these visitors were mountain bikers. The data is broken down by specific site within the resort, and one site examined was the Mountain Bike Park, with nearly all visitors assessed at this site reporting their main activity as mountain biking. The vast majority of Bike Park visitors (87%) were younger than 39, with an average age of 26.

Tour Operators

To support the growing popularity of mountain biking, Canada boasts many tour operators that have a specific focus on mountain biking holidays. Travel packages offered by mountain biking tour operators tend to be designed to appeal to the various mountain biking disciplines, and range from tours aimed at the recreational cross country mountain biker to freeride or downhill tours aimed at more experienced or more thrill seeking bikers. The following are examples of tour operators that offer mountain biking tours both in Canada and elsewhere.

| Tour Operators | | |
|--------------------------------|------------------------|--|
| Name | Location | Website |
| Mountain Bike Tours | Australia | www.mountainbiketours.com.au |
| Tropical Experience Cairns | Australia | www.tropicalexperience.com.au |
| Rocky Mountain Cycle Tours | BC | www.rockymountaincycle.com |
| Whistler Bike Guide Adventures | BC | whistlerbikeguide.com/adventures |
| Real Adventures | Global | realadventures.com |
| Pacific Cycle Tours | New Zealand/ Global | www.bike-nz.com/entry/mountain-bike-tour-canada |



| Tour Operators | | |
|--------------------------------|----------|---------------------------------------|
| Name | Location | Website |
| Escape Adventures | NV | www.escapeadventures.com |
| Mountain Bike Tours and Trails | UK | www.mountainbiketours.co.uk/index.htm |
| Wildcat Adventures | UK | www.wildcat-bike-tours.co.uk |
| Dreamride Moab | UT | www.mountainbiketours.com/home.html |
| Cabin Fever Adventures | Yukon | www.cabinfeveradventures.com |
| Boréale Mountain Biking | Yukon | www.borealebiking.ca |

Mountain Biking Operators in Canada

There are a large number of mountain biking operators in Canada offering various types of mountain biking including downhill, cross country, freeride, and dirt jumping. Many operators who run ski resorts during the winter season are taking advantage of summer activities and providing trails for mountain biking. In addition, clubs and associations are constructing and managing trails on private and public land, bike parks are opening to appeal to the expanding dirt jumping and freeride markets, and those looking to take advantage of increased tourism are promoting their mountain biking offerings. Below is a list of the main operators in Canada.

Private Operators

The majority of private operators of mountain biking facilities are ski resorts looking to supplement their income during summer months. Indeed, most of these operators are more likely to have downhill trails rather than cross country. Private operators are also more likely to offer a broad range of services, with most having on-site rentals, repairs, and restaurants. Finally, private operators are more likely to offer paid lessons and clinics, compared with public operators.

| PRIVATE Mountain Biking Operators – Canada | | | | | | |
|--|----------|---|-----------|---------------|-----------|--------------|
| Name | Province | Notes | Down-hill | Cross Country | Free ride | Dirt Jumping |
| Canadian Olympic Park | AB | <ul style="list-style-type: none"> - courses designed by Whistler's Gravity Logic, including a downhill run with a 400 foot vertical descent - includes a skills centre - operates a rental and repair facility for bikes and equipment, as well as a restaurant - offers a vast array of different training programs for individuals of varying ages and skill level | X | | X | X |
| Fernie Alpine Resort | BC | <ul style="list-style-type: none"> - 40 trails - lift access - operates a rental facility for bikes and equipment - offers private lessons and public clinics | X | X | X | |



| PRIVATE Mountain Biking Operators – Canada | | | | | | |
|--|----------|---|-----------|---------------|-----------|--------------|
| Name | Province | Notes | Down-hill | Cross Country | Free ride | Dirt Jumping |
| Kamloops Bike Ranch | BC | - a partnership between the City of Kamloops Parks, Recreation and Cultural Services Department and the Kamloops Bike Riders Association - 26 hectare area - includes a jump park and BMX track | X | X | X | X |
| Kicking Horse Mountain Resort | BC | - 27 trails - lift access - bike park is 7,700 feet above sea level - operates a rental facility for bikes and equipment, as well as a restaurant | X | X | | |
| Kimberley Alpine Resort | BC | - 100 km of trails | X | | | |
| Mount Washington Alpine Resort | BC | - 19 trails covering 37 km - two high speed chair lifts - includes a jump park and skills area | X | | X | X |
| Panorama Mountain Village | BC | - 15 trails - lift access - operates a dirt jump park - operates a rental facility for bikes and equipment - offers both group and private lessons | X | | X | X |
| Silver Star Mountain Resort | BC | - 16 trails - features Canada's largest mountain bike lift, which takes bikers to a height of 1,600 feet - allows a local bike repair shop to operate a satellite location on-site during summer months - operates a variety of restaurants and accommodations at the main resort | X | | | |
| Sun Peaks Resort | BC | - 39 trails covering a total of 70 km - lift access - operates a dirt jumping park - offers camps, clinics, and tours on-site - operates a rental facility for bikes and equipment, as well as a restaurant | X | | X | X |
| Whistler Mountain Bike Park | BC | - 100 km of downhill trails - 8,400 square foot indoor arena for jumps - offers paid lessons and bike camps - operates a retail store selling bikes and equipment - operates a rental facility for bikes and equipment, as well as a storage location for riders who wish to keep their bikes at the park | X | | X | X |
| Blue Mountain | ON | - 30 km of trails - lift access - offer lessons, camps, and clinics on-site - operates a full-service bike repair shops, as well as a rental facility for bikes and equipment | X | | X | |
| Sir Sam's Ski and Summer Resort | ON | - 10 km of cross country trails and 7 km of downhill runs - lift access - includes a BMX pump track - operates a rental facility for bikes and equipment | X | X | | |



| PRIVATE Mountain Biking Operators – Canada | | | | | | |
|--|----------|---|-----------|---------------|-----------|--------------|
| Name | Province | Notes | Down-hill | Cross Country | Free ride | Dirt Jumping |
| Camp Fortune | QC | - 20 km of trails - lift access - offers bike camps for children | X | X | | |
| Mont-Saint-Anne Mountain Resort | QC | - 35 trails that cover 179 km - host site of the UCI World Championships for 18 consecutive years - operate rental facilities for bikes and equipment - includes a pump track | X | X | X | |
| Ski Bromont | QC | - 25 trails that cover 100 km - lift access - offers lessons at an on-site bike school - operates a rental facility for bikes and equipment, as well as a repair shop and restaurant | X | | X | |

Public Operators

Publicly operated mountain biking areas are more likely than private operators to include cross country trails. One reason for this is that the majority of natural cross country trails are located on federal, provincial, and municipal land. Another trend worth noting is that many publicly operated trail networks or parks are maintained by a local mountain biking association. The majority of these operations have been funded co-operatively by governments, corporations, and private donors. In some instances, public mountain biking opportunities are within a specific area, such as the city of Nelson, and their offerings are discussed below, in addition to other more structured public mountain biking parks.

| PUBLIC Mountain Biking – Canada | | | | | | |
|---------------------------------|----------|---|-----------|---------------|-----------|--------------|
| Name/Location | Province | Notes | Down-hill | Cross Country | Free ride | Dirt Jumping |
| Gleneagles Adventure Park | BC | - urban bike park in West Vancouver that includes jumps up to 7 feet in height and 12 feet in length - operated by District of West Vancouver - was designed and constructed with the help of many volunteers - situated next to a skate park and community centre | | | X | X |
| Mount Fromme | BC | - over 35 trails in the North Shore area covering 40 km - trails are maintained by the North Shore Mountain Bike Association | X | X | X | |
| City of Nelson | BC | - trail network in the Selkirk Mountains - famous trails include Burlington National Santa Fe Railway and Clearwater Bike Route - many trails were originally built by local community members, and are now maintained by the Nelson Cycling Club. | X | X | X | |



| PUBLIC Mountain Biking – Canada | | | | | | |
|--|----------|---|-----------|---------------|-----------|--------------|
| Name/Location | Province | Notes | Down-hill | Cross Country | Free ride | Dirt Jumping |
| North Saanich Dirt Jump Park | BC | <ul style="list-style-type: none"> - 7 different runs with 44 jumps that range from 5 to 15 feet in height - operated on land within the jurisdiction of the District of North Saanich, but construction was organized by the Friends of North Saanich Bike Park Society - construction was funded by both private and public supporters - park maintained by volunteers, as well as the South Island Mountain Bike Society | | | | X |
| City of Revelstoke | BC | <ul style="list-style-type: none"> - network of trails that are over 7,000 feet in altitude - some trails, including Mt. Macpherson and Begbie Creek, were built and are maintained by the Revelstoke Cycling Association | X | X | | |
| South Surrey Bike Park | BC | <ul style="list-style-type: none"> - 3 km of trails - located on land under the jurisdiction of the City of Surrey's Department of Parks, Recreation, and Culture - re-developed and maintained by the Surrey Off Road Cycling Enthusiasts Society | | | X | X |
| Williams Lake | BC | <ul style="list-style-type: none"> - network of trails known for its fast shuttle runs and trail stunts - trails located on mix of Crown and private land, but maintained by Williams Lake Cycling Club | X | X | X | |
| Bruce Peninsula Mountain Bike Adventure Park | ON | <ul style="list-style-type: none"> - 20 km of trails - 18,000 visitors in 2005 - located on 300 acres of land - construction of the park was financed by County Council, the Government of Canada, Ontario Power Generation, and the Town of South Bruce Peninsula - current trail crews are financed by a combination of government grants, corporate sponsorships, and funding from the County of Bruce | | X | X | |

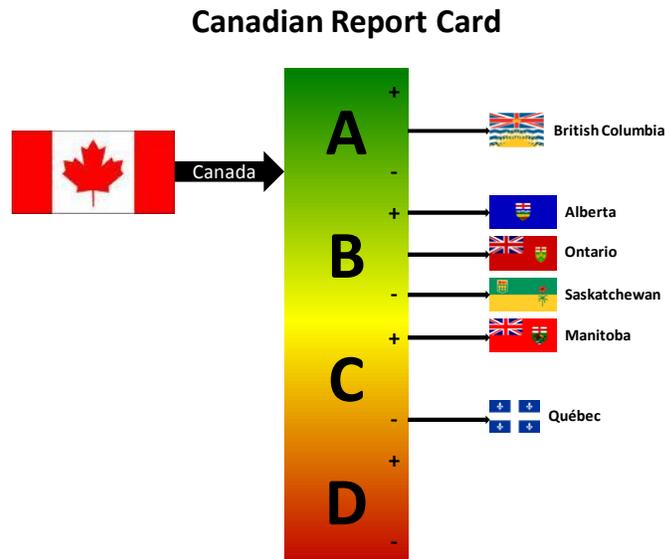
Notably, there are a few winter ski resorts who do not offer downhill mountain biking. In particular, Mont Tremblant in Quebec specifically notes on its website that downhill mountain biking is not available and trails are not to be used for this purpose. The Canada Trails website suggests that this is due to erosion concerns. Cross country ski trails are open to mountain biking in the summer season. In addition, Apex Mountain in BC offered mountain biking in the past, but halted this offering several years ago.

Provinces

IMBA produces a report card that rates each of the states and provinces, as well as some countries, in terms of their mountain biking offerings. IMBA rates six provinces, as well as the country overall, with the last full report available from 2005. British Columbia fares the best, with a rating of A, while second place goes to Alberta with a rating of B+. Overall, Canada receives an A-, which is the same as the United



States, and above most other countries under consideration, with the exception of Scotland which receives an A rating.



Source: IMBA 2005 Report Card

Competitions

Canada has a wide range of mountain biking competitions for all types and styles. Below are some of these competitions, although this list should not be considered exhaustive.

Giant Bicycle Lake to Lake Classic

- 🚲 Location: Niagara, ON, Canada
- 🚲 Website: www.laketolake.ca
- 🚲 Type: Cross country
- 🚲 Description: A mountain bike race from Lake Erie to Lake Ontario. This event in the past has attracted over 1,000 participants.

Union Cycliste Internationale Mountain Bike World Championship

- 🚲 Location: Various (in 2010 will be at Mont-Sainte-Anne)
- 🚲 Website: <http://www.uci.ch/templates/UCI/UCI5/layout.asp?MenuId=MTI10Tc&LangId=1>
- 🚲 Types: Cross country, downhill, 4X
- 🚲 Description: 800 athletes from over 50 different countries compete for the world championships.



Kokanee Crankworx

- 🚲 Location: Whistler, BC, Canada
- 🚲 Website: www.crankworx.com
- 🚲 Types: cross country, downhill, freeride, dirt jumping
- 🚲 Description: This is a nine day event taking place at the Whistler Mountain Bike Park. The many competitions include all of the major mountain biking disciplines, with separate competitions for men and women. This event attracts many of the top bikers in the world.

BC Bike Race

- 🚲 Location: Vancouver and Whistler, BC, Canada
- 🚲 Website: www.bcbikerace.com
- 🚲 Types: Cross country
- 🚲 Description: The BC Bike Race is a seven day race, where riders start in Vancouver and end in Whistler. There are separate categories for solo racers, as well as teams of two, three, four, and five. The route is designed by famous endurance mountain bike racer Andreas Hestler.

24 Hours of Adrenalin – Canmore Nordic Centre

- 🚲 Location: Canmore, Alberta (2010)
- 🚲 Website: www.24hoursofadrenalin.com
- 🚲 Type: Cross country relay race
- 🚲 Description: The 24 hours of adrenalin race occurs in different cities in the US, Canada and Australia, and involves teams who try to complete as many laps as possible around a mountain biking trail.

Canadian Cycling Association National Championships

- 🚲 Location: Various locations within Canada
- 🚲 Website: www.canadian-cycling.com/cca/racing/nat_champs.shtml
- 🚲 Type: Cross country, downhill
- 🚲 Description: The CCA conducts a range of national championships every year, for all types of cycling.

**United States****Market Size - Cycling**

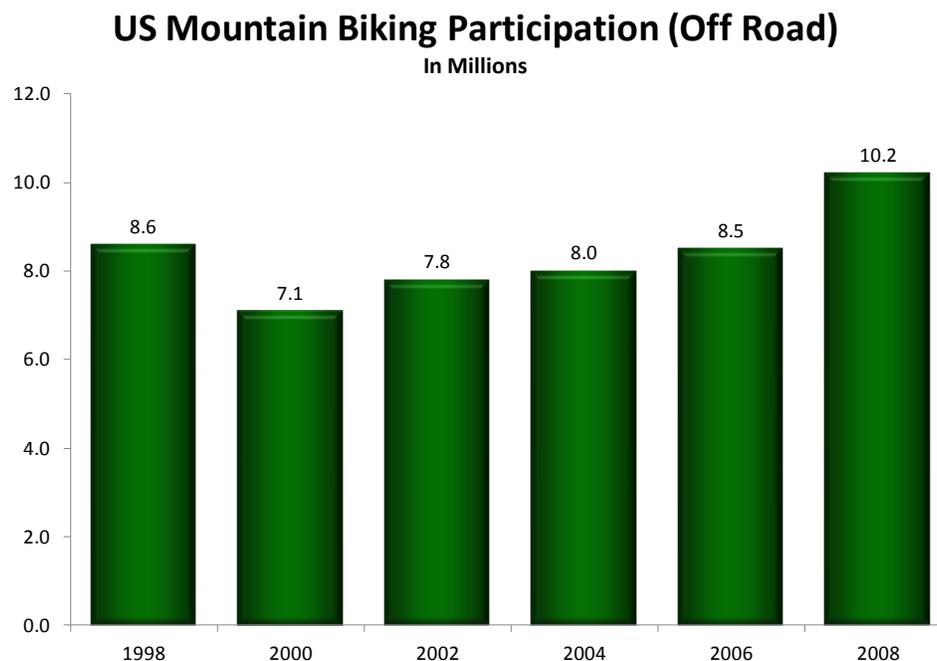
The National Bicycle Dealers Association estimates that nearly 45 million Americans aged seven and older rode a bicycle at least six times in 2008, which is approximately 15 percent of the population. Notably, this number has declined since 1995, when 56.3 million Americans had ridden a bicycle that often, although is an increase compared with 2007 results (40.1 million).



Market Size – Mountain Biking

Research on the number of mountain bikers in the United States offers conflicting results, ranging from six million to 45 million Americans. Given that there are many different interpretations of ‘mountain biking’ it would be expected that different surveys reach somewhat different conclusions. The empirical results indeed indicate that differences in question wording can have a marked impact on survey results. The **National Survey on Recreation and the Environment (NSRE)** is a telephone survey among 50,000 households in the US, and is also used as the basis for results in *Outdoor Recreation for 21st Century America*. This survey estimates the number of mountain bikers at the high end of the spectrum, suggesting in 2000/2001, 45.6 million Americans aged 16 or over participated in mountain biking at least once in the past year. The questionnaire wording first asked if respondents had done any type of bicycling for fun or exercise in the past 12 months, and if yes, asked if any bicycling occurred on backcountry roads, trails, or cross country, riding a mountain bike or hybrid bike.

In contrast, the **Sporting Goods Manufacturers Association’s (SGMA)** survey, which is conducted online among 60,000 households, estimates that seven million Americans aged six and over participated in mountain biking at least once in 2005. The Outdoor Recreation Participation Report (2009) from the **Outdoor Foundation** bases its results on the same survey that SGMA uses to collect information, and also reports that the number of mountain bikers in the US is between six and seven million. The Super Study on Sports Participation by **American Sports Data** states that 6,700,000 Americans aged six and over participated in mountain biking at least once in 2002. Finally, the **National Sporting Goods Association** estimates that 10.2 million Americans aged seven years and over participated in mountain biking more than once in 2008.



Source: National Sporting Goods Association



A survey of **IMBA members** in 2003 suggests that three percent of the US population mountain bike, and of these, 80 percent had taken a trip of one or more nights to go mountain biking. This study also found that 89 percent of riders had been cross country riding, 23 percent were freestyle, and 18 percent downhill. In addition, three in ten surveyed had visited the Moab Utah mountain biking region. It is also noteworthy that an **IMBA** publication outlining the benefits of mountain biking suggests there are 50 million Americans who mountain bike. Finally, the **TAMS** survey suggests that 3.3 million Americans aged 18+ mountain biked on an overnight trip in 2005.

Bicycle Sales

The National Bicycle Dealers Association projected that 18.5 million bicycles (of all types) were sold in the US in 2008. Of these, 13.4 million were a 20 inch wheel base and above. Seventeen percent of these were sold through specialty bicycle retailers, which include additional services such as bike fitting, repair and assembly. Approximately three in ten bicycles sold through these specialty retailers were mountain bikes. Furthermore, in 2008, approximately three-quarters of bicycle units sold through mass merchants. It should be noted that the number of mountain bikes sold does not correlate to participation in mountain biking activities, as mountain bikes may be used for road biking or commuting.

| Specialty Bicycle Sales by Year, Units, 2006-2008 | | | |
|---|---------------|---------------|---------------|
| Category | 2006 Unit (%) | 2007 Unit (%) | 2008 Unit (%) |
| Mountain | 28.5 | 28.0 | 28.5 |
| Comfort | 14.0 | 15.0 | 12.0 |
| Hybrid/Cross | 15.0 | 16.5 | 19.0 |
| Cruiser | 6.0 | 6.5 | 4.0 |
| Road/700C | 17.0 | 15.0 | 13.0 |
| Youth | 16.5 | 16.5 | 21.5 |
| Other | 3.0 | 2.5 | 2.0 |

Source: U.S. Commerce Department statistics, Gluskin Townley Group estimates

The National Ski Areas Association reports there are 162 ski resorts that offer mountain biking during the summer season, and of these, 84 have gravity-fed trail systems.

Participant Profile

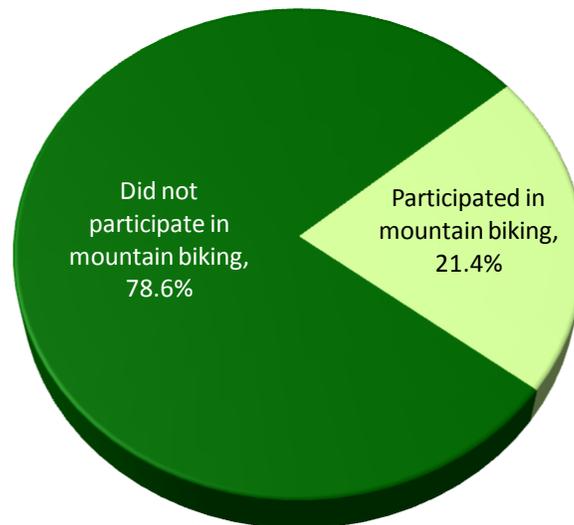
Due to conflicting data, demographics analysis will be conducted for two surveys: the NSRE and SGMA survey, with a summary of results provided following this analysis.

National Survey on Recreation and Environment

The NSRE reports that 45.6 millions Americans aged 16 or over participated in mountain biking at least once in 2000/2001, which is 21.4 percent of the American population.



American Participation in Mountain Biking in 2000/01

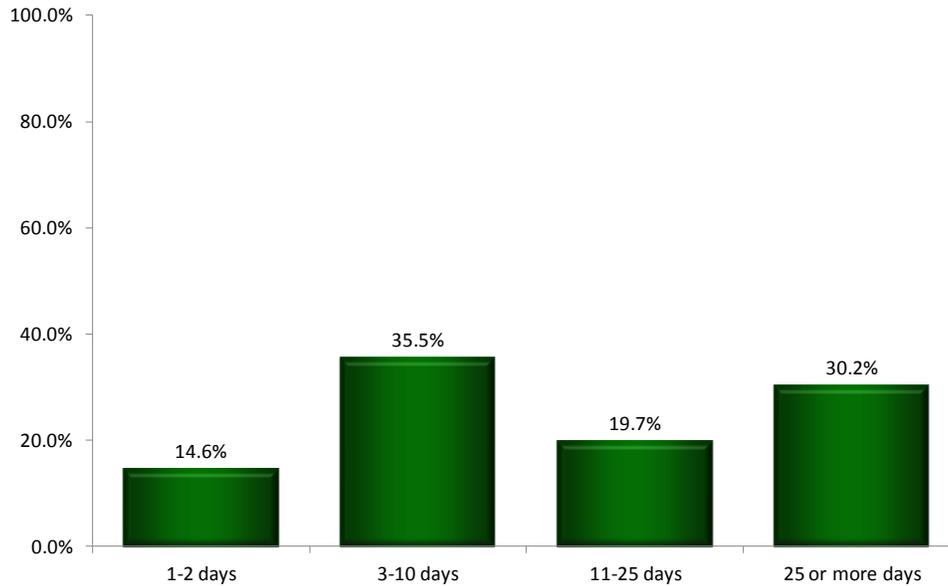


Source: National Survey on Recreation and Environment

In terms of number of days of participation, three in ten mountain bikers are considered enthusiasts, that is, they participated in mountain biking 25 or more times in the last year, which represents 6.8 percent of the American population. The majority of enthusiasts are found to mountain bike between 25 and 138 times, although 20 percent of this group report mountain biking 139 or more times in the last year.



Days of Mountain Biking Per Year

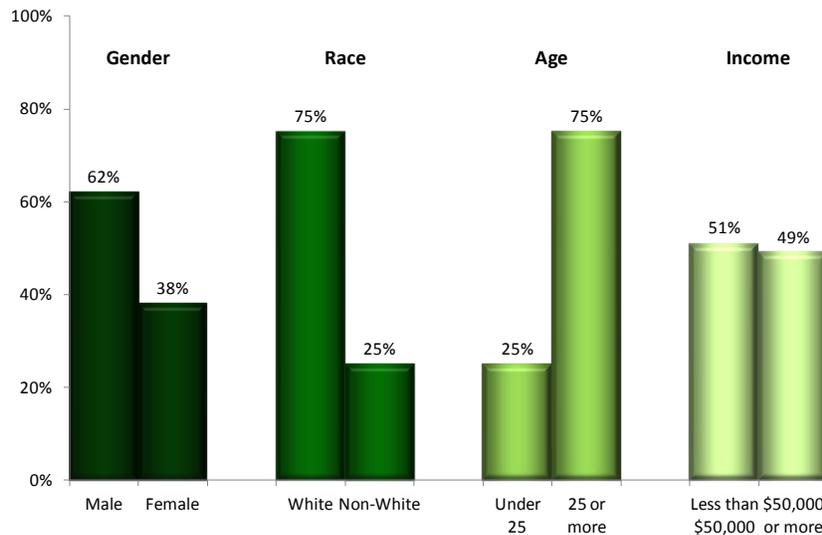


Source: National Survey on Recreation and Environment

There is limited demographic information available from the NSRE regarding mountain biking participation. Examining enthusiasts specifically, 62 percent of mountain biking enthusiasts are male, 75 percent are white, 25 percent are under 25 years of age, and 49 percent earn \$50,000 or more.

Demographics of Mountain Biking Enthusiasts

25+ Times Per Year



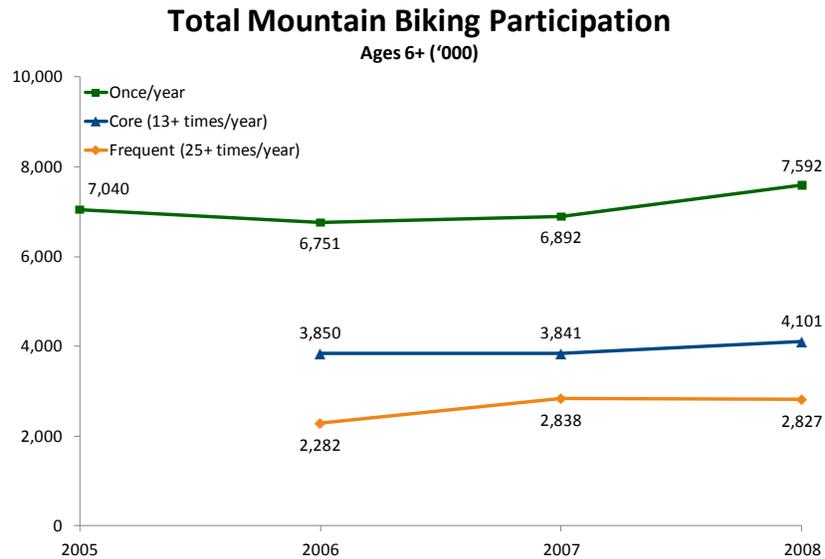
Source: National Survey on Recreation and Environment

The Sporting Goods Manufacturers Association

SGMA estimates that the number of mountain biking participants in the United States has fluctuated over the past few years, with 7.5 million Americans aged six and over mountain biking at least once in 2008. There are approximately four million who are considered ‘core’ participants, that is, they



mountain biked 13 or more times in 2008, and just under three million participated in mountain biking 25 or more times in 2008.



Source: Bicycling (Mountain/Non-Paved) for the Sporting Goods Manufacturers Association

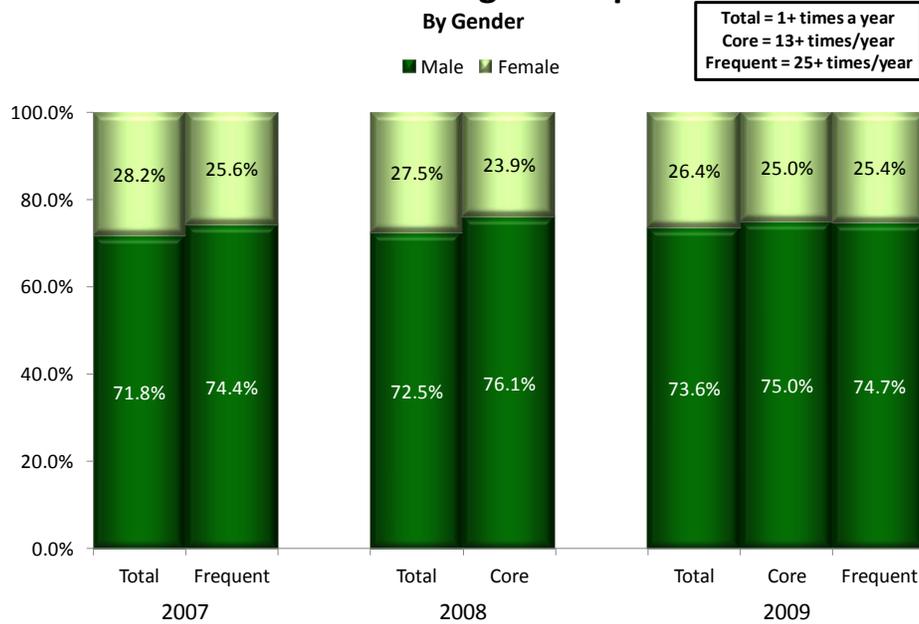
SGMA provides more demographic information compared with the NSRE, and a few demographic breakdowns are outlined below.

Gender

As is the case for the Canadian mountain biking population, the sport in the United States is predominantly male, with men making up 75 percent of all participants. Overall, 4.1 percent of all men aged six and over mountain biked at least once in the 2008, compared with only 1.4 percent of women. Notably, there is little change in division between genders when examining total, core, and frequent participants.



Mountain Biking Participation

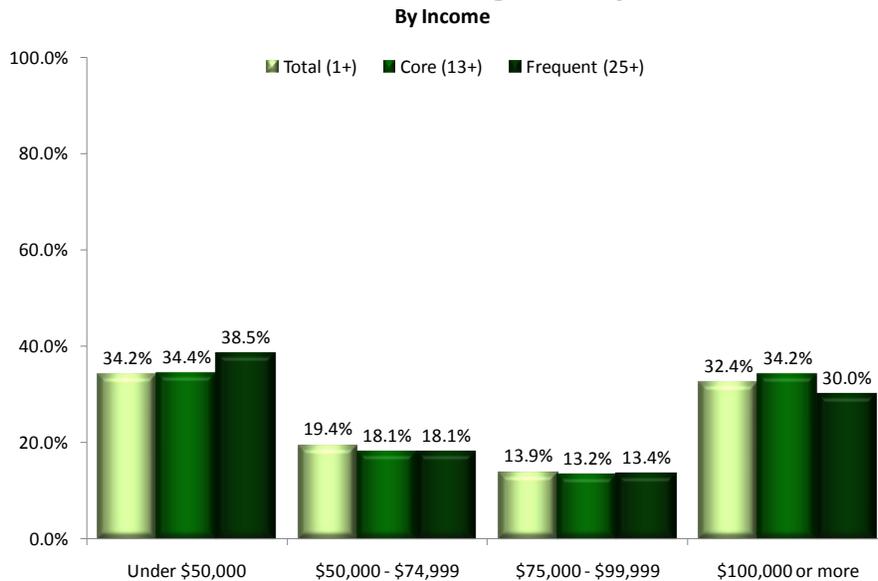


Source: Bicycling (Mountain) for the Sporting Goods Manufacturers Association

Income

Income levels are similar across the various participation levels of mountain bikers, although frequent participants (those who mountain bike 25 or more times in one year) are somewhat more likely to be in the lower income category.

2008 Mountain Biking Participation

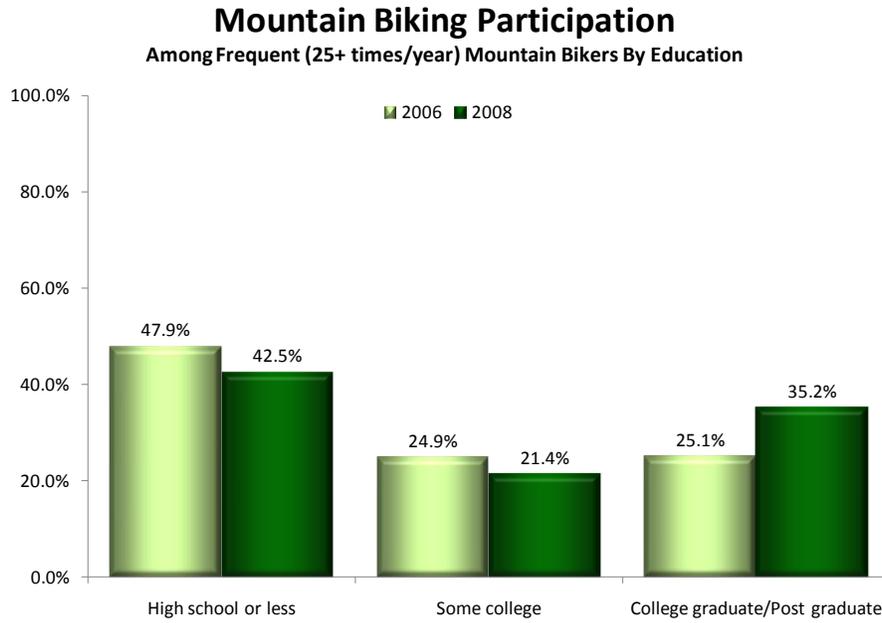


Source: (Mountain) for the Sporting Goods Manufacturers Association



Education

Four in ten frequent mountain bikers have a high school diploma or less education, and over one-half have some college, or a college or post-graduate degree. The number of frequent mountain bikers with a college or post-graduate degree increased between 2006 and 2008.



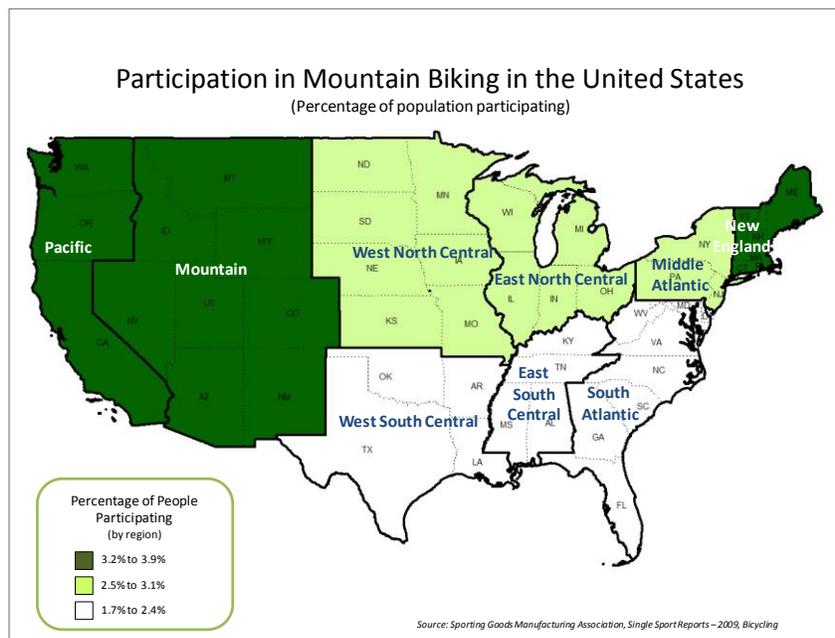
Source: Insight07 and 09 USA Sports Participation Study: Bicycling (Mountain) for the Sporting Goods Manufacturers Association



Region

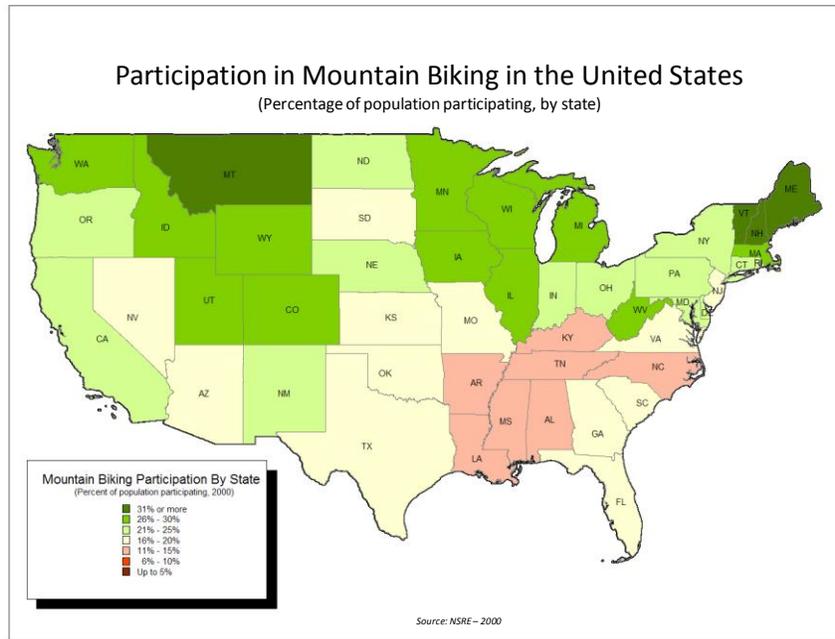
Notably, according to SGMA, there are regional differences in mountain biking frequency. Specifically, both casual mountain bikers (those who mountain biked between one and twelve times in 2008) and frequent mountain bikers (those who mountain biked 25+ times in 2008) are more likely to be located in the South Atlantic and Pacific Region.

In terms of overall participation, parts of the Mountain and New England region have a higher percentage of mountain bikers per capita, which is consistent across SGMA and NSRE data. SGMA reports on participation by region within the US, based on 7.5 million Americans mountain biking in 2008. The following graph depicts mountain biking participation based on the population of each region. The West and New England regions have a higher percentage of mountain bikers per capita compared with other areas.



NSRE reports similar information, although by state. The following graph illustrates participation rates of mountain bikers in the US (based on 45 million total), by state.

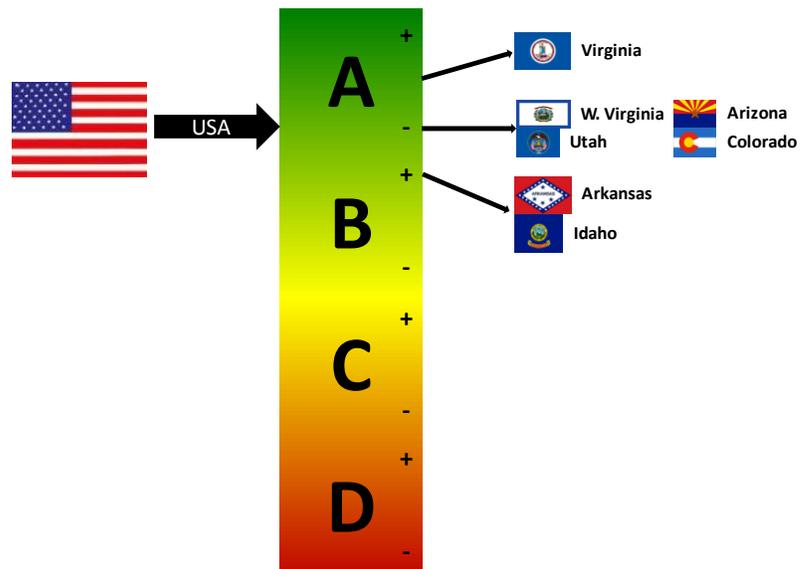




States

In the IMBA's 2005 Report Card assessment, a few states perform well and above others, with Virginia most highly rated. Overall the United States received a rating of A-.

United States Report Card



Source: IMBA 2005 Report Card



Overall Assessment of Participation

Trends in Participation

As there is conflicting information about the number of mountain bikers in the US, estimating trends in participation is difficult. Overall, US mountain bikers tend to be younger, male, and white, with higher than average levels of income. Specifically, the majority of participants are under the age of 45, are over-indexed in the upper income category (\$100,000+), and are also more likely than the average American to have completed post-secondary education, or to not have completed high school (this latter category reflects the young age profile of mountain biking participants). Examining the most frequent mountain bikers (those who participate in the sport at least 13 times each year), these participants tend to fall into two age groups, those under 18 years of age, and those aged 25 to 44 years. This mountain bike segment tends to have higher than average levels of household income, and is more likely to have higher levels of education, or to still be in secondary school.

Mountain biking participants tend to be more involved in outdoor activities such as climbing, overnight backpacking, hunting, fishing, and hiking, and are more active overall, compared with the average American.

An analysis of Wisconsin recreation statistics predicts that activities that are most popular among those in their twenties, such as in-line skating, downhill skiing, rock climbing and mountain biking are likely to experience stability or decreases in participation rates after 2015, due to an aging population. Mountain biking is an activity that experiences decreased participation rates as people age.

Trends in Trails

A 2006 Ohio State park survey determined several overall trends in mountain biking within the parks, including:

- 🚲 The majority of parks experienced an increase in mountain biking activity;
- 🚲 Under one-half experienced illegal trespassing by mountain bikers; and
- 🚲 Most had requests to mountain bike on trails reserved for foot traffic.

Trends in Types

In the US market, mountain biking appears to be moving in two separate directions. At one end of the spectrum, there is continued interest in the more extreme forms of mountain biking, such as freeriding. At the other end of the spectrum, Bicycle Retailer reported in 2009 that there is a trend toward European Style hybrid bicycles, as opposed to full suspension freestyle or BMX bikes. These hybrid bicycles are a blend of road and mountain bikes, and are not made to withstand the rigours of the more extreme forms of mountain biking.

Competitions

Mountain biking is an established competitive sport in the US. The following are examples of the types of US mountain biking competitions.



USA Cycling Mountain Bike National Championship

- 🚲 Location: Various, USA
- 🚲 Website: www.usacycling.org/mtb
- 🚲 Type: Cross country, downhill, mountain cross, super-D, short track
- 🚲 Description: Over 1,200 professional and amateur off-road riders compete on world-class terrain in contests for various mountain biking disciplines. Twenty-one events will be held in 2010.

Moab Ho-Down

- 🚲 Location: Moab, UT, USA
- 🚲 Website: <http://moabhodown.chilebikes.com>
- 🚲 Types: Cross country, downhill, freeride, dirt jumping
- 🚲 Description: This event has been taking place for 23 years in the famous Moab region of Utah. It incorporates events that cover all major mountain biking disciplines, and is sponsored by many bike shops and industry members.

Texas Mountain Bike Marathon Series

- 🚲 Location: Various, Texas, USA
- 🚲 Website: www.tmbra.org
- 🚲 Types: Endurance
- 🚲 Description: This is a series of endurance mountain bike races held in various locations in Texas. It is sponsored by many bike shops and industry members.

Union Cycliste Internationale Mountain Bike World Cup

- 🚲 Location: Various (the sixth round of this event in 2010 will be at Windham, New York)
- 🚲 Website: www.uci.ch/templates/UCI/UCI5/layout.asp?MenuId=MTUzNDI&LangId=1
- 🚲 Types: Cross country, downhill, 4X
- 🚲 Description: The Mountain Bike World Cup is held in several venues in Europe and one in the USA, with competition in cross country, downhill, and 4X.



Europe

The IMBA 2005 Report Card rates Scotland an A, Wales and England a B, and the United Kingdom a B+ overall. Many other European countries are not rated, although Italy receives a B. Comments about Scotland suggest that mountain bike tourism is increasing, and the country has riding centres and excellent trails. Below are some participation estimates and bicycle sales statistics for several European countries.



Market Size



United Kingdom

There is very little data on mountain biking statistics in the UK. IMBA-UK reported 358 members in 2009, and 35 clubs or groups that represented 1500 members. Furthermore, IMBA-UK attempts to estimate mountain biking participation by using US data and some known information about sales of bicycles in the UK. The association estimates that 5.5 million UK residents ride off-road at least once per year, which is about eight percent of the population in 2005. In addition, approximately 3.4 million bicycles were sold in the UK in 2007.

Sport England reports that just under two million UK residents participate in cycling at least once per week in 2008, for at least 30 minutes, which is an increase compared with the last 12 months.



Germany

It is estimated that there are approximately 3.5 million mountain bikers in Germany.



Norway

Norway has one of the most sports centered populations in Europe, and Norway holds the largest mountain biking race in the world. In 2008, it is estimated that 400,000 bikes were sold in the country, which has a population of 4.7 million. Fifty percent of these units were mountain bikes, which is one of the highest proportions in Europe.

Notably, one of the trends in Norway is to own more than one bicycle, as many citizens use a bike to commute to and from work, but also cycle for recreation.



Sweden

It is estimated that the number of bikes sold in Sweden in 2008 was approximately 500,000, for a population of over nine million. The majority of these bicycles are commuting bikes (which include fenders), although other types include road bikes and electric bikes. According to Sweden's official tourism website, mountain biking is a well-developed activity in this country.



Denmark

Approximately 550,000 bicycles were sold in Denmark in 2008. These bikes tend to be city or classic bikes. Mountain bikes account for approximately 10 percent of the bicycles sold in Denmark.



Profile of Mountain Biking Participants

With very limited availability of descriptive information about European mountain biking participants, it is generally accepted that European mountain bikers have demographic characteristics similar to those of North American participants, namely younger men, with higher than average levels of household income and education. Recent years have seen increased participation among women.

Trends in Participation

Competitive mountain biking is a growing industry in the United Kingdom, with endurance/marathon, downhill, and cross country events expected to have the highest participation rates in 2009. Indeed, there are reports of new entrants, and interest from large sponsors for endurance and marathon events, suggesting this type of race is growing in popularity. The age of competitive mountain bikers in the UK is varied, although participants tend to be between 20 and 30 years of age.

Competitions

Europe has a well developed mountain biking competition circuit. The following are examples of some competitions.

2010 White Style Mountain Bike Slopestyle Competition

- 🚲 Location: Leogang, Austria
- 🚲 Website: www.bikepark-leogang.com
- 🚲 Types: Freeride
- 🚲 Description: This event has been taking place for five years, and features a “slopestyle” course constructed from snow and wood.

Union Cycliste Internationale Mountain Bike World Cup

- 🚲 Location: Various
- 🚲 Website: www.uci.ch/templates/UCI/UCI5/layout.asp?MenuId=MTUzNDI&LangId=1
- 🚲 Types: Cross country, downhill, 4X
- 🚲 Description: The Mountain Bike World Cup is held in several venues in Europe and one in the USA, with competitions in cross country, downhill, and 4X.

Mountain Mayhem 2010

- 🚲 Location: UK
- 🚲 Website: www.osmountainmayhem.co.uk/arena_campsite.html
- 🚲 Types: Cross country
- 🚲 Description: A 24 hour bike race, Mountain Mayhem began in 1998, and the 2009 race had 2,500 participants.





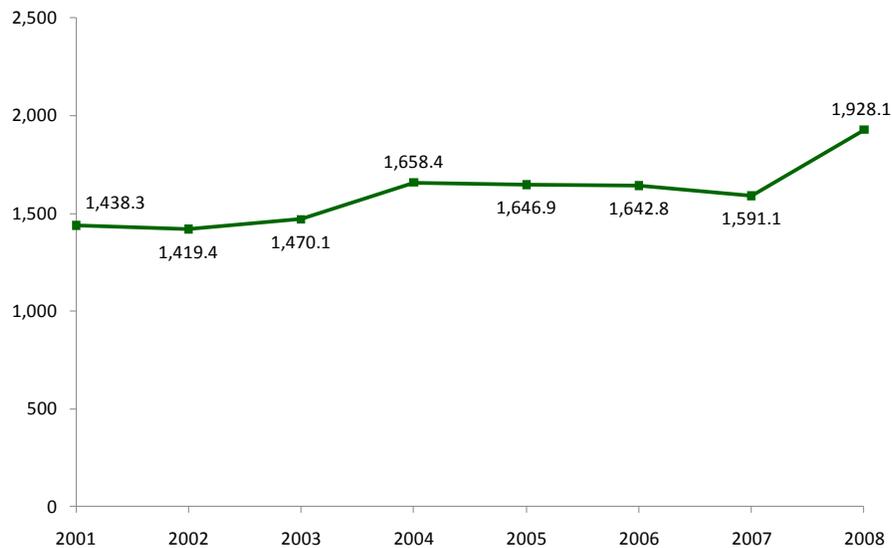
Australia/New Zealand



Market Size

Cycling was the fourth most popular physical activity in Australia in 2008, with 1.9 million participants, or 11.6 percent of the population. This includes BMX and all forms of mountain biking. Participation rates have been steadily increasing over the past decade or so.

Australia Cycling Participation (000)



Most participation in cycling in Australia is considered 'non-organized', that is not fully organized by a club or association. Mountain Bike Australia continues to experience an increase in membership, with 4,700 members in 2007. As an estimate of the number of mountain bikers in Australia, a research paper suggests that club memberships compose approximately three to five percent of mountain bikers. This would suggest that in Australia there are approximately 50,000 to 75,000 riders. This appears to be a low estimate of the number of mountain bikers in Australia given the estimated number of mountain bikers in New Zealand, therefore this number may be considered conservative.

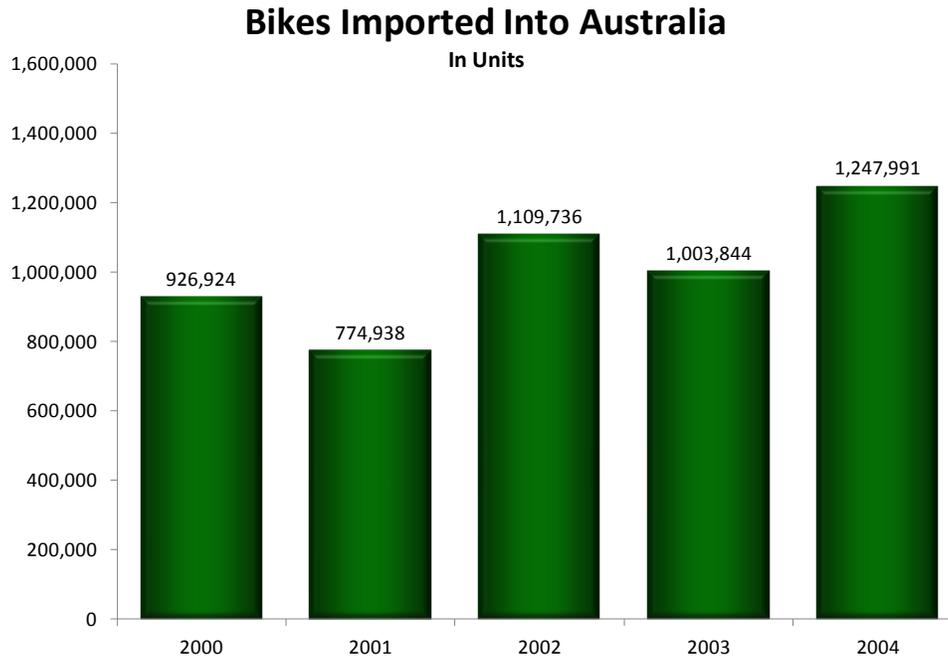
In New Zealand, approximately 750,000 adults aged 16 years and over participated in cycling in 2007/2008. Of these, approximately 200,000 participated in mountain biking, or six percent of the NZ population.



Profile of Mountain Biking Participants

Australia

Men (1.2 million) are more likely than women (681,000) to participate in cycling in Australia, and the majority of this is for leisure purposes (86%). Furthermore, the number of bicycles imported into Australia has been steadily increasing.



Source: Australian Bicycle Industry

Mountain Bike Australia (MTBA) data indicates that 70 percent of event participation is within cross country events, and 30 percent is downhill racing. Moreover, an examination of results from the National MTB Championships in 2005 indicate that those who participate in downhill events are predominantly young men, while cross country riding encompasses all ages. In terms of MTBA membership, 5 percent are recreational members, 13 percent are women, and 21 percent are 19 and under.



New Zealand

Similar to Australia, men are more likely than women to participate in mountain biking. Notably, nine percent of New Zealand men aged 16 and over (151,000) participated in mountain biking in the past year, while only three percent of women (50,000) participated. Furthermore, mountain biking participants are divided in terms of age, with 75,000 under the age of 35, and a similar number between 35 and 49 years of age.

| Age of Adults Who Participated In Cycling At Least Once Over 12 Months | |
|--|-----|
| 16-24 years | 19% |
| 25-34 years | 24% |
| 35-49 years | 41% |
| 50 years or more | 16% |
| Source: Sport and Recreation Profile: Cycling – Findings from the 2007/08 Active New Zealand Survey | |

In general, mountain biking is considered an 'extreme' sport, and participants often participate in other activities as well. Indeed, New Zealand mountain bikers participated in an average of 7.4 other different sports, compared with the national average of 4.6. Examples of these other activities include walking, swimming, and running or jogging.

Fifteen percent of mountain bikers who participated in mountain biking at least once in the past 12 months had also been in an organized competition or event. Meanwhile, 2.9 percent of New Zealanders participated in mountain biking in any given month, and of these, six percent belong to at least one club or association related to mountain biking.

Trends in Participation

Participation in cycling (both BMX and mountain biking) is increasing, with a 34 percent increase in participation between 2001 and 2008.

The key trend taking place in Australia is that government agencies have been more responsive to mountain bikers' demands for new trails. Increasingly, government agencies throughout the country have been co-operating with local mountain biking associations to develop and maintain new riding trails. For instance, the Queensland Parks and Wildlife Service is attempting an innovative plan to lease part of the Smithfield Conservation Park to the Cairns Mountain Bike Club. Similarly, Parks Victoria collaborated with the Geelong Mountain Bike Club to construct a new downhill track. Finally, Forestry South Australia and Sport and Recreation worked with Bicycle SA and the Adelaide Mountain Bike Club to construct a network of trails within the Cudlee Creek Forest.



Competitions

Scott 24 Hour Mountain Bike Championships

- 🚲 Location: Mt Stromlo, Australia
- 🚲 Website: www.scott24hr.com.au/race-info
- 🚲 Types: Combination of cross country and downhill, an endurance race
- 🚲 Description: The two day event attracts 2,500 riders.

SRAM Australian MTB Championships

- 🚲 Location: Adelaide
- 🚲 Website: www.southaustralia.com/9008099.aspx
- 🚲 Types: Cross country, downhill, 4X, trail and dirt jumping
- 🚲 Description: a large multi-day event with a range of races for all types of mountain bikers.

Karapoti

- 🚲 Location: New Zealand
- 🚲 Website: www.karapoti.co.nz
- 🚲 Types: Cross country, or off-road
- 🚲 Description: This race began in 1986, and is different because it comprises of a single loop that does not change from year to year. There are two lengths available for competitors, 50 km and 20 km.

There are two aspects of profiling mountain biking participants, motivations for mountain biking and owning versus renting, that are global in nature in that there are few differences across countries, and therefore were not discussed in individual country profiles.

Motivations

Overall, it appears as though mountain bikers are motivated to participate in the sport because it allows them to be outdoors and enjoy nature, they are active and seeking an activity that allows them to be physically active, and they like to be challenged and have fun. Research suggests mountain bikers tend to travel in groups, however, there are some mountain bikers who do travel alone and companionship may not be a primary driver when choosing mountain biking as an activity.

What are mountain bikers seeking when they plan a mountain biking trip or meet up with their friends for a ride?

The IMBA's Managing Mountain Biking Guide suggests a number of experiences or aspects that mountain bikers are looking for, including:

- 🚲 Connection with nature
- 🚲 Escape
- 🚲 Fun



- 🚵 Challenge
- 🚵 Exercise
- 🚵 Variety
- 🚵 Connections
- 🚵 Camaraderie
- 🚵 A sense of belonging
- 🚵 Facilities

Various research sources support the areas outlined by the IMBA, with nature, exercise and fun being the top mentions. These motivations are similar for mountain bikers in Canada, the US, and elsewhere. Below is an outline of various research studies and their findings relating to motivations for mountain biking.

In 2003, the IMBA surveyed members in order to understand travel patterns and motivations of mountain bikers, and received a total of 464 responses. Reasons for enjoying mountain biking include: being **outdoors/scenery**, **exercise**, or the **challenge associated with the sport**. In terms of assessing the appeal of a destination, these mountain bikers believe the variety and difficulty of terrain, number of trails, and scenery are most important.

A 2002 study in the US (n=224), indicated that respondents participated in mountain biking for **health factors**, **excitement**, and **being outdoors**. Mountain bikers also participated in activities other than mountain biking, such as road biking and hiking. Moreover, the study concluded that the average mountain biker owns between two and four bikes, and the average amount spent on their last bike was \$1,800.

A 1995 (n=696) study was conducted to examine the motivations and behaviours of mountain bikers in the National Forests in the United States. The average age of participants was 30, they had been riding for approximately four years, and tended to have some college education. Most of these mountain bikers rode with friends (rather than by themselves or with family), spent little time on paved roads, and much of their time on trails. There is a high level of usage reported, with an average of 67 mountain biking trips in the last 12 months. Reasons for mountain biking include: **enjoyment**, **fun**, **love of mountain biking**, **physical exercise**, and for **nature/being outdoors**. Reasons for riding in the national forest were because of **nature** and the **environment**, or the **trails**. The author made several recommendations following this study, including emphasizing trails, and not relying on trails that are shared with automobiles. Finally, rides in the national forest are almost 15 miles in length or two and a half hours in duration, suggesting that trail management should focus on trails of this length.



A 2003 study of visitors (both mountain bikers and 'other users' which included bushwalkers, dog walkers, runners, and equestrians) to Wellington Park in Tasmania Australia suggests that these users visited the park for **exercise** and **nature/scenery**. In addition, some of the mountain bikers who responded to the survey indicate that **socializing** and **excitement and risk** are also reasons for their visit, while relaxation was mentioned by other (non-mountain bike) users.



In terms of trail preference, the more experienced riders preferred rough surfaces, narrow or bending tracks, and steep trails.

A 2000 study of summer visitors to the Whistler resort suggests that mountain bikers deem **recreation** opportunities most important, followed by **experiencing the scenery**, reputation of the ski area, and ease of access.

An online study of mountain bikers was conducted at the University of Colorado at Boulder. The sample included a large proportion of serious mountain bikers, based on the extent of mountain biking undertaken, and skill level. This study addressed questions relating to companions while mountain biking, that is, whether or not they prefer to mountain bike alone or with someone else. A number of issues come into play, including skill level (bikers may want to travel with people of a similar skill level so they are not ahead or falling behind), and safety (biking alone could be more dangerous in the event of a fall or other injury). Under one-half of respondents agreed that mountain biking is “an opportunity to compete with others”, while one-half agreed that mountain bike rides are an “opportunity to be with and enjoy my friends”. Notably, with respect to safety, one-half reported that they often or sometimes “worry about an accident or mechanical problem that could leave you stranded on the trail” when they ride. Finally, a smaller number (21%) indicated they do not like waiting for slower companions, while 29 percent do not mind waiting.

A workshop in Kelowna revealed reasons for travelling to mountain bike, which include mountain bikers being bored with local trails and wishing to try new trails, an appreciation for varied terrain and scenery, or a preference for combining mountain biking with vacation travel.

Trail Preference

A 1999 study in New Zealand suggests that there is a relationship between experience and trail preference. That is, more experienced users prefer rougher trails, or are willing to deal with rougher terrain that may be less suitable for biking, while novice participants prefer wider trails with fewer obstacles. Furthermore, novice bikers indicate they bike for fitness, while more experienced mountain bikers look for speed and challenge.



Own vs. Rent

There is limited research available regarding owning and renting mountain bikes. In terms of availability, many operators offer mountain bike rentals, and other locations such as provincial parks also provide this service. Indeed, of the 60 Ontario Provincial Parks, 16 offer bike rentals. In addition, some mountain bike parks encourage visitors to rent bikes rather than transport their own. In the words of the Pro Ride Mountain Bike Camp, the bike park “eats bikes”, and therefore participants should rent bikes when they arrive in Whistler, unless they have purpose-built freeride or downhill bikes.



In the 2003 IMBA survey, only seven percent of survey participants had rented a bike on a mountain biking trip, although it is important to note that members of this group are active mountain bikers, with the majority biking 40 or more times during the 2002 season, and therefore likely prefer to use their own bike when possible.

There are several situations in which renting bicycles may be required. When travelling, some participants may not wish to deal with the hassle of transporting their own bicycle. In addition, when planning an outing with a group, some members may own bikes and others may not, necessitating the need for bike rentals.

A German travel website outlines a few considerations when assessing whether to rent or bring your bike:

- 🚲 Participant size: are they 'off the shelf'? If they are not average height or build, they may have difficulty renting an appropriate bike;
- 🚲 Travel limitations: how to transport the bicycle, is it allowed on trains, planes, etc.;
- 🚲 Distance of planned riding: if the participant is only using the bike for small trips over a few days, it may be better to rent; and
- 🚲 Cost: the participant needs to weigh the cost of transporting and storing their own bike, vs. the cost of renting.

A 2001 study of Yosemite Valley visitors interviewed three types of cyclists: those who rented bikes, those who brought their own bikes, and those who are in a group of both renters and owners. The division between rented bikes and owned bikes was similar, with approximately one-half of survey participants falling into each group. Those who had visited Yosemite before were slightly more likely to bring their own bikes when compared with those who were visiting Yosemite for the first time.

Mountain Bike Operators

As previously mentioned in the Canadian profile section of this report, there are both public and private mountain biking opportunities available to participants. A selected number of mountain bike operators are profiled below.

Public Operators

Kootenay Columbia Trails Society, Rossland, BC

Website: www.rosslandtrails.ca/cms/index.php

Rossland BC, located south of Banff National Park.

Physical Attributes

KCTS (Kootenay Columbia Trails Society) manages a variety of trails in Rossland BC. Trails are located on both private and public land.



The trails in Rossland accommodate cross country, downhill, freeriding, and dirt jumping forms of mountain biking. It should be noted that the municipality manages the dirt jump park. There are a wide range of trails available, which run from less than 1 km to 28 km in length:

🚲 Beginner – 7 trails

🚲 Advanced – 11 trails

🚲 Intermediate – 18 trails

🚲 Expert – 4 trails

In addition, the KCTS manages the Seven Summits Trail, recognized as an *Epic trail* by the International Mountain Biking Association.

There are no fees to access the trails, although the KCTS encourages trail members to become members of the Society for an annual fee of \$10 per individual or \$20 per family. The KCTS receives a variety of funding from public projects such as the BC Job Opportunities Program (\$200,000), and Government of Canada (\$70,000).

Participation

The KCTS does not maintain statistics on visitation.

Participant Profile

Local riders vary in age and gender, although the most common demographic is men aged 30 to 50 years. This area tends to attract experienced riders, particularly from Western Canada and USA. Finally, the majority of riders at Rossland are cross country bikers. There are also some downhill and freeride bikers, but very few dirt jumping cyclists.

Training and Lessons

The KCTS only manages the trails and does not currently offer any training. There are two local operators, DevineRide and Rossland Recreation, in the area that run bike camps.

Safety

The KCTS does not require any waivers to ride on its trails. The organization incurs costs of approximately \$3,000 per year to insure both itself and landowners. The KCTS is required to place safety-related signage on the trails, which costs less than \$1,000 per year.

There are frequent injuries incurred by riders on the trails, however, the majority are never reported to the KCTS. The organization has not faced any litigation to date.

Toronto Regional Conservation Authority: Albion Hills Conservation Area

Website: <http://trca.on.ca/enjoy/locations/albion-hills.dot>

Open from May 1st to October 31st, Albion Hills offers single track and double track cross country mountain biking trails. The double track trails are approximately 26 km in length, and are open for both hiking and mountain biking, while the single track trails are 20 km in length, and are reserved for mountain bikers.

Costs

A family season pass is \$141, while an individual season pass is \$78. Day passes are \$6 for adults, while admission for children is free.



Services

The facility offers equipment rentals.

Training/Learning Opportunities

KTS does not currently offer any lessons.

Participation

Albion Hills has approximately 57,000 visitors each year, and of these, 5,000 are mountain bikers. The operator believes that most riders are located in the Greater Toronto Area, and tend to be males aged 20 to early 30s. It was also suggested that the riders have well paying jobs and can afford to purchase expensive mountain bikes and other equipment.

Safety and Regulation

The facility does not limit the age or ability of visitors, and riders use the trails at their own risk. The facility has a general insurance policy for the conservation area. Maintenance and upkeep of the facility is done by staff, and an offsite mountain bike company that runs onsite events performs some trail maintenance.

The facility has had safety incidences or infractions in the past five years. There have been a few incidences of riders falling off of bicycles and becoming injured, although the majority of injuries are not severe and do not require medical assistance.

SÉPAQ – Parc National de la Jacques-Cartier

Websites: www.sepaq.com/activites/sentiers_bicyclette/ and <http://www.sepaq.com/pq/jac>

Physical Attributes

This park is located in Stoneham-et-Tewkesbury, QC, and is less than a thirty minute drive from Québec City. The park is situated within a 670 square kilometre mountainous plateau and contrasts mountainous uplands and steep-sided valleys with yellow birch forests. Parc National de la Jacques Cartier boasts over 122 km of mountain biking trails including the following:

- | | |
|-------------------------------|----------------------|
| 🚲 Sautauriski River – 11.5 km | 🚲 Route 10 – 28.4 km |
| 🚲 Le Draveur Sud – 15 km | 🚲 Route 12 – 34 km |
| 🚲 À l'Épaule River – 34 km | |

Nearly all of these trails are cross country. The Park's mountain biking trails are open from May 14 until October 24 each year.

The price for renting a bicycle at SÉPAQ mountain biking trails is \$9.52 per hour.

Other Services

Parc National de la Jacques Cartier has a Discovery and Visitor Centre, which is open seven days a week during the summer months. The Centre includes a reception and information desk, a gift shop, first-aid service, and a sandwich shop.



The park also offers transportation services to take visitors and their equipment to the trail launching areas. Visitors can arrange for the transportation by calling a toll-free number.

Safety

Parc National de la Jacques Cartier staff encourage all visitors to visit Vélo Québec's website (<http://www.velo.qc.ca/english/index.php>) and read the documents that specify precautions to take when mountain biking.

Kingdom Trails Vermont

Website: <http://www.kingdomtrails.org>

Kingdom trails is located in East Burke, Vermont, which is in the north east part of the state. The Kingdom Trail Association is a non-profit conservation organization that manages trails and organizes legal access to trails. Trails are open year round for various activities such as mountain biking, cross country skiing, and hiking. The Association manages over 100 miles of trails, including single track and dual track trails.

There are two membership options, a day pass or a season pass. Day passes are \$10 for adults, while a year long season pass is \$75.

Participation

Kingdom Trails had 32,000 visitors in 2008, and the number of visitors has been increasing each year. There are many participants from Québec, and the website is available in both English and French. The trails attract both beginner and advanced mountain bikers.

Operating Season

Kingdom Trails is open year round, and offers mountain biking from May to late November.

There is a welcome centre and a map of trails can be purchased when memberships are purchased. There are limited services available, although the local area has a range of accommodations and eateries.

Private Operators

Whistler Mountain Bike Park

Website: www.whistlerbike.com

Whistler Mountain Bike Park is open from Victoria Day weekend (mid-May) to Thanksgiving weekend (early October) each year.

Whistler offers downhill mountain biking, but also has an indoor air jump training facility called the Air Dome. There are 50 downhill trails that total approximately 100 km in length. The Air Dome is 8,400 square feet and includes inrun jumps, pipes, and a foam pit.



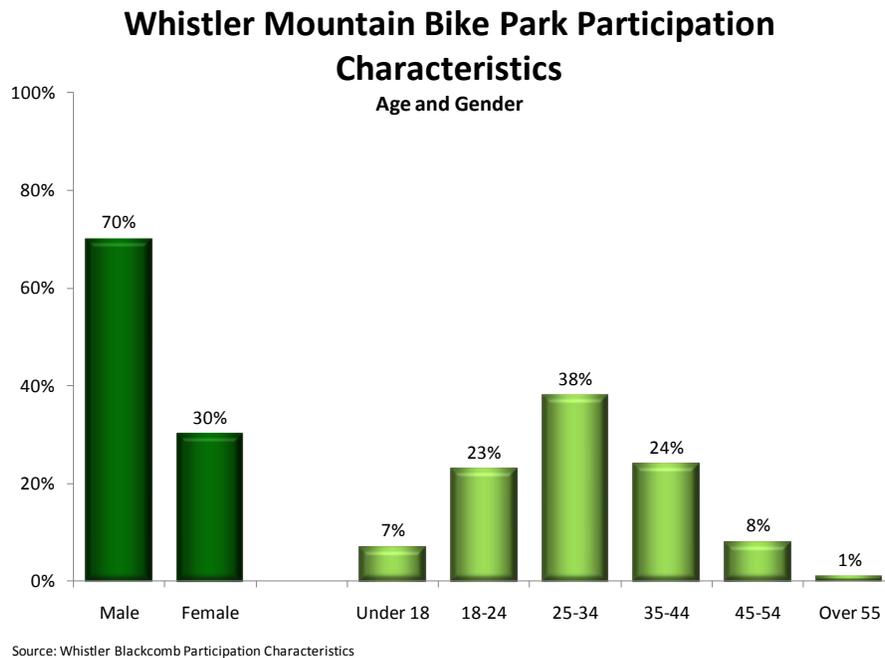
Day passes are \$52 for adults, and the Air Dome charges \$16 for a two-hour session.

Children under the age of five are not permitted in the bike park, and those aged five to 12 must be accompanied by a parent or legal guardian.

Participation

The downhill facility has approximately 125,000 visitors each season, and 2,000 visitors to the Air Dome.

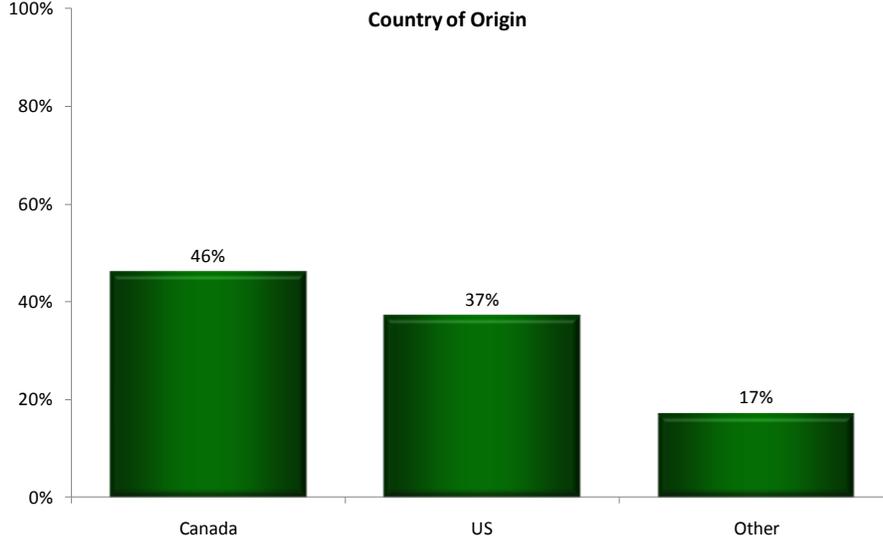
Whistler maintains statistics on mountain bike visitors. The vast majority are male, and four in ten are between the ages of 25 and 34, although a number of visitors are older and younger, with most falling in the 18 to 44 years category.



Mountain biking visitors are not necessarily from the local area, with 37 percent from the US, and nearly two in ten visitors from outside of North America.



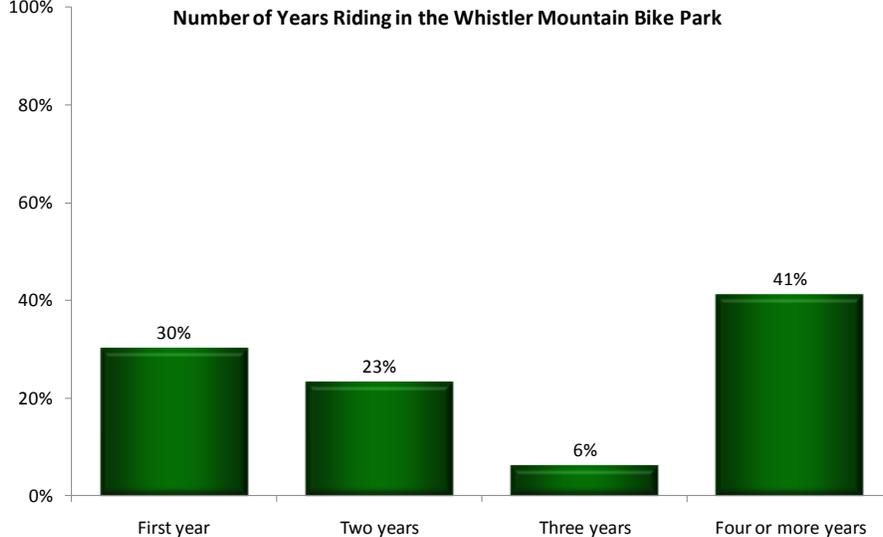
Whistler Mountain Bike Park Participation Characteristics



Source: Whistler Blackcomb Participation Characteristics

Many mountain biking visitors to Whistler have been riding at the park for four years or more, however, the operator also had a large number of first time visitors in 2009.

Whistler Mountain Bike Park Participation Characteristics



Source: Whistler Blackcomb Participation Characteristics

Training and Lessons

Whistler offers a range of training opportunities for visitors, including beginner lessons (Bike Park 101), private and group lessons, as well as events such as women’s clinics, and week-long camps for youth and adults.



Safety

There were safety infractions in the past five years at this facility, although no further detail was provided.

Mont-Saint-Anne

Website: www.mont-sainte-anne.com

Mont-Sainte-Anne is a ski resort during the winter and offers hiking, gondola rides, mountain biking, and paragliding during the summer months.

The operating season is from late May to mid-October, although trails are only open on weekdays from mid-June to early September.

Trails

There are two trail options at Mont-Sainte-Anne, cross country or downhill. These trails vary in length from 1 km to 14.4 km, as well as from easy to extreme. In total, there are 23 mountain biking trails available. There are over 125 km of cross country trails, and 26 km of downhill trails serviced by a gondola.

Costs

There are a variety of packages available, which can include trails only, or trails plus gondola trips to the top of the mountain.

| | 1 day trails | 1 day + 1 trip up | 1 day + unlimited trips up |
|--------------|--------------|-------------------|----------------------------|
| Adult | \$10.63 | \$24 | \$36 |
| Aged 7 to 17 | \$5.32 | \$18 | \$28 |

Mountain bike rentals are available, for half days (4 hours), or full days. Children's bikes, as well as front or full suspension rentals are available. Bike rentals include trail or gondola access. Helmet rentals are also available, including regular helmets or full face helmet protection.

Services

Mont-Sainte-Anne offers three restaurant options onsite, as well as camping and lodging.

Hardwood Ski and Bike (Formerly Hardwood Hills)

Website: www.hardwoodhills.ca/

Hardwood Ski and Bike is located in Oro Ontario, about one hour north of Toronto. The facility is open for cross country mountain biking in the summer and cross country skiing in the winter. There are also options for hiking, walking, and running. Surfaces are sand, compacted soil and grass.



Participation

In 2002, Hardwood Ski and Bike had between 34,000 and 38,000 skiers, and 30,000 bike riders during the summer season.

Operating Season

Hardwood Ski and Bike is open to mountain bikers from the end of April to end of October. Operating hours are from 9am to 5pm, as well as one evening per week.

Physical Attributes

There are over 80 kilometres of mountain biking trails, both double track and single track. The trails move in one direction only. Trails range in difficulty from easy to advanced, and from 2.5 km to 15 km in length.

Services

Hardwood Ski and Bike has on staff several professionals available for athletes who use the facility, including a physiotherapist, massage therapist, and certified athletic therapist. In addition, the facility offers a beach volleyball court, orienteering, disc golf, a climbing wall, and Nordic walking.

There is a rental facility whereby visitors can rent a disc bike for full or half days. Helmets are also available for rent. The retail store also sells bikes, at discounted rates, that have been used as rentals.

Training/Learning Opportunities

There are a variety of lessons available, including mountain biking 101 and 201. There are also road camp lessons, which include topics such as bike fitting and maintenance, as well as road handling and pedalling techniques.

Camp Hardwood is a day camp for children between the ages of four and 16, and offers a variety of sports.

Waivers

All participants must sign a liability of release form, and those under the age of 19 must have an adult sign their form.

Blue Mountain

Website: www.bluemountain.ca/mtnbike.htm

This bike park is located at the Blue Mountain Ski Resort in Hollingwood, ON. The park is most known for its 30 km of challenging downhill and freeriding runs. Like other mountain biking parks located at ski resorts, Blue Mountain has a gondola which carries riders to the top of the mountain.

In addition to the downhill runs, Blue Mountain operates and maintains some cross country trails. The bike park is open seven days a week from late May to early September, and Friday to Sunday from early September to early October.



Costs

A day pass costs \$35 and the regular rate for a season pass is \$284. Everyone wishing to gain access to the bike park must first sign a waiver, view an educational video, and then pay a one-time fee of \$10 to obtain a photo ID Bike Park Pass.

Training/Learning Opportunities

Blue Mountain has an extensive offering of lessons for riders of varying skill levels.

Private lessons can be arranged for both individuals and groups. The cost for an individual private lesson is \$79 per two-hour session. To bring another individual into the training session costs an additional \$15. Alternatively, an individual can purchase a package which includes a two-hour lesson, a day pass, and a four-hour bike and armour rental for \$149. The cost of adding an additional person to this session is \$119.

Blue Mountain also regularly conducts group beginner lessons for downhill riding. A lesson costs \$34, and if an individual wishes to purchase a day pass as well as attend the lesson, the price is \$69.

Cross country riders new to the area can also hire a guide to take them on a two-hour tour of the local trails. There must be at least two individuals participating in a tour, for a total cost of \$49, with an option of renting a bike for \$20 per person.

Blue Mountain has recently started a Mountain Biking Downhill team. This program is geared towards developing the downhill mountain biking skills of riders aged 13 to 18 years. Participants receive weekly training sessions from a certified coach and attend several competitions throughout the summer. The cost for this program is \$1,550 plus GST, but includes a season pass at the bike park.

Other Services

This operator also runs its own rental business, where riders can rent both bikes and equipment. The rates for these rentals are as follows:

| BIKE RENTAL RATES + GST & PST | 1 Hour | 2 Hour | 3 Hour | Full Day |
|--|--------|--------|--------|----------|
| Cross country | \$12 | \$20 | \$26 | \$46 |
| High performance XC | | | \$46 | \$66 |
| Downhill | | | \$54 | \$84 |
| Tyke | \$10 | \$12 | \$18 | \$34 |
| Family (2 Adults, 2 Children) \$10 for every additional bike | \$39 | \$49 | \$69 | \$99 |
| Trail-a-bike | \$10 | \$16 | \$20 | \$34 |
| Child's trailer | \$10 | \$16 | \$20 | \$34 |



| RENTAL DAMAGE PROTECTION | +GST & PST |
|--------------------------|------------|
| Cross country | \$5 |
| Downhill | \$15 |

| HELMET & ARMOUR RENTALS | +GST & PST |
|-------------------------|------------|
| Cross country helmet | \$5 |
| Full face helmet | \$10 |
| Arm guards | \$10 |
| Leg guards | \$10 |
| Chest protector | \$10 |
| Armour package | \$30 |

The rental shop also offers repair services.

Safety

The safety standards at Blue Mountain are quite rigorous. As mentioned, every rider must purchase a Bike Park identification card. To obtain this card, a potential rider must first complete a waiver form and view an educational video. All riders under the age of 17 must complete the waiver process with a parent or legal guardian. Additionally, all riders 17 years and under must complete a freerider assessment before receiving access to the bike park. This assessment takes less than one hour, and allows operator staff to determine if the rider is capable of safely navigating the downhill runs. The bike park has created a rider rating scale from one to five on which to assess the skill level of each cyclist. In addition, the bike park indicates that customers are responsible for damage to rental bikes, and the insurance may be voided if the bike has not been used for its intended use.

Moab, Utah

Moab Utah offers a variety of trails for mountain bikers of any experience level, from beginners looking for a scenic ride, to seasoned bikers looking for a challenge.

Most of the trails in the Moab area are publicly owned and are within Parks and Recreation areas, with some trails requiring only the access fee to the Park or Recreation area over which the trail crosses. There are a variety of tour operators offering tours of all trail systems.

The MOAB Branded trails include five trails varying in difficulty. The Bar 'M' Loop is technically a fairly easy ride, with modest elevation change of about 300 feet. This loop is seven miles long and may be ridden in either direction, with most riders choosing the counter clockwise direction. The Circle 'O' Loop is 100 percent slickrock. The trail itself is 3.5 miles long. One may ride in either direction, with south-to-



north being most common. Rockin' A is very similar riding to Circle 'O', with quick moves on slickrock, which requires good shifting, balance control, and stand-and-grunts, and is 1.7 miles in length. The Bar 'B' Loop starts as a desert single track, then a technical rock-rolling single track. The return half is easy double track and slickrock. Killer 'B' is the most advanced trail in the MOAB Branded Trail System. It is very steep, dropping 500 vertical feet in 0.7 miles. There are a few extreme rock-clearing stunts, and a couple of very steep sandstone sections. Near the bottom, there is a 600 foot stair-step hike. This is a public trail system and there is no access fee required.

Another well known area for mountain biking is the Sand Flats Recreation Area which has numerous trails, including the world famous Slickrock Bike Trail. This challenging trail is considered by many to be the ultimate mountain biking experience, with its constant elevation change, slickrock and short patches of sand, and very steep pitches. Slickrock is a physically and technically difficult trail and is located on a heavily eroded sandstone plateau between Moab Valley and the Colorado River. The main loop is 10.5 miles with an additional 2.2 miles for the practice loop. Sand Flats Recreation Area offers day-use passes, valid for three days. If you enter in a private vehicle the pass costs \$5, those who enter on a bike pay \$2 each, and each occupant in a shuttle van pays \$2.

A popular trail system in the Moab area is the Intrepid System. The trail system consists of three loops: the 1.1 mile Intrepid Loop, the 4.2 mile Great Pyramid Loop, or the 9.0 mile Big Chief Loop. The Big Chief is the main outer loop of the trail system, and the other two trails are cut-offs of the Big Chief. The trails are five foot wide single track. The loops are relatively flat, with only 140 feet of elevation change on the Big Chief. The trail surfaces are sand interspersed with occasional rocks, with a couple of short sections of slickrock for variety. The Intrepid System is within the boundaries of Dead Horse Point State Park, and a fee is charged for access. The fee is \$10 per vehicle, or \$2 per bicycle entering the park.

Participation

The Moab region has over a 100,000 mountain biking visitors annually. This area is ideal for mountain biking in spring, fall and winter (midday heat in July and August).

Mount Washington Bike Park

www.mountwashington.ca

The Mountain Washington Bike Park is located near the Comox Valley on Vancouver Island and claims to be one of the highest rated bike parks in North America. The park is open from late June to late September, and has downhill, cross country, and freeride options.

The park has a range of trails, from 0.5 km to 6.1 km in length. There are four 'easiest' trails, five which are classified as difficult, 11 that are black diamond (more difficult), and three that are double black diamond, or considered most difficult. In addition, the park has a jump park and three skills areas. Notably, the bike park posts signs that state 'there are no easy trails', and provides the following definitions for difficulty.





Source: <http://mountwashington.ca>

Prior to the opening of the 2009 season, the bike park announced that long term plans include adding more entry-level mountain biking trails.

Costs

Mountain Bike Season passes range from \$239 (early bird) to \$289 for a regular pass.

Services

The bike park offers bike and body armour rentals, for full day or per hour. There is also a retail store and bicycle repairs are offered.

Events

The bike park offers a range of events. In 2009, events included the Race Face Women's weekend, a learn to ride week, as well as the BC Cup Provincial cross country and downhill race, and the Lucky downhill race series.

Operator Summary

It is evident that there is a wide range of mountain biking opportunities available within Canada and the US. Public mountain biking areas may have membership fees or daily park fees associated with trail usage, and may be maintained by a local association or club. Often, the management of a public trail system requires extensive volunteer work and fundraising activities. Research indicates that local mountain bikers are often willing to help in trail maintenance or fundraising activities to maintain trails.

With respect to public operators, location, offerings, and quality of trails can vary greatly. Within Canada, many of the private operators are ski resorts that are open in the summer, or are recreational facilities that provide winter activities such as cross country skiing and snowmobiling, and summer



activities such as hiking and mountain biking. Costs can vary greatly, with additional fees for gondola or lift access. Day passes can range from \$10 for basic access to upwards of \$50 for downhill trails and lift access. Private operators often provide training or lessons for an additional fee, and many offer mountain bike rental services.

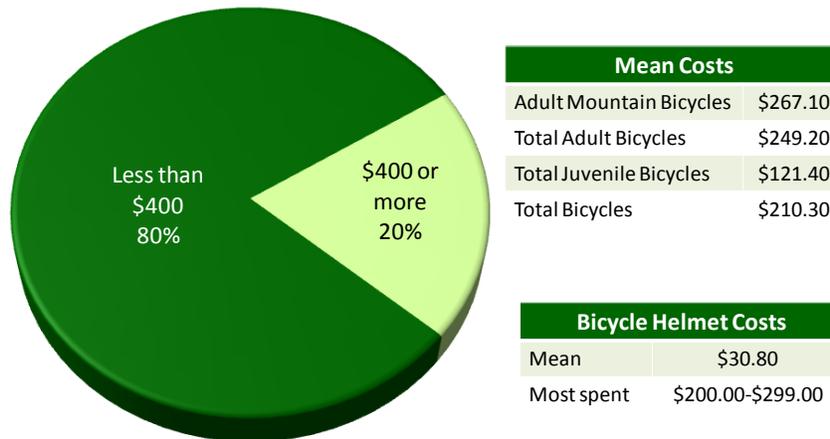
Overall, it is apparent that mountain bikers have a range of trails and prices from which to choose. It is important to note that centralized websites listing mountain biking trails, operators and bike parks are limited or unreliable. Indeed, as will be seen later in this report, even larger organizations such as national, provincial and state parks systems do not offer an overall view of mountain biking opportunities. This may prove difficult for beginner mountain bikers who wish to learn more about the activity, but do not currently belong to associations, clubs, or know of mountain biking organization websites such as the IMBA site.

Cost

Mountain biking has a number of costs, including equipment, memberships, and entrance fees, although it is evident that like many sports, mountain bikers can spend a lot or a little.

The Canadian Sports Vision Study reports mountain bicycle costs range from \$20 to over \$800. The mean price spent on an adult mountain bike in Canada in 2008 was \$267. Notably, 20 percent of adult mountain bikes sold in 2008 cost \$400 or more.

Bicycle and Accessory Cost



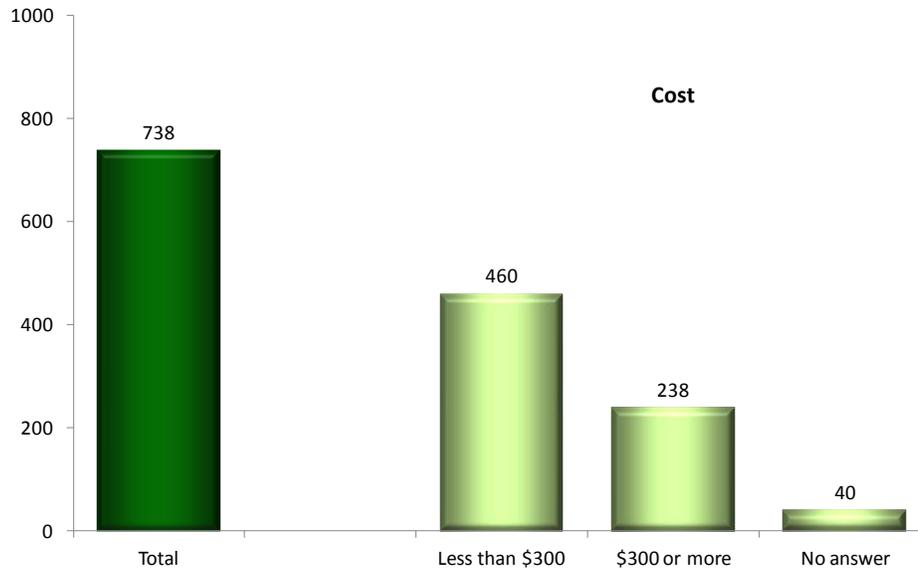
Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2008



Of all the adult mountain bicycles sold in Canada in 2008, 238,000, or approximately one-third, cost \$300 or more.

Adult Mountain Bicycle Sales

By Unit (000)

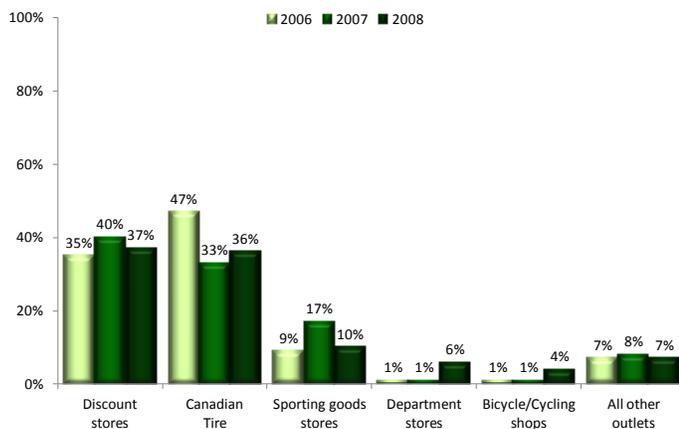


Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2008

Lower priced bicycles (under \$300) are more likely to be purchased at discount stores and Canadian Tire, while higher priced bicycles (\$300 or more) are more likely to be purchased at sporting goods stores and bicycle or cycling shops.

Canadian Bicycle Sales by Unit

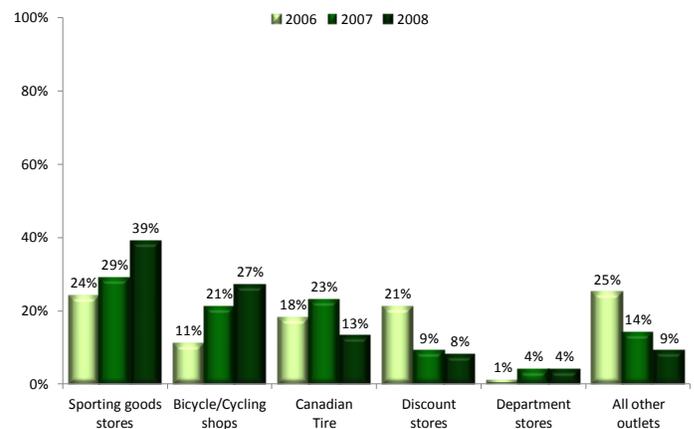
Among Bicycles Costing Less than \$300



Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2009

Canadian Bicycle Sales by Unit

Among Bicycles Costing More than \$300



Source: Canadian Sports Vision Study Bicycle Equipment Product Report 2009



Other Equipment Costs

A beginner would only require minimal equipment to start, including a mountain bike, a helmet, and any costs associated with park fees. Helmets range from \$30 for a traditional bicycle helmet, to several hundred dollars for full face protection. The type of helmet chosen depends on the mountain biking discipline, as well as trail difficulty. The average amount spent on a bicycle helmet in Canada in 2008 was \$30, while the most spent was between \$200 and \$299. `



Depending on the trail type and length of outing, other equipment may be required, such as gloves, shoes, a bicycle tire pump, tools, special clothing, bags to carry food and water, and a GPS (Global Positioning System).



Trail/Entrance Fees

As previously mentioned in the summary of operators, trail and entrance fees can vary greatly, from free access to trails at certain public operators, to \$40 per day for access to trails and gondola or lifts at mountain bike parks.



Memberships and Licenses

Mountain bikers who simply wish to participate in mountain biking as a recreational sport may choose to become a member of an association or club, although this is not necessary. Athletes who wish to participate in events or races are generally required to obtain a license, which can vary substantially in price.

Membership

Membership fees vary across association and across countries, below are some examples of membership fees.

| Memberships | | | |
|---|---------------------------------|------------|--|
| Association/Club | Type | Annual Fee | Notes |
| International Mountain Biking Association | Basic membership | \$30.00 | |
| IMBA Canada | Basic membership | \$40.00 | |
| Michigan Mountain Biking Association | Individual membership | \$30.00 | |
| | Lifetime membership | \$500.00 | |
| Rocket Mountain Biking Club – Ontario | Senior (19+) membership | \$30.00 | Includes insurance at club events |
| Mountain Bike Australia | Club membership | \$110 | License to race in MTBA events. Insurance coverage. |
| | MTBA Fee | \$90 | |
| USA Cycling | Adult (19+) racing license | \$60 | |
| Cycling BC | General (non-racing) membership | \$61 | |

Licensing

Overall, it appears that the licensing and membership system for those interested in cycling and mountain biking is not clearly defined and varies depending on the event and location/country.

There are often two categories of licensing. Athletes wishing to race only in their own province/region or for club specific races can obtain a license for this purpose. Those who wish to race in events outside of their region or country are required to have a Canadian Cycling Association or Union Cycliste Internationale license, which are available through individual associations and clubs. Additionally, many clubs and associations offer single day racing permits for those athletes who are not UCI license holders. There is limited information available on the number of licenses issued to mountain bikers each year, particularly in regards to UCI licenses, as the process of providing these licenses is decentralized. In Canada, the Alberta Bicycle Association reports that it has 1,200 racing members who are licensed, and in 2003, approximately 1,500 day licenses were sold for single day events.



Insurance

There are a variety of insurance options available for mountain bikers.

Individuals

Insurance companies offer sport coverage and travel insurance for people who participate in sports activities. Coverage includes bicycle theft, public liability, and personal accident insurance. Specific travel insurance covers individuals who mountain bike while travelling.

Associations

Clubs and associations in Canada have the opportunity to purchase insurance through the IMBA Canada insurance program, which covers generally liability, director and officer errors and omissions, and accidental death and dismemberment. It can also cover operations, meaning that if a club or association builds a trail and someone is injured on that trail and sues, the policy would cover the club or association's defence.

Events

Insurance coverage for events varies. For example, Crankworx, one of the largest mountain biking competitions in Canada, is not sanctioned by Cycling BC. Athletes do not require a license to compete, and are not covered by UCI insurance during training or the competitions. Athletes are required to sign release forms to participate. If athletes are under the age of 18, a parent must complete the waiver/release of liability form.

On the other hand, the World Cup 2009 requires participants to hold an International Race License and International Competition Insurance to be eligible to race.

IMBA recommends that trail managers and volunteer groups should hold an insurance policy that protects them from liability claims.



Safety

Safety and the related topic of injury are important discussion topics in the mountain biking community. As the more extreme forms of the sport increase in popularity, the risk of injury increases, although even the most benign form, cross country, comes with increased risk of injury compared with other recreational activities. Many mountain biking organizations devote significant space on their websites to the topic of safety, and offer guidelines to assist participants in avoiding injury. Topics range from warm up exercises to trail etiquette to injury prevention.



According to physioroom.com, the five most common mountain biking injuries are:

1. Cuts and scrapes
2. Broken collar bone
3. AC joint sprain
4. Knee pain
5. Lower back pain

Looking specifically at mountain biking competitions, the managing organization issues the rules specific to that competition. These rules typically identify any requirements or restrictions related to safety, as well as general competition rules. The rules also identify the consequences for any infractions.

Union Cycliste Internationale (UCI) has developed a handbook to assist commissioners at UCI-sanctioned events. The handbook outlines the various rules and regulations, and highlights the importance of maintaining a safe event.

IMBA provides information on safety and risk management for mountain biking trails, with a focus on mitigating risk. This information is covered in the regulations and risk management sections later in this report.

Current Infractions

A 2006 report that examined New Zealand adventure tourism operators suggests mountain biking is one of the more injury prone adventure sports, for both the independent travel sector and the commercial adventure tourism sector. This conclusion is based on research conducted between 1999 and 2003. A 2006 mail survey of operators indicates that while mountain biking does result in injuries, it does have a lower client injury incidence rate (per million participation hours) than other activities such as white water rafting, kayaking, or bungee jumping. This research also references an 'accident book', indicating that operators in New Zealand do record injuries that occur at their organization.

A report from the American Academy of Family Physicians discusses the incidence of injury from bicycling, and estimates that 3.7 percent of bicycle injuries overall come from mountain bikers. This report also indicates that one-half of recreational mountain bikers and the majority (85%) of competitive mountain bikers sustain injuries each year. These mountain biking injuries are more common among males aged 20 to 39 years (who are more likely to engage in more extreme forms of mountain biking), and tend to be a result of the participant hitting an obstacle and losing control, frequently while riding downhill on an unfamiliar trail.

A 2008 review of mountain biking injuries in the UK concluded that while mountain biking can cause injury, there are injury prevention measures being adopted and the sport is becoming more safe. Facial trauma is a common injury, and helmet use decreases the likelihood of experiencing this type of injury.



Some research suggests that traditional helmets may not be adequate, which is supported by the recommendation by some operators that participants wear full facial helmets.

An examination of trauma centres in the greater Vancouver area reveals that of approximately 1,000 bicycle related injuries, 400 were a result of mountain biking, and the incidence of mountain biking injuries increased over a ten year period. Those most likely to be injured while mountain biking are young males. The types of injuries experienced by mountain bikers include orthopaedic, head, spine, chest, facial, abdominal, genitourinary and neck.

Overall, it is evident that increasing safety and reducing injuries on trails is a priority for operators and users alike, and with the use of proper signage, rules, and regulations, as well as training for users, injuries due to mountain biking can be reduced. Notably, some operators, similar to ski operators, require their users to pass training courses before allowing participants to have lift access. Moreover, some clubs and associations provide members with best practices and training, which can further reduce the likelihood of injuries.

Regulations

Regulation for mountain biking can be divided into two categories: competitive and recreational. In general, individual trails and bike parks provide regulations or rules to follow, and often implement minimum age requirements or the requirement for a parent to sign a waiver for their child.

The International Mountain Biking Association offers general guidelines for bikers including:

- 🚲 Respect trail and road closures
- 🚲 Leave no trace and be aware of conditions (soft trails, for example)
- 🚲 Keep in control of the bicycle
- 🚲 Be aware of others on the trail
- 🚲 Be sensitive to nature/animals
- 🚲 Plan ahead

The IMBA also outlines 10 responsible riding tips:

- 🚲 Be prepared
- 🚲 Do not ride on closed trails
- 🚲 Say no to mud
- 🚲 Respect the trail, wildlife, and environment
- 🚲 Stay on the trail
- 🚲 Ride slowly on crowded trails
- 🚲 Pass with courtesy and care
- 🚲 Share the trail with other trail users
- 🚲 Do not do unauthorized trail work
- 🚲 Get involved



Mountain Biking Trail Regulations

In general, operators often post rules and regulations for mountain bikers to follow, which are similar to the IMBA guidelines listed above. Individual parks and forest areas list rules and regulations for bicycle use within public land. In general, these regulations include:

- 🚲 Where cycling is permitted (e.g., only on roads open to traffic, only on designated trails, only on paved roads, etc.)
- 🚲 Helmet use (e.g., those under the age of 16 must wear a helmet, all users must wear a helmet)
- 🚲 Riding regulations (e.g., ride in single file, cannot ride two abreast, keep to the right)
- 🚲 Cyclists must obey traffic signs and yield to motorized vehicles
- 🚲 Use proper hand signals when turning or stopping
- 🚲 Time of day (e.g., dawn to dusk)
- 🚲 Yield to other trail users, alert other users of presence
- 🚲 Use of reflectors
- 🚲 Carry drinking water/food
- 🚲 Do not disturb wildlife

Some parks offer safety precautions and indicate that cycling is done at the visitor's own risk. Some of these safety precautions include:

- 🚲 Bring a map
- 🚲 Be aware of weather conditions
- 🚲 Check brakes and tire pressure prior to riding
- 🚲 Helmet use
- 🚲 Maintain control of speed, and observe park speed limits
- 🚲 Use caution when on roads, observe traffic

In addition, many park websites outline specific safety rules and regulations for dealing with horseback riders. These include stopping and moving completely off the trail, not approaching horses from behind, and announcing your presence well in advance.

Racing Regulations

Union Cycliste Internationale provides detailed regulations for mountain bike racing, which outline age categories, types of races, safety, types of bicycles allowed, as well as other regulations.

Some specific race regulations include the length; for example, Olympic cross country races are generally between an hour and a half to two-hours in length, between five and nine kilometres in length, and the regulations also state the race route is ideally formed to be the shape of a cloverleaf. There are also recommendations as to what elements the course should contain. A cross country race should have a mix of road, forest, fields, gravel, and climbing and descending. Paved areas should not be more than fifteen percent of the entire course.

There are also specific race regulations relating to markings, indicating the frequency and placement of distance markers, as well as indicating when there is a dangerous or difficult section of the trail.



Trail Development/Management

A critical component of trail development and management is controlling access to and use of mountain biking trails. Park and trail operators must balance the desires of the mountain biking community with the constraints under which they operate (e.g., protecting the environment, safety, liability, trail use by others, and risk management).

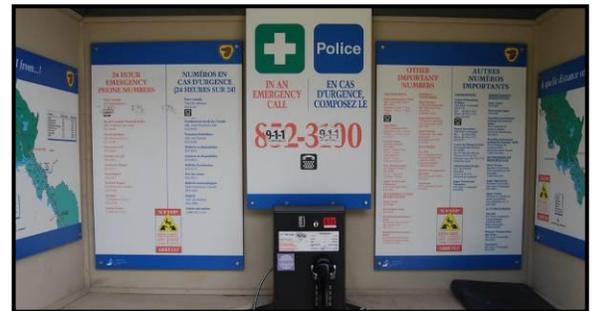
Trail Cutting

One area that emerges as concerning to mountain bikers, land owners, and environmentalist relates to mountain bikers cutting their own trails. Indeed, many entities have found that they need to implement trail development standards or processes for designing and developing mountain biking trails.

Signage

Signs are very important to mountain biking trail management and serve a number of purposes, including:

- 🚲 Identifying trails
- 🚲 Describing trail difficulty
- 🚲 Route identification
- 🚲 Location identification (i.e., you are HERE)
- 🚲 Visitor education
- 🚲 Protection
- 🚲 Warning of risks and hazards



These signs are important both within the trail system, but also prior to entering the trail. **Trailhead signs** are often at the entrance of a trail, and can outline the trail route, length, difficulty, facilities, regulations, emergency numbers, and educational messages. In addition to trailhead signs, there may be a **rules and regulations** sign, a sign outlining **allowed activities** (bikes and hiking allowed, for example), **warning signs**, or **emergency signs**.



The Angeles National Forest Land provides the following diagram to indicate right-of-way on trails.



Risk Management

The IMBA's *Managing Mountain Biking* report outlines two trail-related risk management goals:

- 🚲 Manage risks on trails
- 🚲 Minimize threats and losses from lawsuits

Addressing these goals can be accomplished by:

1. Designing and building trails with risk management in mind

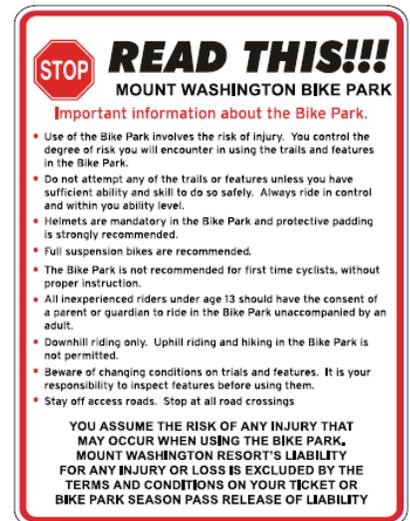
There are currently no international standards for trail design, and therefore it is crucial that an operator or public entity that is planning on designing a mountain biking trail be familiar with available literature and guidelines. The US Forest Service, IMBA, and Forest Commission of Great Britain all offer publications relating to trail design and construction guidelines.

2. Manage and maintain trails appropriately

IMBA suggests that many lawsuits are a result of improper maintenance rather than trail design or construction, therefore this is an important part of managing risk. Each organization develops its own guidelines for maintaining trails and inspection. In addition, it is important to address, and warn users of, hazards.

3. Have insurance coverage/employ the use of waivers

Any organization involved in the construction, maintenance, or management of a trail could be deemed liable by an injured party. Often, an injured visitor will claim that the trail was not properly constructed, maintained or managed with reasonable and prudent care. A waiver or release is a contract that indicates the visitor understands the risks involved, and that they cannot sue the operator.



Source: www.mountwashington.ca

The US Forest Service, Pacific Southwest Region, is undertaking a mountain bike planning project to “provide sustainable mountain biking recreation on the 18 national forests in California.” Some of the risk management issues that are raised include:

- 🚲 Managing signage
- 🚲 Inspection
- 🚲 Technical trail design (sight lines, traffic flow, speed)
- 🚲 Emergency access
- 🚲 Trail ratings

The IMBA outlines considerations for managing risk at ski area operators:

- 🚲 Educate users about rules and responsibilities
- 🚲 Understand how much commitment there is to maintaining trails
- 🚲 Talk to other operators about their mistakes



- 🚲 Connect with local bike shops to understand the types of users in the area
- 🚲 Contact local clubs
- 🚲 Understand facts such as erosion, maintenance and overuse when undertaking trail design
- 🚲 Develop a risk management plan

Some organizations conduct a thorough inspection of a trail prior to undertaking trail maintenance tasks, which can examine everything from trailhead signs, fences, gates, rest stops, erosion, steps, railings, trail edges, grade dips, slopes, bridges, and signage within the trail, just to name a few.

Other National Parks

Australia: The National Parks and Wildlife Service (NPWS)

Currently, mountain biking is typically not permitted on single tracks in the parks, although reports suggest that riding has been occurring over the past 20 years. The Australia National Parks Service (NPWS) has been working with local mountain biking groups to introduce trails into the parks system. In many instances, this can be easily accomplished because existing hiking or road trails can be converted to mountain biking trails. Some areas the park takes into consideration are safety (excessive dirt jumping, or downhill biking can be too extreme for park activities), preferences of mountain bikers (they prefer loop trails to out-and-back trails, as do other users such as hikers), other users of the trails, and environmental concerns.

United States: National Parks Service (NSP)

The National Parks Service (NSP) manages 392 national parks and 40 national heritage areas. The provision of mountain biking trails on public land is highly fragmented, as it appears that each individual park defines the areas that mountain bikers can use. There is also a lack of consistency across national parks in the US in terms of signage, and sharing trails with other users.

In general, parks only allow mountain bikers on roadways that are open to vehicles. Indeed, many park websites refer to bicycling or cycling as opposed to mountain biking, as the majority of national park cycling opportunities are on paved roads. In addition, it is notable that most park or heritage areas have a section on their website discussing mountain biking and bicycling, even if it is only to mention that cycling is not permitted. The IMBA estimates that 20 parks allow mountain biking on narrow dirt trails, and 20 allow riding on dirt roads. Given the number of national parks, the offering to mountain bikers is very limited.

Assessing the number and characteristics of mountain biking trails in US National Parks is challenging, as there is no single website dedicated to the various mountain biking or cycling opportunities available. Furthermore, each national park maintains a section within the www.nps.gov website, however, discussions of mountain biking are not consistent nor are they provided on all websites. In an effort to



understand mountain biking opportunities in national parks, 20 national parks were selected, based on their appearance in a Google search (suggesting that they are webpages with the most links to other websites, and therefore more popular). A detailed summary of these 20 parks is available in Appendix C.

Overall, NPS regulates where mountain bikers can travel within its parks, and most parks do not allow mountain biking on their hiking trails. Many parks allow cycling on roads that are open to traffic, but do not allow cycling elsewhere in the parks.

IMBA and NPS

For many years, the International Mountain Biking Association has been working to increase mountain biking trails within National Parks and the National Forests. In 2005, IMBA and NPS signed an agreement, with the goal of “providing high quality mountain biking opportunities for visitors to enjoy the national park system in appropriate areas in a manner consistent with our stewardships responsibilities.”

IMBA reports that in 2006, three pilot projects were undertaken with national parks:

- 🚲 Big Bend National Park (TX)
- 🚲 Cuyahoga Valley National Park (OH)
- 🚲 Fort Dupont Park (DC)

In addition, IMBA encourages members to contact their member of congress or attend public sessions when parks are assessing whether or not to proceed with mountain trail planning. In January 2009, IMBA asked members to get involved in ensuring funding for national parks are included in the economic stimulus package.

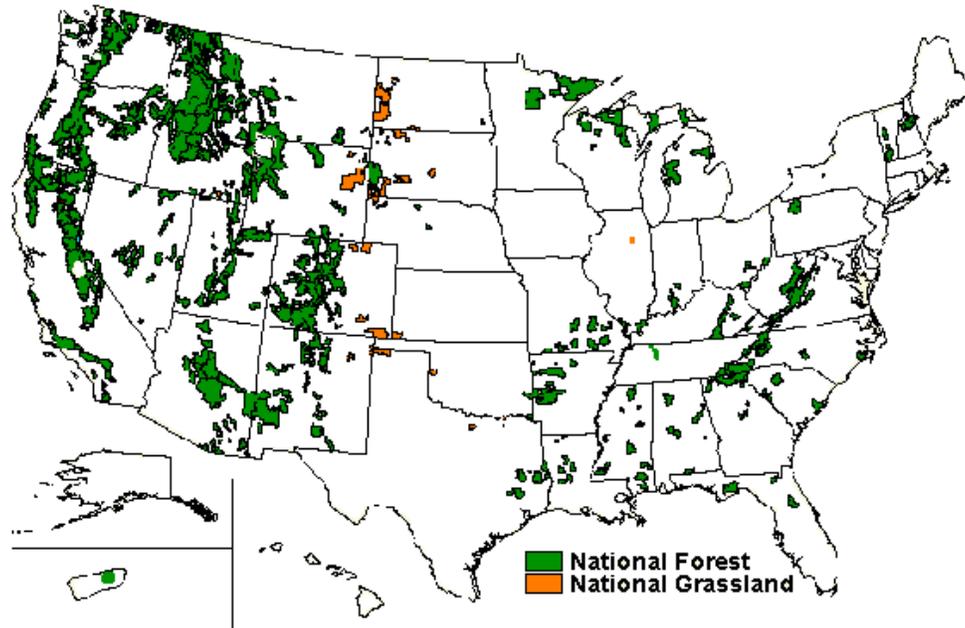
United States: National Forest Service

While the National Parks may not be as ‘mountain biking friendly’ as mountain bikers may like, the National Forest does offer many mountain biking trails, and therefore Parks Canada may be better suited to using a comparison with the national forests rather than the US National Parks Service.

The US Forest Service manages 155 public forests and 20 grasslands in the United States. The National Forest Service (NFS) estimates that in 2007, 3.9 percent of visitors to NFS participated in cycling activities, and two percent indicate it was their primary activity. Moreover, the average time spent participating in the primary activity, in this case, mountain biking, was 2.9 hours.

Each national forest maintains information on the availability of mountain biking. There is no consistency in rules across all national forests. Appendix C outlines the top 20 national forests by visitation, and their current status for allowing mountain biking. It is evident that NFS is quite open to mountain biking, with many locations offering multi-use trails that are often shared with other users. Many national forests have designated Wilderness areas that do not allow any mountain biking.





source: <http://www.fs.fed.us/recreation/map/finder.shtml>

IMBA and NFS

IMBA and NFS reached a memorandum of understanding in 2007. The two organizations now work together to create trail systems within the National Forest Service. The agreement also recognizes that mountain bikes are non-motorized vehicles, and should not be regulated in a similar fashion to motorized vehicles. An example of these two organizations working together is the Forks Area Trail System at the Sumter National Forest, which created 17 miles of trails along with aid from SORBA.

Parks Canada Comparison

Similar to the National Parks Service, Parks Canada does not provide an overall cycling guide, and each individual park determines where cyclists are allowed. Some park websites do not make mention of cycling activities, while others list specific trails where mountain bikers and cyclists are allowed.

Provincial Parks

There are hundreds of provincial parks in Canada. Some offer cycling opportunities while others do not. Similar to the national parks or the parks system in the US, these parks outline trail usage at the park level. For example, in British Columbia, some parks provide mountain biking trails and detail their level of difficulty, some only allow cycling on roadways, while others simply indicate that “cycling is permitted”.



Challenges and Conflicts

User conflict is a topic that emerges time and time again throughout trail management documents. In many instances in the National Parks or National Forest, trails that have been primarily used as hiking or equestrian trails in the past are being opened to mountain bikers. These conflicts arise for a number of reasons. Visitors can have different expectations about trail usage, there can be concern about trail safety (some users travelling faster than others), or there may simply be poor etiquette (not yielding or alerting other users of their presence). Moreover, these conflicts can occur not only across user groups, but also within user groups.

The IMBA *Managing Mountain Biking* report identifies three main types of conflict:

- 🚲 Environmental: trail damage or other environmental impacts
- 🚲 Safety: perceptions that some users threaten the safety of other users
- 🚲 Social: goals and values of users may be incompatible

The Santa Monica Mountains National Recreation Area identified user conflict as an area it wished to examine in a trail use survey, conducted in 2003. Notably, when asked if their trail experience was affected by other trail users, the majority were in agreement, although in some instances this interaction was positive. Those users who were less well regarded included dog walkers, picnickers, and mountain bikers. The areas of concern were regarding uncooperative behaviour, animal waste, and litter. To mitigate user conflict, the management suggested the development of a code of conduct for trail users.

Another example relates to the challenges experienced by IMBA when attempting to move forward with national parks pilot projects. In 2005, the Big Bend Trail Alliance contacted the Big Bend National Park to be considered as one of the pilot projects under the IMBA/NPS agreement. Some of the concerns raised by the Park include:

- 🚲 Costs associated with maintaining trails, as well as parking and access
- 🚲 The possibility of more serious injuries with mountain bikers (as compared with hikers)
- 🚲 Workload of staff such as maintenance crews
- 🚲 Concern that allowing mountain biking would open up the possibility of other activities such as dirt bikes and jet skis

In many instances, organizations state that the solution to trail conflict is to provide adequate information to users regarding rules and regulations, etiquette, etc. In addition, some organizations outline the importance of assessing trail aspects, such as type (gravel, dirt, etc), and width. If hikers, equestrians and mountain bikers are sharing one trail, width and sight lines (how far along the trail one can see) become more important in reducing these conflicts.

Below are some examples from IMBA to **resolve user conflict**:

- 🚲 Signs: indicating yielding protocol and signalling rules
- 🚲 Setting Expectations: users will understand who else may be using the trail
- 🚲 Staff patrols



- 🚲 Peer Education: through group rides, skills clinics and other social events
- 🚲 Clinics: to encourage new riders to learn appropriate skills
- 🚲 Handouts: outlining shared use rules, tips, and why trails are shared use
- 🚲 Interpretive trails
- 🚲 Passing Etiquette: slow down, yield, communicate, pass safely

Specific areas within **trail design** that may be considered when managing user conflict are as follows:

- 🚲 Provide an adequate number of trails/diverse trails
- 🚲 Design trails to control speed
- 🚲 Spread out the trail system network, for example, have shorter trails near trailheads so casual users can access them
- 🚲 Stacked loops whereby intersecting trail loops have a network that provide for different trail needs
- 🚲 Allowing preferred use or single use trails within the trail system
- 🚲 One-way loops help reduce the requirement to pass other users



Methodology

This study consisted of gathering secondary data from a variety of sources, primarily from the Internet and academic sources. In addition, selected mountain biking operators in Canada were contacted and asked to complete a fact sheet regarding their organization. The fact sheet, which can be found in Appendix A, was designed in consultation with Parks Canada staff.

In general, operator websites contain a breadth of information regarding cost, hours, services and trail characteristics. In instances where operators did not complete a fact sheet, a thorough Internet search was conducted to gather detailed information about that operator.



Appendix A - Fact Sheet

Fact Sheet

Name of organization _____

Location _____

Operating season _____

Trails and Services

Type (check all that apply):

- Cross country
- Downhill
- Freeride
- Dirt Jumping/Dirt Park
- Other (Specify: _____)

Please describe the types of trails or infrastructure your organization offers to mountain bikers.

| | Number | Total Length | Mountain Bike Only |
|------------------------|--------|--------------|--------------------|
| Cross country | | | |
| Downhill | | | |
| Freeride | | | |
| Dirt Jumping/Dirt Park | | | |
| Other 1: | | | |
| Other 2: | | | |



Fees:

| | Membership Fees | Day Passes | Park Fees |
|------------------------|-----------------|------------|-----------|
| Cross country | | | |
| Downhill | | | |
| Freeride | | | |
| Dirt Jumping/Dirt Park | | | |
| Other 1: | | | |
| Other 2: | | | |

Services (check all that apply):

- Rentals
- Bike shop
- Storage
- Video camera rental
- Restaurant/Cafe
- Accommodations (Type and capacity) _____
- Other (Specify)

Describe any courses, training, or lessons that your organization provides.

Does this mountain biking location include an interpretive centre or interpretive components (e.g., information on the natural landscape or history of the area)? If yes, please describe below.



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Appendix C

US National Parks

Below is a sample of United States National Parks and their mountain bike offerings.

| Name | State | Mountain Biking | Notes |
|---|-------|--|--|
| Wrangell-St. Elias National Park | AK | Limited availability due to lack of maintained roads. Currently list two main mountain biking trails: Nugget Creek Trail and Kotsina Road. | |
| Saguaro National Park | AZ | Has only one off-road multi-use trail that allows mountain biking. Cyclists are allowed on all paved roads. | |
| Death Valley National Park | CA | Only allowed on roads open to automobiles. They offer a list of roads, and provide the road type (graded dirt road, paved, gravel, rutted gravel, wash-board gravel, steep grads, one way, uphill, etc.), as well as the level of use (low, medium, high). | |
| Devils Postpile National Monument | CA | Road biking is permitted, while mountain biking is not, with the exception of one trail, and indicates that mountain biking is only allowed on this trail after shuttle buses have stopped running for the season. | |
| Joshua Tree National Park | CA | Cycling is only allowed on roads open to vehicles. Notably, there is a backcountry and wilderness management plan that will allow 29 miles of trails to be open for non-motorized bike use, although they are waiting for congressional approval before this comes into effect. |  |
| Santa Monica Mountains National Recreation Area | CA | Has 38 different biking trails of varying difficulty. The National Recreation Area states that a rule of thumb is <i>"If a trail is over four feet wide, it is a fire road and open, unless signed Closed. If a trail is less than four feet wide, it is a single track and closed, unless signed Open"</i> . * http://www.nps.gov/samo/planyourvisit/upload/biking-2.pdf | Offers bike safety and etiquette rules including: Safety: wear a helmet, carry water, obey speed laws, etc. Etiquette: Stay on trails, respect closures, yield to others, announce yourself, let horses pass. Resource projection: Do not cut new trails, do not disturb wildlife, leave gates as found (open or closed), avoid muddy trails. |
| Yosemite | CA | Paved bike paths and allowed on regular roads. They state that mountain biking and off-trail riding is not permitted in the park. They also offer bicycles for rent. | |



| Name | State | Mountain Biking | Notes |
|---|-----------|---|---|
| Rocky Mountain National Park | CO | Entrance fees of \$10 per week per bicycle. 60 miles of hard surfaced roads. Cycling is only allowed on established roads. Cyclists must also ride single-file. | |
| Kennesaw Mountain National Battlefield Park | GA | Bicycles only allowed on paved roads. Riders can be cited and have their bikes confiscated if they are found riding anywhere other than a roadway. | |
| Acadia National Park | ME | Allowed on paved motor roads, and 45 miles of carriage roads. Cyclists are not welcome on hiking trails or privately owned carriage roads. | |
| Sleeping Bear Dunes National Lakeshore | MI | Only permitted on maintained roads open for automobiles. Bikers are allowed to ride on any back roads near camping areas. | Offer 7 weekly free bike tours, led by a park ranger. Within three miles, there are two Michigan State Forest trails for mountain biking. |
| Battle Creek Regional Park | MN | Has 3.3 miles of multi-use trails and 4.5 miles of single track mountain biking trails. Trails are maintained by Ramsey County Parks, and it is illegal to modify existing trails. | Bikers must abide by several rules, including: no riding after sunset; no riding on unmarked trails; yield to pedestrians; wear a helmet; and respect the wildlife. |
| Cuyahoga Valley National Park | OH | There are four main bicycle trails. Cyclists can also ride on all roads and in parking lots, but not on the other trails. | Cyclists can bike the 20-mile Towpath Trail, and then take a scenic train ride back for \$2. |
| John Day Fossil Beds National Monument | OR | There are no mountain biking areas, but there are many designated routes in the nearby Malheur National Forest. | |
| Great Smoky Mountains National Park | NC and TN | Only allowed on roads and allow cycling on three trails, which are also open to hikers and in some instances, pets. | |
| Big South Fork | TN | Big South Fork Mountain Bike Club designs, builds and maintains some trails. There are bike only trails, and mountain bikes are permitted on highway edges, backcountry roads, and horse trails. There is also trail sharing of the Grand Gap Loop hiking trail, that allows cyclists and hikers on weekdays. | The park labels routes with the following signs:  |
| Big Bend National Park | TX | Has over 100 miles of paved roads and 160 miles of backcountry dirt roads. The trails range from easy to difficult. | |
| Canyonlands National Park | UT | Has a number of mountain biking trails that are also open to four-wheel motorized vehicles. Overnight visitors are required to have a permit, while day rides do not. Bikers must remain on established roads, as single track riding is not allowed in the park. | Home to the famous 100-mile White Rim Road. |



| Name | State | Mountain Biking | Notes |
|------------------|-------|--|-------|
| Great Fall Parks | VA | Has five miles of trails open for biking. Biking is not permitted on the falls, and is prohibited on some hiking trails. The entrance fee for cyclists arriving by bike is \$3 per person. | |

National Forest Service

The top 20 NFS locations according to visitation in 2005 are as follows:

| Name | State | Number of Annual Visitors | Mountain Biking/Cycling |
|-------------------------------------|-----------|---------------------------|---|
| Tonto | AZ | 6,273,000 | Areas not within a Wilderness area or marked 'closed' can be used by mountain bikers, and it is advised the mountain bikers yield to hikers and equestrians. |
| Angeles | CA | 3,549,000 | The forest offers 557 miles of multi-use trails that mountain bikers can use. The cyclists must share the trails with hikers and horseback riders, however. Also, mountain bikes are not allowed on the Pacific Crest Trail or in Wilderness Areas. |
| Inyo | CA | 5,699,000 | Inyo has a number of mountain biking trails, including Mammoth lakes, which offers 70 miles of single track, as well as a ski lift. (\$23 daily fee) |
| Lake Tahoe Management Unit | CA and NV | 3,883,000 | The forest has 18 distinct areas where mountain biking trails can be found. |
| Tahoe | CA | 4,625,000 | A number of trails available for mountain bikers. Routes are often shared with hikers, equestrians, and sometimes motor vehicles. |
| Arapaho-Roosevelt | CO | 7,763,000 | Offers many mountain biking trails in the following districts: Boulder Ranger District, Canyon Lakes Ranger District, Clear Creek Ranger District, Pawnee National Grassland District, and Sulphur Ranger District. |
| Grand Mesa Uncompahgre and Gunnison | CO | 3,612,000 | Offers a number of multi-use trails. Mountain bikers are welcome on these routes, but must share them with hikers. |
| Pike-San Isabel | CO | 4,348,000 | Some non-motorized trails are open to mountain bikers. |
| White River | CO | 10,421,000 | Trails available for both road bikes and mountain bikes. Trails are often shared with other users such as hikers and joggers. |
| Daniel Boone | KY | 3,396,000 | Mountain bikers are allowed to ride on most of the multi-use trails, but must share them with hikers, horseback riders, and off-highway vehicles. Bikers do not have to pay a fee to access the trails. |



| Name | State | Number of Annual Visitors | Mountain Biking/Cycling |
|------------------------------------|-----------|---------------------------|---|
| Superior | MN | 5,488,000 | In addition to forest roads, there are a number of specifically designated mountain biking routes. The routes vary in difficulty. Also, no mountain biking is allowed in the Boundary Waters Canoe Area Wilderness. |
| National Forests in North Carolina | NC | 8,564,000 | There are many multi-use trails which are open to mountain bikers, particularly in the Pisgah Ranger District. |
| Humboldt-Toiyabe | NV | 3,205,000 | Mountain bikes are allowed on any of the forest's multi-use trails. |
| Green Mountain and Finger Lakes | NY and VT | 4,184,000 | Cyclists are limited to trails specifically marked as open to mountain bikers, as well as vehicular routes. There are many different mountain biking trails located in the northern half of the Green Mountain National Forest. |
| Deschutes and Ochoco | OR | 3,851,000 | There are 20 mountain biking trails that cover 254 miles. Access to some trails requires a Recreation Pass, which usually costs approximately \$5 per day. |
| Mount Hood | OR | 5,597,000 | Has over 1,000 miles of multi-use trails that mountain bikers can ride on. Cost to access trails is \$5 per day per vehicle. |
| Uinta-Wasatch-Cache | UT | 3,240,000 | Cyclists are allowed to ride on almost any of the forest's multi-purpose trails, but must share them with hikers, horseback riders, and off-highway vehicles. Also, mountain bikes are not allowed in designated Wilderness Areas. |
| Wasatch-Cache | UT | 4,974,000 | Available on most trails and roads, except those trails within a designated Wilderness area. The website mentions that many trails are designed for hikers, and therefore bikes may need to be carried or walked on parts of some trails. |
| George Washington and Jefferson | VA | 4,168,000 | Mountain bikers are allowed to ride on any forest road or trail, unless it is specifically designated as closed to mountain bikes. Riders do not have to pay any fees for access to the trails. Bikers are encouraged to avoid the trails during the hunting season in November and December. |
| Mount Baker-Snoqualmie | WA | 3,988,000 | There are currently very few opportunities for mountain biking in this forest, although the administration admits that the demand for more access to trails is rising. |



Parks Canada

Parks Canada has 42 National Parks, below is a sampling of their mountain biking offerings.

| Name | Province | Mountain Biking |
|--|----------|--|
| Banff National Park | AB | Has 190 km of mountain biking trails. The designated rules of the trails are: leave no trace, control your bicycle, always yield to hikers, never scare animals, and plan ahead. Riders are also cautioned to be aware of bears. |
| Elk Island National Park | AB | No mention of any mountain biking trails. |
| Jasper National Park | AB | Offers hundreds of kilometres of mountain biking trails. Cyclists are only allowed on designated trails, and must share many of the trails with hikers and horseback riders. Also, riders are cautioned to beware of bears. |
| Waterton Lakes National Park | AB | Mountain biking is limited to four trails: Snowshoe Trail, Akamina Pass Trail, Wishbone Trail, and Crandell Loop. These trails cover 24 km, and bikers must share them with hikers and horseback riders. Cycling is also permitted on paved roads. |
| Glacier National Park | BC | No mention of any mountain biking trails. |
| Gulf Islands National Park | BC | There are no mountain biking trails and cycling is not allowed on park trails, due to fears of damaging sensitive plant species. Cyclists are allowed, however, to ride on any of the paved roads in the park. |
| Gwaii Haanas National Park Reserve and Haida Heritage Site | BC | No mention of any mountain biking trails. |
| Kootenay National Park | BC | Mountain biking is allowed on paved roadways and on some fire roads, but not on any hiking trails. |
| Mount Revelstoke National Park | BC | Cycling is allowed on the Trans-Canada Highway and the Meadows in the Sky Parkway, as well as on 2 km and 5 km trails at the foot of Mount Revelstoke. |
| Pacific Rim National Park Reserve | BC | Mountain biking is allowed on paved roadways (although caution is advised given heavy traffic), and on beaches. It is not 'suitable' to bike on hiking trails given stairs and boardwalks. |
| Yoho National Park | BC | Mountain biking is only allowed on the following fire roads: Kicking Horse, Amiskwi, Otterhead, Ottertail, and Ice River. Off-trail cycling on the O'Hara fire road is prohibited. |
| Riding Mountain National Park | MB | Mountain biking is permitted on gravel patrol roads, as well as on several backcountry trails. |
| Wapusk National Park | MB | No mention of any mountain biking trails. |
| Fundy National Park | NB | Mountain biking is allowed on 6 trails: Goose River, Marven Lake, Black Hole, Bennett Brook, East Branch, and Maple Grove. Cyclists must share these trails with hikers, and are prohibited from riding on other trails. |



| Name | Province | Mountain Biking |
|---|----------|--|
| Kouchibouguac National Park | NB | Offers over 50 km of biking on fairly flat terrain. This park is recognized as one of the best biking locations in Atlantic Canada. |
| Gros Morne National Park | NL | There are a number of wide pea gravel trails that allow mountain biking. |
| Terra Nova National Park | NL | Offers three designated mountain biking trails which cover 23 km. Also, bikers are allowed to ride on park roads and campgrounds, as well as in neighbouring communities. Bikes can also be rented from Ocean Quest, near the visitor kiosk. |
| Torngat Mountains National Park | NL | No mention of any mountain biking trails. |
| Cape Breton Highlands National Parks | NS | Mountain bikes are only allowed on a select few hiking trails, due to safety and environmental concerns. |
| Kejimikujik National Park | NS | There are five trails where mountain biking is permitted. Cyclists must share these trails with hikers and horseback riders. |
| Auyuittuq National Park | NU | No designated trails |
| Quttinirpaaq National Park | NU | There are no established trails in the park. |
| Sirmilik National Park | NU | No mention of any mountain biking trails. |
| Ukkusiksalik National Park | NU | No mention of any mountain biking trails. |
| Aulavik National Park | NWT | No designated trails |
| Nahanni National Park Reserve of Canada | NWT | No mention of any mountain biking trails. |
| Tuktut Nogait National Park | NWT | No mention of any mountain biking trails. |
| Wood Buffalo National Park | NWT | There are two loops north and south of the main highway, totalling 15 km, that are open to mountain biking. |
| Bruce Peninsula National Park | ON | Biking is restricted to paved roads within the park. |



| Name | Province | Mountain Biking |
|------------------------------------|----------|---|
| Georgian Bay Islands National Park | ON | Offers several marked bike trails. Cyclists are not allowed to ride on other trails. |
| Point Pelee National Park | ON | Cyclists are allowed to ride on the Centennial Bike and Hike Trail, as well as on paved roads. Bikes can be rented at the Marsh Boardwalk. |
| Pukaskwa National Park | ON | Mountain biking is not allowed on any trails in the park. Cyclists are allowed, however, to travel on Highway 627 as well as on campground roads. |
| St. Lawrence Islands National Park | ON | No mention of any mountain biking trails. |
| Prince Edward Island National Park | PEI | Mountain biking is permitted on three trails that cover 23 km: Woodlands, Gulf Shore Way, and Homestead. |
| Forillon National Park | PQ | Offers 19.5 km of mountain biking trails. |
| La Mauricie National Park | PQ | Mountain biking is only allowed on trails 3, 7, 8, and 9. The trails are interconnected to form a 30 km circuit, and the paths are covered with fine gravel. Cyclists must share the trails with hikers. |
| Mingan Archipelago National Park | PQ | No mention of any mountain biking trails. |
| Grasslands National Park | SK | No mention of any mountain biking trails. |
| Prince Albert National Park | SK | Offers 9 designated backcountry trails where mountain biking is allowed. Cyclists must share the trails with horseback riders and hikers. Also, bikers are cautioned to beware of bears, and are encouraged to use bear bells in order to not startle any while riding. |
| Ivvavik National Park | YT | No mention of any mountain biking trails. |
| Kluane National Park | YT | Mountain biking is allowed on a number of old mining roads. Popular spots include the Alsek Trail and Mush Lake Road. Also, cyclists are warned to watch out for bears. |
| Vuntut National Park | YT | No mention of any mountain biking trails. |

