MOUNTAIN BICYCLES

and their use

in the

EAST KOOTENAY DISTRICT

B.C. Provincial Parks

Prepared for: Wasa District Office
East Kootenay District
B.C. Provincial Parks

Prepared by: David Goldie
~~Andrew Duizer~~

May 8, 1986

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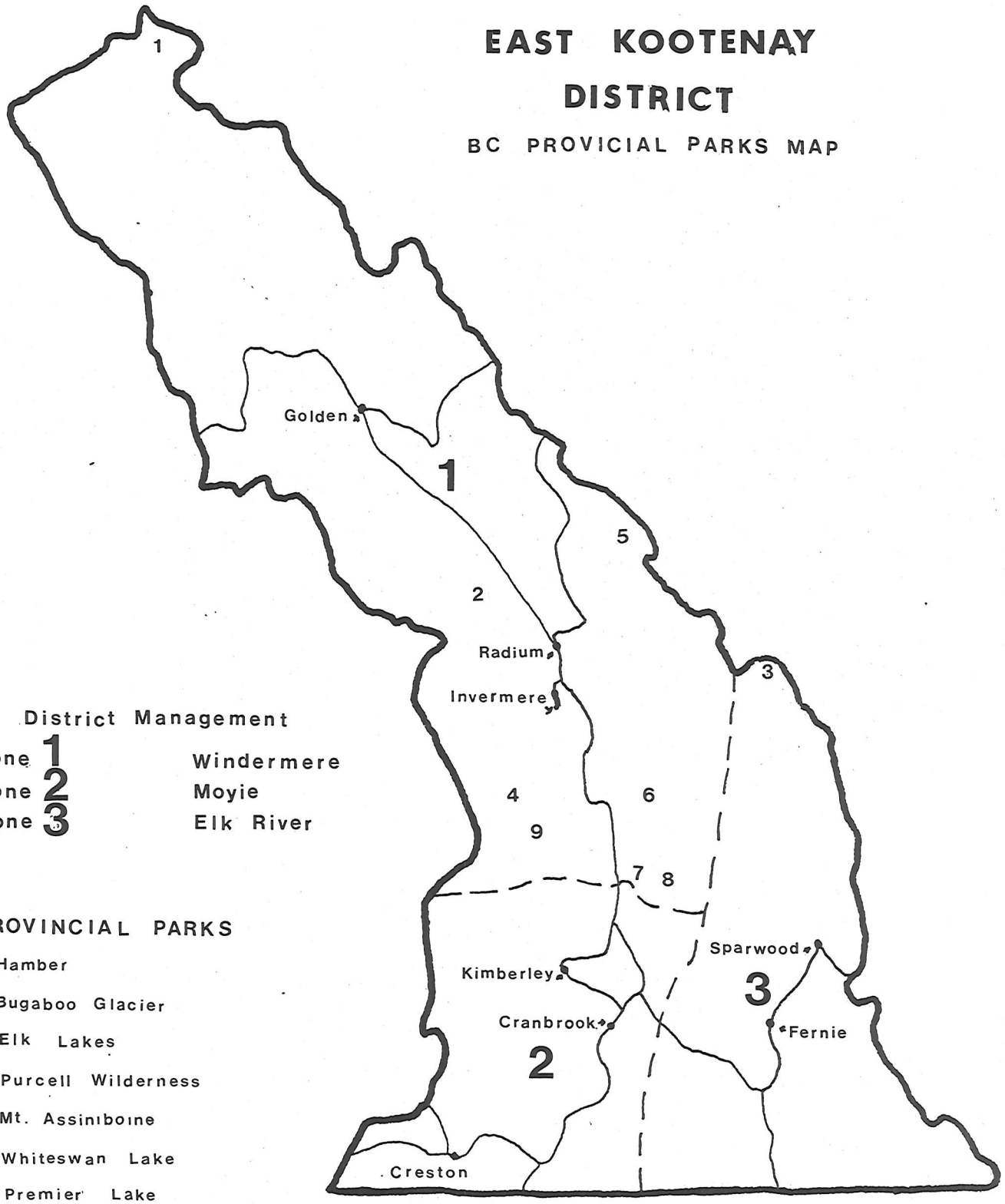

District Management

Zone 1	Windermere
Zone 2	Moyie
Zone 3	Elk River

PROVINCIAL PARKS

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LIST OF APPENDICES

1.0 INTRODUCTION

1.1 Subject and Purpose

The subject of this report is the issue of all-terrain bicycle use within the British Columbia Provincial Parks (primarily the East Kootenay District). The purpose of this will be to come up with a set of recommendations that can be used for handling the mountain bike issue.

1.2 Brief Description of Problem

Off-road bicycle use is a new issue concerning the parks. They want to accommodate them, but need to keep conflicts between cyclists and other park trail users, and damage to the environment to a minimum. Parks don't want to cause problems and limit cyclists, but some guidelines have to be set.

1.3 Background

All-terrain bicycle use has only really become an issue in our parks since around 1980 to 1982. They were first developed in Marin County, California, in the 1970's when refinements were starting to be made to the original one speed clunkers. The use of mountain bikes has spread up to Canada and is mostly in the western provinces. Riders are always looking for new terrain, and those who don't know the bikes capabilities look on them with disdain. Use is mostly day trips with some overnight trips being done. Rides can be recreational touring by and individual or small group, organized trips by clubs and outfitters, or competitions.

Mountain or trail bicycling has the following appeal:

-quick access to backcountry and to special sites

-opportunity to enjoy scenery
-challenge of a risk activity
-ability to travel most terrains
(Spence, 1985)

If trends continue, the numbers of off-pavement cyclists and bikes will continue to rise, unless there are so many closures of areas that people wont't buy them. At present time it appears that overnight travel will be unpopular except for the most avid cyclists. This may change as people become aware of facilities that may be offered.

1.4 Methods Used in Report Compilation

An outline was made up, first by ourselves before undertaking the project, then in the form of a memo from R. Quilter, backcountry supervisor, and D. Herman, chief, Visitor Services. From this, a list of contacts was made. Information from these contacts is shown in section 2.1.1 to 2.2.5. A bicycle trail evaluation form was also made up and was used for a field day at Premier Lake Provincial Park assessing trails (see section 3.0). Reference material was collected from previous reports, contact to other agencies, and what was available in the Wasa District office. Material was compiled, and this report written from it.

2.0 PRESENT SITUATION

2.1 Parks Canada

2.1.1 Banff National Park

Banff Park has a number of trails and fireroads open to off-pavement cyclists. These trails are designated and are the only ones all-terrain cyclists can use (see Appendix II). So far they have found that people are good and cooperate, and they have had no problems with

backcountry areas or conflicts between users.

2.1.2 Jasper National Park

Jasper Park has all of its trails open to mountain bicycle use except for the Skyline trail, Tonquin trail, and Lake Annette trail which is for wheelchair use. They also have produced a small brochure about mountain bicycling in the parks.

2.1.3 Kootenay National Park

Kootenay Park has only allowed off-pavement cycling on its old fireroads. The Simpson River trail into Mt. Assiniboine Prov. Park has also been identified. There has been some use of bicycles on restricted trails, but there have not yet been any complaints from hikers, or enough use for enforcement. They have made no plans for specifically made bicycle trails.

2.2 Provincial Parks

2.2.1 Cypress/Seymour

Being very close to Vancouver which has a high population of people and mountain bikes, Cypress and Seymour Parks have quite a problem. Their hiking trails that are lower down in elevation are snow free in winter. With the amount of precipitation they receive, the trails get very muddy. Mountain bikers have been using these trails and have caused damage. Bikers were also getting onto the higher elevation hiking trails in the summer, and causing damage on cross-country ski trails by skidding down hills.

The parks have limited bikes to horse trails and forest roads. No complaints have been received from equestrians as horse trail use is very low. Hikers complaining about bikes on hiking trails, was what first put the ban on bicycle use on hiking trails, along with the damage they did when it was muddy. For enforcement, Parks have put up large signs on the Cypress and Seymour access roads stating that bikes are only allowed on the horse trails and forest roads, not on the hiking trails. The heads of hiking trails also have the 12 inch 'bicycle with a red slash through it' signs posted. No-one has been prosecuted yet for disobeying one of these signs. They are now waiting to see if more enforcement will be needed.

2.2.2 Garibaldi

Garibaldi Park has restricted bicycle traffic in the Black Tusk area due to the grade of the trail, heavy use by pedestrians, the high amount of access (~~alot~~), and erosion problems on the slopes. The road up to Diamond Head is open and would not cause any problems with people or damage. Checamus Lake trail is very rough and has few users. The Singing Pass trail is not as steep as the Black Tusk trail and has few users as well. These two trails are open as well as the back of Whistler which is very popular with those who live there. If you have to ban cyclists from an area, then you have to enforce it which is more difficult. Parks

are trying to make the mountain bikers aware of their safety concerns through interpretive services.

2.2.3 Manning

Manning Park has permitted bicycle use only on access roads that are also open to vehicles, except for Windy Joe, which is a four wheel drive road, and the Monument 83 trail to the Canada/U.S. border. Use is restricted on all hiking trails and in alpine areas such as the Lightning Lakes chain and Heather trail. Damage could occur from riders going off the trails, especially in the alpine areas. Horses have their own trails and are also permitted on the access roads, but bicycles are not permitted on the horse trails. There have been four or five complaints from people about the use of bicycles on trails. Cyclists are still found on the trails at times and they are warned. Discretion is used as they may honestly not have seen the signs. Cyclists may be ticketted when the book comes out which would mean a mandatory court case. Signs used are the 'bicycle with a red slash through it' ones.

2.2.4 Strathcona

In the Forbidden Plateau area, Strathcona Park had only 10 to 20 mountain bikers last year (1985). A few ruts were left, but the numbers of bikers is so few that it is not a problem. The situation is going to be monitored and the parks should have a better idea of what thay are

going to do by the fall of 1986. Areas where there were complaints or conflicts will be looked at and trails may possibly be closed.

2.2.5 Kananaskis/Peter Lougheed (Alberta)

Kananaskis Country has no policies or regulations yet. Off-road cyclists can go anywhere they want, but there are some recommended trails which are designated bicycle trails and are very easy. Some cross-country trails around the Canmore Nordic Centre are set aside for mountain bikes in summer. There have been some close calls between horses and cyclists and in one instance a horse went off a small cliff, but was unhurt. Parks employees want to educate people and hope to have no strict rules. In Peter Lougheed Park most trails are too steep. There are also lots of old logging roads that are also trails which provide easy riding. Cyclists are allowed into the backcountry if they want to go there. They are staying on the trails and there have been no erosion problems yet. Bicycles will continue to be allowed on horse and hiking trails until such a time when there may be a problem. If they are restricted from horse and hiking trails, alternatives will be needed for them. The Rangers patrol the bicycle trails by bike but still cover the back-country and hiking trails on foot, although they would like to do them by bike. A brochure on trail bicycling will likely be out in the summer of 1987.

2.3 U.S. Wilderness Areas

These areas have banned the use of all-terrain bicycles within their boundaries following the Wilderness Act of 1964 that states that no form of mechanized transport is to be used (see Appendix IV). Whether or not mechanized transport means human powered or not is still being fought over. If a bicycle is a human powered mechanized conveyance then so are wheelchairs and cross-country skis.

3.0 PREMIER LAKE PROVINCIAL PARK TRAIL ASSESSMENT

3.1 Description of Work

At Premier Lake Park we rode the main roads and trails. Some are hiking trails, others are vehicle access roads. For each trail or road ridden, a Bicycle Trail Assessment form was filled out. Data on the type of trail, length, slope, erosion factors, surface of trail, vegetation on the trail, obstructions, signing, and hazards was collected. From this, and our personal feelings about the trail, it was either recommended on not recommended and reasons given (see Appendix V).

3.2 Trail Recommendations

Trails that we recommend and reasons for it:

Cat's Eye Lake- good for a short ride, only about 10 mins. Trail is wide enough to avoid collisions, and there is wildlife to see at the lake. Two steeper pitches may warrant pushing ones bike.

Campground to north end Quartz Lake- pleasant ride with easy

hills. Faster travel mode than by foot or possibly a vehicle. Road cannot be damaged as it is used by vehicles which one would have to be careful about.

Campground to Wolf Ck. Rd. Lookout- this is a long steady climb but it is worth it for when you get to the top. The return trip is a good downhill. Wildlife can be seen along this route but should not be a problem as they are used to some vehicle traffic.

Wolf Ck. Rd. Lookout to south park boundary- a very nice ride. Hills are small, wildlife to be seen, good view, no damage to be done, and access right through to Wasa.

South park boundary to south end Quartz Lake- a nice downhill though road material is somewhat loose. Trail from road to lake is really nice. Good visibility. Trail could become muddy if wet. Return trip up road is fairly long but if taken slow is not too difficult.

Trails that are not recommended are:

Yankee and Canuck Lakes- slopes are too steep and you need to push your bike to often. There are also quite a few hikers who use this trail in the summer so conflicts could occur.

Rod and Gun Club access road- too steep and short. Winding and vehicles. Not very spectacular.

Campground to main gate (north park boundary)- too much vehicle use during summer season. A typical gravel road, rough, and nothing to see.

4.0 ASPECTS TO CONSIDER

4.1 Safety

Safety of the backcountry cyclist is a major concern. A breakdown for an unprepared cyclist could mean an unprepared for night out.

There are other hazards like those that could result from wildlife contact, especially bears. There is no information on mountain bike/bear encounters, but it should be monitored, and considered for trail locations.

A list of safety concerns associated with trail bicycling are:

- -possibility of accidents or breakdowns far from help
- -cyclists not being prepared for overnight trips (food, clothing, shelter, increased chance of hypothermia)
- -chance of sudden encounters with wildlife, mainly bears
- -possibility that horses met along a trail will be spooked
- -conflicts with hikers

(Spence, 1985)

Cyclists should be aware of what could occur and be prepared for it. A patch kit, pump, tool kit, and first aid kit may save them a night out.

Maximum slopes should be around 20%, and the rougher it gets, the less it should get. Actually riding the trail is the best way to determine it.

Horse trails are generally rutted and hard to ride on. They

are generally avoided unless horse use is very low. Warning, direction, and distance signs would help cyclists to know what they have ahead of them and whether they are up to it or not.

4.2 User Conflicts

Conflicts can be reduced right from the start by providing information to the trail cyclist before they venture out. If they know where they can and can't ride, complaints from other trail users will be less. Conflicts can and have occured between bicycles and hikers/equestrians. This would especially happen in areas where visibility is limited. The fast and silent approach of a mountain bike could startle others, spook a horse, or result in an accident. There could also be conflicts with wildlife, namely bears. Likely they would be startled and react in some manner.

If a conflict does arise, it may be that the best solution is to let the traditional use have priority. It would be up to the individual park to assess the problem and take action as necessary as all situations will not be the same.

4.3 Environmental Impact

Impact varies according to the conditions of the trail. Impact is at a minimum when trails are dry and ruts will not be formed by the tires. When trails are wet, a linear track can be formed that carries water. Over time the trail starts carrying water instead of shedding it which creates erosion problems. Steep, bare slopes are the most severely affected. Fine textured soils are more subject to erosion than coarser ones.

Mucking of a trail occurs when a badly rutted trail is saturated

with water (usually from horse and hiker use). The trail will deteriorate, and will also get wider from people avoiding the wet spots.

The following types of impact are:

-trail degradation caused by cyclists on steep grades, wet terrain, sensitive areas, and currently eroded trails. The use of bicycles in the off-season may lead to increased trail degradation.

-off-trail degradation from cyclists straying off the trail

-protection of wildlife, particularly bears

-increased impact to remote wilderness areas due to increased accessibility. The problem may get worse where bicycles provide access to areas where there are no trails currently

Presently it is not known what effects bikes will have on wildlife, whether or not they are worse than hikers and horses. This would have to be monitored.

Degradation would not likely occur off trails as it is difficult to ride through vegetation. Campsite erosion may not be any greater than what a group of hikers would inflict.

5.0 RECOMMENDATIONS

The production of a brochure (see Appendix VIII) on mountain bicycling in the East Kootenay District. This would inform the rider about safety precautions, survival, what to bring, and trail etiquette (see Appendix VI), so people are responsible and moderate their behavior.

Public land managers could also learn about mountain bikes through something like the American Motorcyclist Association and Motorcycle Industry Council did. They sponsored seminars where

the managers learned how to ride safely and responsibly. They lost some of their fears and misapprehensions about off-road motorcycle activity and how to manage it.

Do an assessment of trails in parks to determine which ones will have bicycling permitted on them. This should be done on a standardized form similar to the one found in Appendix V. This will allow for a standardization of information that can be interrelated to similar trails avoiding the duplication of mistakes.

Signing at trailheads and on trails to provide information such as distance, direction, difficulty level, and whether or not it is open to mountain bikes.

Set up a system of monitoring that would cover:

-possibly controlling the number of mountain bikes on each trail through a registration system.

-monitor the environmental impact caused by mountain bikes through visual observation and actual measurements.

-monitor user conflicts so action may be taken as necessary.

-monitor the present conditions of trails so any problem areas can be taken care of quickly.

-monitor the trends of use.

(Spence, 1985)

APPENDICES

APPENDIX I

Parks Canada Block Statement

and

Public Response from Four Mountain

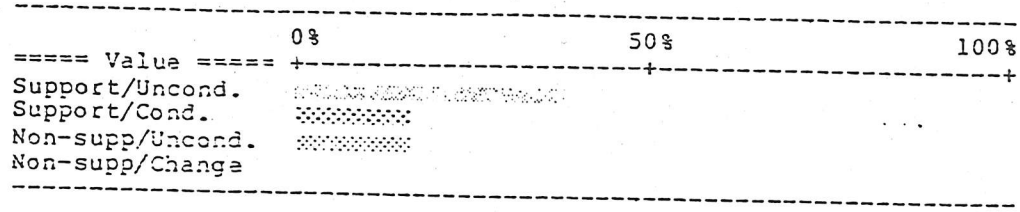
Parks Planning Program

B. *Trail bicycling will be permitted on designated trails to an extent and level in each Park that will be decided in the individual park-management planning process.*

DIRECTION STATEMENT

3.6.5 B. The appropriateness of off-road (backcountry) bicycling would be determined through a separate exercise. If the activity is found to be appropriate, the extent and levels to which the activity may occur, would be outlined in the individual park management plans.

FIRST LEVEL COMMENT CATEGORY FREQUENCY



SECOND LEVEL COMMENT CATEGORY

Support/Conditional

if off-road bikes not allowed on hiking trails
if resource protection receives first priority
if off-road bikes limited to already damaged areas
if conflict between bikers and others minimized
if further studies done
if development of off-road bike opportunities limited
if strict limits set
if access permitted under controlled conditions
if each activity evaluated on individual merit
if paving trails not included in improvements
if public input is considered
if off-road bikes not allowed in alpine country
if improvements do not include new facilities

Support/Unconditional

because off-road bicycling will be enhanced

Non-Support/Unconditional

off-road bicycles inappropriate in national parks
results in negative environmental impact
further development/use should occur outside park
off-road bikes are too dangerous to pedestrians
policy should be consistant thru-out all parks
existing development is sufficient
improvements are too expensive

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APPENDIX II

Western Region Directive

Parks Canada

Trail Bicycling (non-motorized)

SUPT.	MF 04/05/85	
SEC.	June 3/85	
G.W. MGR.	(4)	
P.F.A.O.	(5)	
C.V.S.	(1)	
C.P.W.	(2)	
C.P.C.	(3)	
TECH. OFF.		
RM. A. CR.		
P. & P. CR.		
ACCT. CR.		
REV. CR.		
ENG. CR.		
file	(6)	

WESTERN REGION
DIRECTIVE

ENVIRONMENT CANADA **PARKS CANADA**

DATE: May 15, 1985 NUMBER: WRD -

SUBJECT: Trail Bicycling (non-motorized)

DEFINITION

Trail bicycling is defined as travel by bicycle on terrain other than paved roads. The type of bicycle most commonly used for off-pavement travel is the trail bicycle, also referred to as the mountain bike, the klunker, and the all-terrain bicycle.

1. BACKGROUND

Trail bicycling is becoming a popular activity in the western national parks. To date, most trail bicycle activity has been day use. Over-night and multiple day excursions may increase in the future as the potential of various trail systems is further explored, and the availability of appropriate bicycle accessories increases.

In 1983 and 1984 bicycle trails were designated in Banff, Jasper, Kootenay, Yoho, and Waterton Lakes National Parks, on an interim basis. Over the two year period the activity was monitored to determine the number of users and identify concerns. With the background information Parks Canada conducted a workshop in January, 1985 to determine the appropriateness and establish long term direction for the activity.

The following decisions were made about the activity.

2. POLICY

Trail bicycling is an appropriate recreational activity in national parks, given the following terms and conditions:

(a) Opportunities for the public to appreciate a "wilderness experience" are not compromised.

(b) Given that the activity provides opportunities for the public to experience, understand and appreciate the resources in a national park, the activity be

...2

allowed on designated trails in zones II, III, IV and V. The designation of trails will be based on the following criteria:

i) where resource protection problems can be mitigated,

ii) where unusual dangers to the safety of cyclists or other users can be abated or visitors can be adequately warned of their existence,

iii) where the probability of conflict between wildlife (bears) and cyclists is low,

iv) where serious conflicts with other visitors in the use of the trail are unlikely,

v) where the trail is constructed and maintained to a standard that can withstand bicycle use,

3. AUTHORITY

The authority for restricting trail bicycling to designated areas lies in Section 7 of the National Parks General Regulations.

4. SCOPE

This directive applies to Banff, Jasper, Kootenay, Yoho, Waterton Lakes, Elk Island, Mt. Revelstoke, Glacier, and Pacific Rim National parks.

5. GUIDELINES

(a) The Superintendent will designate trails and review the list annually.

(b) Trails designated for 1985 include:

(i) In Banff National Park

- Sundance Road
- Spray Fireroad to Spray Reservoir
- Goat Creek Trail
- Redearth to Egypt Lake via Pharaoh Creek
- Bryant Creek Trail to Assiniboine Pass
- Brewster Creek to Bryant Creek
- Lake Minnewanka Trail to Devil's Gap
- Cascade Fireroad to Stoney Creek
- Skoki, Red Deer Lakes and Pipestone
- Forty Mile Creek, Elk Lake Summit, out Stoney Creek

...3

- Hardened trails in the immediate townsite vicinity

(ii) In Jasper National Park

All trails in the park are designated acceptable with the exception of - Skyline Trail
- Tonquin Trail
- Lake Annette Trail

(iii) In Kootenay National Park

East Kootenay Fireroad from
- the Concorps Camp to Hector Gorge on Highway 93

West Kootenay Fireroad from
- Crook's Meadows to the Kootenay Crossing Warden Station (Dolly Varden Fireroad) to the park boundary

(iv) In Yoho National Park

- Kicking Horse/Van Horne Fireroad
- Amiskwi Fireroad to Amiskwi III Campsite
- Ottertail Trail
- Ice River Trail

(v) In Waterton Lakes National Park

- Snowshoe Trail from Red Rock Canyon to Snowshoe Cabin
- Akamina Pass Trail
- Park Line Trail from Bison Paddock along the park boundary to the Oil Basin Warden Cabin

(vi) In Elk Island, Mt. Revelstoke, Glacier, and Pacific Rim National Park bicycles are not allowed off paved roads.

(c) In accordance with the regulations each park is required to post notices and maps at park warden offices and information bureaux describing the activity and showing the designated areas.

(d) Parks Canada will embark on an information program targeted at trail bicyclists in cooperation with the Canadian Cycling Association, bicycling clubs, bicycle retailers and rental outlets. The information program will deal with:

i) the location and nature of designated trails,

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ii) trail etiquette and the responsibilities of trail bicyclists,

iii) safety precautions and backcountry travel.

(e) Parks Canada will adapt its existing backcountry information program in an effort to inform all users of what conditions, hazards and other uses to expect on trails.

(f) It is not anticipated that new facilities will be required for the sole purposes of trail bicyclists.

(g) Trail bicycling will be monitored and reviewed over a three year period to determine the following:

i) environmental impact,

ii) trends in use (total use, overnight and multiple day use, organized group use, party size, organized events),

iii) acceptance/conflicts with other backcountry users,

iv) preferred types of trails,

v) public safety requirements.

(h) Completion of the individual park management plans may result in a revision to the list of designated trails.

Steve Kun
Director
Western Region
Parks Canada

APPENDIX III

B.C. Provincial Parks

Interim Guidelines - Mountain Bikes

in Provincial Parks

Fr: JDELIKAT--LPH01 Date and time 04/08/86 16:13:52

To: CNORTH --LPH01 Dennis Eggen
DCARRUTH--LPH01 Don Carruthers
SROBERT --LPH01 Sandy Robertson
NBLACKBU--LPH01 Norm Blackburn
RLUSSIER--LPH01 Raoul Lussier
DGOUGH --LPH01 Don Gough
RSOULE --LPH01 Robin Soule
JDELIKAT--LPH01 Jim Delikatny
JGILLING--LPH01 Joe Gillings
GTRACHUK--LPH01 George Trachuk

JDELIKAT--LPH01 Jim Delikatny
JGILLING--LPH01 Joe Gillings
GRATHBON--LPH01 Gordon Rathbone
JMOORE --LPH01 Jim Moore
JPREMIS --LPH01 John Premischook
VBOPP --LPH01 Vic Bopp
CNORTH --LPH01 Dennis Eggen
DCARRUTH--LPH01 Don Carruthers
GTRACHUK--LPH01 George Trachuk
MGODDARD--LPH01 Milt Goddard

*** Resending note of 04/08/86 16:02
To: LMCHALE --LPH01 Linda McHale

SUBJECT: MOUNTAIN BIKES IN PROVINCIAL PARKS
RECOMMENDED GUIDELINES FOR 1986

You will recall at our District Manager's Meeting in March, a committee was formed to produce interim guidelines to manage mountain bike activity and the problems of dogs in alpine areas. The committee recommends the following guidelines.

Non motorized bicycles which are also known as trail bicycles or mountain bikes is becoming a popular method of travel in Provincial Parks and will increase rapidly, especially in the Lower Mainland Region. Our committee consisting of Victor Bopp, Norm Blackburn and Jim Delikatny is recommending suggested guidelines to manage this activity in parks and to achieve consistency throughout the Province. Hiking trails in Provincial Parks are open to mountain bikes unless posted closed at the discretion of the District Manager. Enforcement of the closure shall be under section 77 of the Park Act Regulations. Each District Manager will maintain contact with various hiking clubs and/or organizations to keep them informed on regulations within their area.

Some valid reasons for closure are:

- adverse effect on environment i.e. fragile alpine meadows
- adverse effect on facility i.e. damage trails
- conflict with other users i.e. complaints from hikers
- safety, re: hazards to bikers and hikers

The activity should be monitored in 1986 and if problems persist a request can be made to Headquarters for a policy on this issue. It is recommended that we will not issue park use permits for commercial mountain bike activity until a policy is established.

DOMESTIC ANIMALS

The issue of domestic animals in alpine parks is complex and sensitive. Banning them should be done only with absolute justification at the discretion of the District Manager under section 45. Restriction of domestic animals from Black Tusk and Bowron Lakes is beneficial to all, but management of the regulation is not without problems.

Regards,
Jim Delikatny

cc: GTRACHUK--LPH01 George Trachuk
TMOORE --LPH01 Tom Moore
MGODDARD--LPH01 Milt Goddard

APPENDIX IV

U.S. Department of the Interior letter

re. Wilderness Areas and all-terrain bicycling

Point Reyes Update

Dear Fat Tire Friends,

In early September, Point Reyes National Seashore announced that all trails within the designated wilderness area would be closed to bicycles. The orders came from the National Park Services in Washington, DC. It is their interpretation of a clause in the Wilderness Act prohibiting any "form of mechanical transportation."

The reaction of local trail riders was immediate. By September 29, the date of the next National Seashore Citizens Advisory Committee meeting, we had petitions with over 1200 signatures demanding public hearings. The meeting was attended by over fifty fat tire friends. Many chose to speak to the commissioners on subjects such as the historic use of bicycles in the park (and in the same area before there was a park), environmental impact, user compatability and the trail system so ideally suited to bicycles. We interpret 'mechanical transport' as mechanically powered and not human powered, otherwise it should include skis, rafts, canoes, kayaks, wheelchairs and other forms of human powered mechanical transportation. A clear case of discrimination.

The Advisory Commission reacted favorably and decided unanimously to draft a letter to the director of the National Park Service urging him to seek a formal opinion form the Solicitor's Office of the Department of the Interior on bicycles within the wilderness area and also to consider the historic use of bicycles within the wilderness, other forms of 'mechanical transport' already allowed and the fact that many exceptions to the Wilderness Act were made just to establish a wilderness area on previously developed land so close to a large urban population.

At this point, no signs prohibiting bikes have been posted and rangers are not enforcing the new ruling. As we await an answer from the Solicitor General, we are riding on all trails, as we have for many years and appreciating it more than ever.

I would like to encourage anyone interested in updates on this situation or with information on similar problems in other areas to write to the address below.

Happy Trails,
Marshall Livingston
Point Reyes Bikes
P.O. Box 362
Point Reyes, CA 94956

United States Department of the Interior

NATIONAL PARK SERVICE
GOLDEN GATE NATIONAL RECREATION AREA
FORT MASON, SAN FRANCISCO, CALIFORNIA 94123

IN REPLY REFER TO

GOLDEN GATE NATIONAL RECREATION AREA ADVISORY COMMISSION

A18 (WR-GOGA)

October 16, 1984

Russell E. Dickenson
Director
National Park Service
U. S. Department of the Interior
Washington, DC 20240

Dear Mr. Dickenson:

On September 29, 1984, the Golden Gate National Recreation Area Advisory Commission, which also serves Point Reyes National Seashore, met at Point Reyes Station, the community adjacent to that park. A major agenda item was the recent prohibition of bicycles on the trails within the wilderness area of the Seashore. The purpose of this letter is to seek the parameters of flexibility within which the Advisory Commission may structure its recommendation on this issue to the National Park Service.

As you know, 24,200 of Point Reyes' 71,000 acres were designated wilderness in 1976 by Public Law 94-544. After receiving clarification of the Wilderness Act as it pertains to that wilderness area, the Seashore management announced in early September the closure to bicycles of approximately sixty percent of the present Seashore trails, those within the wilderness area. That announcement generated considerable interest in the surrounding communities and throughout the San Francisco Bay Area. There was both support of the restriction and conversely support of the Seashore allowing bicycles on some of the trails in the wilderness. Limited use of those trails would allow bicycle access to some of the popular "backcountry" areas and provide for trail linkage and loops, while leaving the majority of the wilderness free of bicycles.

After reviewing the Seashore's legislative history, and the history of bicycle use on Seashore trails, and after listening to the many public comments at the September 29 meeting, we of the Advisory Commission feel that the following questions and suggestions should be considered by the National Park Service in a review of this issue as it relates to Point Reyes National Seashore.

1. We recommend that the National Park Service seek a formal opinion from the Solicitor's Office of the Department of the Interior as to whether a "mechanical form of transport" as defined in the Wilderness Act (16 U.S.C. 113 (c)) includes bicycles.

2. If the Solicitor determines that bicycles are covered by that definition, a review should be made of the legislative history of the Wilderness Act to ascertain if the original intention was to exclude living-powered sources of transport, which would include bicycles, wheelchairs, skis and others, from wilderness areas.

3. Could the Special Provision clause of the Wilderness Act, which allows some historical uses involving mechanical transport to continue, be applied to the situation at Point Reyes National Seashore? Prior to the designation of the Point Reyes wilderness, there was a history of bicycle use within the Seashore; could that history qualify continuing bicycle use within the Seashore's wilderness, as provided by that Special Provision clause?

4. If the legislative history of the 1964 Wilderness Act indicates an intent to ban bicycles and no exemption is possible under the Special Provision clause, the Solicitor should review the history and intent of the Point Reyes National Seashore wilderness legislation. That legislation included the designation of several vehicle corridors that traversed the wilderness area to provide service to the Seashore's hike-in campgrounds. Because those corridors are not part of the actual wilderness area, they are available for bicycle use. We would appreciate an opinion from the Solicitor as to whether it would be possible to create additional such corridors through the wilderness as provided for in Section 3 (e) in the Wilderness Act.

Because the question of bicycle use within the Point Reyes wilderness has been put before us, we of the Advisory Commission feel that further study of the application of the 1964 Wilderness Act as it applies to Point Reyes National Seashore is a reasonable request. We would very much appreciate a timely response on this issue which we anticipate will surface in our public meeting scheduled for early January. We look forward to your opinion on this source of public concern.

Sincerely,

Frank C. Boerger
Chairman
GGNRA and Point Reyes National Seashore Advisory Commission

cc: G. Ray Arnett, Assistant Secretary for Fish and Wildlife and Parks

APPENDIX V

Bicycle Trail Assessment forms

Premier Lake Provincial Park - map

BICYCLE TRAIL ASSESSMENT

Park: _____

1 Trail Name: _____

2 Type: _____

3 Length: _____ km 4 Time to Travel: _____ mins.

5 Slope

Steep	Moderate	Undulating	Flat

6 Max Grade ___ %

7 Remarks: _____

_____

8 Trail Conditions

9 Width _____ m

10 Erosion

Badly	Moderate	Some	Not

11 Description: _____

_____

12 Surface

Rutted	Rocky	Rough	Fairly Smooth

13 Description: _____

_____

14 Vegetation on Trail

Overgrown	Passable	Clear

15 Description: _____

_____

16 Soil Texture

Fine	Medium	Coarse

17 Description: _____

_____

18 Obstructions

Windfalls	Creeks	Other

19 Description: _____

_____

20 Signing

Trail Head	Direction	Distance	Difficulty Level

21 Description: _____

_____

22 Hazards Description: _____

_____

23 Recommended ☐ Not Recommended ☐

24 Reasons: _____

_____

_____

_____

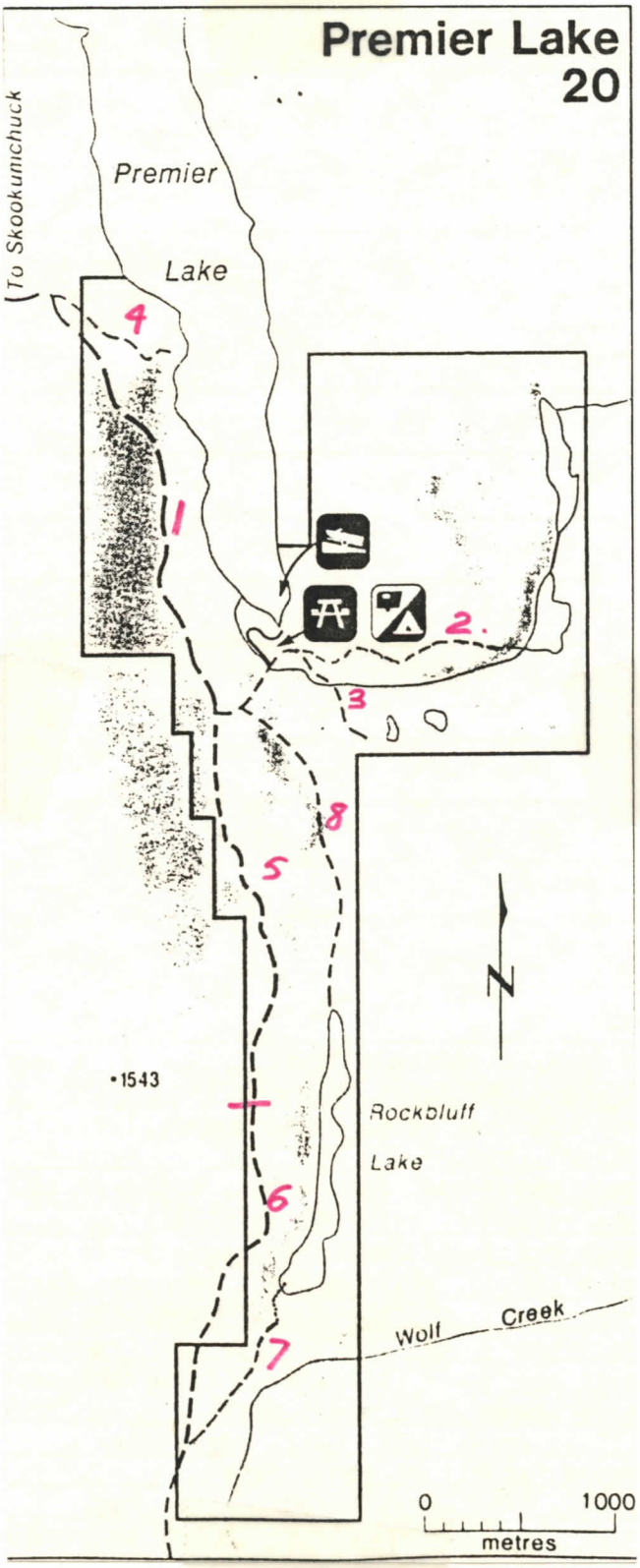
_____

25 Date: _____

26 Technician(s): _____

---

2 old road, wheelchair trail, self-guiding, horse, hiking, etc.	5 check one
7 steep pitches, long, continuous climbs, flat sections, etc.	
10 check one	11 washed out, signs of slumping, mass movement, water flow, etc.
12 check one	13 potholes, ruts (tire), bedrock, loose stones, loose gravel, compact, dirt, etc.
14 check one	15 how much, types, etc.
16 check one	17 variety, coarse fragments, etc.
18 check one	19 size, height, width, depth, rock, swamps, wet areas, etc.
20 fill in each good, fair, poor, none	
21 needed for all or some areas	
22 cliffs, foot or vehicle traffic, etc.	
23 check one	24 high/low impact on area with bicycle use, high/low demand, good/poor connections to other areas, unstable, needs rehabilitation, etc.


Premier Lake
20
(To Skookumchuck
Premier
Lake
4
1
2.
3
8
5
N
•1543
6
Rockbluff
Lake
Wolf Creek
7
0
1000
metres

BICYCLE TRAIL ASSESSMENT

Park: Premier lake

1 Trail Name: Campground to Main gate (North park boundary)

2 Type: Main Vehicle access road

3 Length: 3.2 km 4 Time to Travel: 40 mins.

5 Slope

Steep	Moderate	Undulating	Flat
		✓	

6 Max Grade 20 %

7 Remarks: Rolling terrain - a steep hill out of the Campground and another at the park boundary

8 Trail Conditions

9 Width 6.5 m

10 Erosion

Badly	Moderate	Some	Not
			✓

11 Description: N/A

12 Surface

Rutted	Rocky	Rough	Fairly Smooth
			✓

13 Description: loose highway gravel

14 Vegetation on Trail

Overgrown	Passable	Clear

15 Description: N/A

16 Soil Texture

Fine	Medium	Coarse
		✓

17 Description: Highway gravel

18 Obstructions

Windfalls	Creeks	Other

19 Description: N/A.

20 Signing

Trail Head	Direction	Distance	Difficulty Level
good	good	poor	None

21 Description: requires distance and difficulty Signs along the road.

22 Hazards Description: "Vehicle Traffic"

23 Recommended ☐ Not Recommended ☑

24 Reasons: The Vehicle Traffic to and From Premier lake campground makes travel along this corridor not recommended for a hike trail.

25 Date: May 1/86

26 Technician(s): A. Duizer, D. Goldie.

2	old road, wheelchair trail, self-guiding, horse, hiking, etc.	5	check one
7	steep pitches, long, continuous climbs, flat sections, etc.		
10	check one	11	washed out, signs of slumping, mass movement, water flow, etc.
12	check one	13	potholes, ruts (tire), bedrock, loose stones, loose gravel, compact, dirt, etc.
14	check one	15	how much, types, etc.
16	check one	17	variety, coarse fragments, etc.
18	check one	19	size, height, width, depth, rock, swamps, wet areas, etc.
20	fill in each good, fair, poor, none		
21	needed for all or some areas		
22	cliffs, foot or vehicle traffic, etc.		
23	check one	24	high/low impact on area with bicycle use, high/low demand, good/poor connections to other areas, unstable, needs rehabilitation, etc.

BICYCLE TRAIL ASSESSMENT

Park: Premier Lake

1 Trail Name: Yankee and Canuck Lake

2 Type: old road, hiking trail

3 Length: 1.8 km 4 Time to Travel: 20 mins.

5 Slope

Steep	Moderate	Undulating	Flat
✓			

6 Max Grade 30%

7 Remarks: steep climbs alternating with short flat sections

8 Trail Conditions

9 Width 3 m

10 Erosion

Badly	Moderate	Some	Not
		✓	

11 Description: some water flow on steep grades

12 Surface

Rutted	Rocky	Rough	Fairly Smooth
	✓		

13 Description: shale bedrock, loose rocky surface

14 Vegetation on Trail

Overgrown	Passable	Clear
		✓

15 Description: N/A

16 Soil Texture

Fine	Medium	Coarse
		✓

17 Description: lots of shale pieces

18 Obstructions

Windfalls	Creeks	Other
	✓	

19 Description: 1 creek, easily crossed. 1.5 m wide, 0.1 m deep

20 Signing

Trail Head	Direction	Distance	Difficulty Level
fair	fair	fair	none

21 Description: distance signing for hikers only (40 mins)

22 Hazards Description: steep, loose descents

23 Recommended ☐ Not Recommended ☑

24 Reasons: slopes too steep, need to push bikes. Return trip much better, but steep. Popular hiking trail - possible conflicts. Very steep on last leg down to lake, not rideable, & can't ride around lakes.

25 Date: May 1, 1986

26 Technician(s): D. Goldie, A. Daizer

---

2 old road, wheelchair trail, self-guiding, horse, hiking, etc.	5 check one
7 steep pitches, long, continuous climbs, flat sections, etc.	
10 check one	11 washed out, signs of slumping, mass movement, water flow, etc.
12 check one	13 potholes, ruts (tire), bedrock, loose stones, loose gravel, compact, dirt, etc.
14 check one	15 how much, types, etc.
16 check one	17 variety, coarse fragments, etc.
18 check one	19 size, height, width, depth, rock, swamps, wet areas, etc.
20 fill in each good, fair, poor, none	
21 needed for all or some areas	
22 cliffs, foot or vehicle traffic, etc.	
23 check one	24 high/low impact on area with bicycle use, high/low demand, good/poor connections to other areas, unstable, needs rehabilitation, etc.

BICYCLE TRAIL ASSESSMENT

Park: Premier Lake

1 Trail Name: Cat's Eye Lk.

2 Type: old road, hiking trail

3 Length: 0.5 km 4 Time to Travel: 10 mins.

5 Slope

Steep	Moderate	Undulating	Flat
	✓		

6 Max Grade 25 %

7 Remarks: 2 steep pitches

8 Trail Conditions

9 Width 2.5 m.

10 Erosion

Badly	Moderate	Some	Not
		✓	

11 Description: spinning motorcycle wheel

12 Surface

Rutted	Rocky	Rough	Fairly Smooth
		✓	

13 Description: steep pitches have looser rock

14 Vegetation on Trail

Overgrown	Passable	Clear
	✓	

15 Description: deciduous starting to encroach on sides and top

16 Soil Texture

Fine	Medium	Coarse
	✓	

17 Description: med in wetter areas. Coarse materials in sections

18 Obstructions

Windfalls	Creeks	Other
✓	✓	

19 Description: 4 windfalls 2 have to be carried over 1 creek, 1.5 m wide, 0.1 m deep.

20 Signing

Trail Head	Direction	Distance	Difficulty Level
poor	poor	none	none.

21 Description: signs removed for winter. Additional signs for bikes.

22 Hazards Description: loose material on steeper descents

23 Recommended [✓] Not Recommended [ ]

24 Reasons: fairly easy going except for two steep pitches & windfalls. Wildlife to see at lake. Trail is wide enough. Very short though.

25 Date: May 1, 1986

26 Technician(s): D. Goldie A. Daizer.

---

2 old road, wheelchair trail, self-guiding, horse, hiking, etc.	5 check one
7 steep pitches, long, continuous climbs, flat sections, etc.	
10 check one	11 washed out, signs of slumping, mass movement, water flow, etc.
12 check one	13 potholes, ruts (tire), bedrock, loose stones, loose gravel, compact, dirt, etc.
14 check one	15 how much, types, etc.
16 check one	17 variety, coarse fragments, etc.
18 check one	19 size, height, width, depth, rock, swamps, wet areas, etc.
20 fill in each good, fair, poor, none	
21 needed for all or some areas	
22 cliffs, foot or vehicle traffic, etc.	
23 check one	24 high/low impact on area with bicycle use, high/low demand, good/poor connections to other areas, unstable, needs rehabilitation, etc.

BICYCLE TRAIL ASSESSMENT

Park: Premier lake

1 Trail Name: Rod and Gun Club road

2 Type: Vehicle Access Road

3 Length: 0.9 km 4 Time to Travel: 20 mins.

5 Slope

Steep	Moderate	Undulating	Flat
✓			

6 Max Grade 25-30%

7 Remarks: Continuous steep Grade

8 Trail Conditions

9 Width 4.5 m

10 Erosion

Badly	Moderate	Some	Not
	✓		

11 Description: Vehicle tire ruts

12 Surface

Rutted	Rocky	Rough	Fairly Smooth
✓	✓		

13 Description: rutted with loose gravel in the ruts

14 Vegetation on Trail

Overgrown	Passable	Clear
		✓

15 Description: N/A

16 Soil Texture

Fine	Medium	Coarse
		✓

17 Description: Road bed

18 Obstructions

Windfalls	Creeks	Other

19 Description: N/A

20 Signing

Trail Head	Direction	Distance	Difficulty Level
N/A	N/A	N/A	N/A

21 Description: Needs signs everywhere

22 Hazards Description: steep slopes and vehicle Traffic

23 Recommended ☐ Not Recommended ☑

24 Reasons: This is a very short steep road with heavy vehicle traffic. The steep climb up from the lake is very difficult and the heavy traffic use is dangerous

25 Date: May 1/86

26 Technician(s): A. Duizer, D. Galle.

---

2 old road, wheelchair trail, self-guiding, horse, hiking, etc.	5 check one
7 steep pitches, long, continuous climbs, flat sections, etc.	
10 check one	11 washed out, signs of slumping, mass movement, water flow, etc.
12 check one	13 potholes, ruts (tire), bedrock, loose stones, loose gravel, compact, dirt, etc.
14 check one	15 how much, types, etc.
16 check one	17 variety, coarse fragments, etc.
18 check one	19 size, height, width, depth, rock, swamps, wet areas, etc.
20 fill in each good, fair, poor, none	
21 needed for all or some areas	
22 cliffs, foot or vehicle traffic, etc.	
23 check one	24 high/low impact on area with bicycle use, high/low demand, good/poor connections to other areas, unstable, needs rehabilitation, etc.

BICYCLE TRAIL ASSESSMENT

Park: Premier lake

1 Trail Name: Campground to Wolf creek road lookout (Wolf creek road)

2 Type: old Vehicle access road (not maintained)

3 Length: 3.5 km 4 Time to Travel: 45 mins.

5 Slope

Steep	Moderate	Undulating	Flat
✓			

6 Max Grade 20+%

7 Remarks: Long continuous slope - all the way to the lookout

8 Trail Conditions

9 Width 3.5 m

10 Erosion

Badly	Moderate	Some	Not
	✓		

11 Description: Water flow down vehicle ruts and wash outs.

12 Surface

Rutted	Rocky	Rough	Fairly Smooth
	✓	✓	

13 Description: pot holes, surface bedrock loose gravel and stones

14 Vegetation on Trail

Overgrown	Passable	Clear
		✓

15 Description: N/A.

16 Soil Texture

Fine	Medium	Coarse
		✓

17 Description: Shale stones and gravel

18 Obstructions

Windfalls	Creeks	Other

19 Description: N/A.

20 Signing

Trail Head	Direction	Distance	Difficulty Level
Fair	Poor	None	None

21 Description: Needs improved trail head sign. Direction signing is poor - many side roads leading off.

22 Hazards Description: Steep slopes with loose surface material

23 Recommended [✓] Not Recommended [ ]

24 Reasons: This is an intermediate to expert trail the slope is long and continuous. It is recommended that several rest areas be cleared and marked. Must review wildlife conflicts at the look out

25 Date: May 1/96

26 Technician(s): A. Duizer, D. Goldie

---

2 old road, wheelchair trail, self-guiding, horse, hiking, etc.	5 check one
7 steep pitches, long, continuous climbs, flat sections, etc.	
10 check one	11 washed out, signs of slumping, mass movement, water flow, etc.
12 check one	13 potholes, ruts (tire), bedrock, loose stones, loose gravel, compact, dirt, etc.
14 check one	15 how much, types, etc.
16 check one	17 variety, coarse fragments, etc.
18 check one	19 size, height, width, depth, rock, swamps, wet areas, etc.
20 fill in each good, fair, poor, none	
21 needed for all or some areas	
22 cliffs, foot or vehicle traffic, etc.	
23 check one	24 high/low impact on area with bicycle use, high/low demand, good/poor connections to other areas, unstable, needs rehabilitation, etc.

BICYCLE TRAIL ASSESSMENT

Park: Premier Lake

1 Trail Name: lookout to south Park boundary - Wolf Cr. Rd.

2 Type: vehicle access road, not maintained.

3 Length: 1.5 km 4 Time to Travel: 10 mins.

5 Slope

Steep	Moderate	Undulating	Flat
		✓	

6 Max Grade ___ %

7 Remarks: easy ride - mostly downhill travelling south. Return trip not difficult.

8 Trail Conditions

9 Width 3.5 m

10 Erosion

Badly	Moderate	Some	Not
		✓	

11 Description: run-off (minor)

12 Surface

Rutted	Rocky	Rough	Fairly Smooth
		✓	

13 Description: bedrock, loose stones, gravel, patches compact

14 Vegetation on Trail

Overgrown	Passable	Clear
		✓

15 Description: N/A

16 Soil Texture

Fine	Medium	Coarse
		✓

17 Description: rocky road surface

18 Obstructions

Windfalls	Creeks	Other

19 Description: N/A

20 Signing

Trail Head	Direction	Distance	Difficulty Level
N/A	none	none	none.

21 Description: direction is clear. Park boundary marked. Lookout could be marked. Hazard?

22 Hazards Description: falling off lookout, vehicles

23 Recommended [✓] Not Recommended [ ]

24 Reasons: Very nice ride. No large hills. Wildlife to be seen. Very little uphill travelling south. No impact to environment, wildlife should be used to traffic. Can get right through to Wasa.

25 Date: May 1, 1986

26 Technician(s): D. Goldie A. Daizai.

---

2 old road, wheelchair trail, self-guiding, horse, hiking, etc.	5 check one
7 steep pitches, long, continuous climbs, flat sections, etc.	
10 check one	11 washed out, signs of slumping, mass movement, water flow, etc.
12 check one	13 potholes, ruts (tire), bedrock, loose stones, loose gravel, compact, dirt, etc.
14 check one	15 how much, types, etc.
16 check one	17 variety, coarse fragments, etc.
18 check one	19 size, height, width, depth, rock, swamps, wet areas, etc.
20 fill in each good, fair, poor, none	
21 needed for all or some areas	
22 cliffs, foot or vehicle traffic, etc.	
23 check one	24 high/low impact on area with bicycle use, high/low demand, good/poor connections to other areas, unstable, needs rehabilitation, etc.

BICYCLE TRAIL ASSESSMENT

Park: Premier lake

1 Trail Name: South Park boundary to south end of Quartz lake

2 Type: old road - not maintained + short trail to lake

3 Length: 1.3 km 4 Time to Travel: 15 mins.

5 Slope

Steep	Moderate	Undulating	Flat
	✓		

6 Max Grade 15 %

7 Remarks: Going down is easy - long steady climb out

8 Trail Conditions

9 Width road 3 m / Trail 0.8 m

10 Erosion

Badly	Moderate	Some	Not
		✓	

11 Description: Water flow down road during precip. - trail is fine

12 Surface

Rutted	Rocky	Rough	Fairly Smooth
	✓ Road		✓ Trail

13 Description: loose stones on road / trail is dirt

14 Vegetation on Trail

Overgrown	Passable	Clear
	✓ Trail	✓ Road

15 Description: road N/A / Trail - bushes brush rider, buture not a problem.

16 Soil Texture

Fine	Medium	Coarse
	✓ trail	✓ road

17 Description: Trail may have some wet spots in early spring

18 Obstructions

Windfalls	Creeks	Other
		✓

19 Description: bushes where trail is narrow do not cause a problem yet.

20 Signing

Trail Head	Direction	Distance	Difficulty Level
None	None	None	None

21 Description: arrows painted on trees mark start of trail from road - no signs on road showing way to lake.

22 Hazards Description: stubbed by bushes on trails - vehicles on road

23 Recommended [✓] Not Recommended [ ]

24 Reasons: Very nice downhill, trail is not steep and goes through nice timber. No impact to be inflicted on road. Trail is narrow, and if wet could become rutted in places.

25 Date: May 1/86

26 Technician(s): A. Duiner, D. Goldie

---

2 old road, wheelchair trail, self-guiding, horse, hiking, etc.	5 check one
7 steep pitches, long, continuous climbs, flat sections, etc.	
10 check one	11 washed out, signs of slumping, mass movement, water flow, etc.
12 check one	13 potholes, ruts (tire), bedrock, loose stones, loose gravel, compact, dirt, etc.
14 check one	15 how much, types, etc.
16 check one	17 variety, coarse fragments, etc.
18 check one	19 size, height, width, depth, rock, swamps, wet areas, etc.
20 fill in each good, fair, poor, none	
21 needed for all or some areas	
22 cliffs, foot or vehicle traffic, etc.	
23 check one	24 high/low impact on area with bicycle use, high/low demand, good/poor connections to other areas, unstable, needs rehabilitation, etc.

BICYCLE TRAIL ASSESSMENT

Park: Premier Lake

1 Trail Name: campground to north end Quartz Lk.

2 Type: vehicle access road

3 Length: 2.3 km 4 Time to Travel: 30 mins.

5 Slope

Steep	Moderate	Undulating	Flat
		✓	

6 Max Grade 25%

7 Remarks: only one short steep pitch

8 Trail Conditions

9 Width 3 m

10 Erosion

Badly	Moderate	Some	Not
		✓	

11 Description: vehicle damage on muddy road when wet

12 Surface

Rutted	Rocky	Rough	Fairly Smooth
✓			✓

13 Description: rutted in muddy when wet section. Rest is compact

14 Vegetation on Trail

Overgrown	Passable	Clear
		✓

15 Description: N/A

16 Soil Texture

Fine	Medium	Coarse
	✓	

17 Description: rocky sections

18 Obstructions

Windfalls	Creeks	Other

19 Description: N/A

20 Signing

Trail Head	Direction	Distance	Difficulty Level
none	none	none	none

21 Description: direction is clear. Signs removed for winter

22 Hazards Description: vehicles, pedestrion traffic

23 Recommended [✓] Not Recommended [ ]

24 Reasons: pleasant ride with easy hills to nice site. Faster access than by foot or vehicle. Have to be aware of traffic. No environment damage

25 Date: May 1, 1986

26 Technician(s): D. Goldie A. Duizer

---

2 old road, wheelchair trail, self-guiding, horse, hiking, etc.	5 check one
7 steep pitches, long, continuous climbs, flat sections, etc.	
10 check one	11 washed out, signs of slumping, mass movement, water flow, etc.
12 check one	13 potholes, ruts (tire), bedrock, loose stones, loose gravel, compact, dirt, etc.
14 check one	15 how much, types, etc.
16 check one	17 variety, coarse fragments, etc.
18 check one	19 size, height, width, depth, rock, swamps, wet areas, etc.
20 fill in each good, fair, poor, none	
21 needed for all or some areas	
22 cliffs, foot or vehicle traffic, etc.	
23 check one	24 high/low impact on area with bicycle use, high/low demand, good/poor connections to other areas, unstable, needs rehabilitation, etc.

APPENDIX VI

Trail Etiquette Guidelines

NATIONAL OFF-ROAD BICYCLE ASSOCIATION
2175 Holly Lane • Solvang, CA 93463
(805) 688-2325

OFF-ROAD CYCLISTS CODE

1. ALWAYS YIELD — even if at times it seems inconvenient. Being sensitive to how others perceive you will assure a positive image for your sport and minimize the restrictions that follow confrontations and negative encounters. Remember, bicycles in the back country are a new experience for horses and hikers. New trends are often resisted, so it's best to defer.

2. PASS WITH CARE — let others know of your presence well in advance. A greeting or simple handlebar chime will suffice. Being startled out of contemplative bliss by a quiet, whirring blur, will arouse the wrath of the most tolerant hiker. Be especially careful when passing a horse, as each will react differently. By asking the rider if his horse is easily spooked, you demonstrate that you have an awareness of the equestrian's needs, which generally causes the equestrian to regard you more like a peer and less like a rattlesnake. In some instances it may be necessary to dismount and lift your bike off the trail to let others pass.

3. STAY ON TRAILS — riding cross country damages meadows and other fragile ecosystems. Never cut switchbacks as this accelerates erosion. Be aware of the soil type you plan to ride on. If it is a clay soil wait three or four days after a rain before using that route—choose an alternate route, preferably one with a shale or decomposed granite surface.

4. CONTROL YOUR SPEED — safe speeds are relative to terrain and your experiences as a rider. Approach switchbacks and turns in anticipation of someone around the bend.

5. DON'T "RUN" LIVESTOCK — give them time to move away from your path. You've got time, enjoy yourself! Panicking animals deserves buckshot.

6. DON'T LITTER — pack out what you pack in. If you have room in your bags, pack out more than your share.

7. USE PERMITS — check with local authorities regarding fire permits and entry permits. More off-road needs will be addressed if our resource use is documented. Check with landowners regarding private land access. "No trespassing" often means please ask first.

8. PLAN AHEAD — the off-road bicycle will open new horizons to you. Some of these horizons should be approached with respect. If distances are involved, don't travel solo. Expect weather changes. Leave word where you plan to go and when you plan to return.

9. MINIMIZE IMPACTS — the practice of minimum impact camping is the philosophy of the responsible off-road cyclist. "Take only pictures, leave only waffle prints."

NATIONAL OFF-ROAD BICYCLE ASSOCIATION

2175 Holly Lane • Solvang, CA 93463
(805) 688-2325

Dear Bicycle Industry Member:

The **National Off-Road Bicycle Association (NORBA)** is an organization representing the needs and interests of off-road cycling enthusiasts and the bicycle industry.

Our primary goal is to maintain and expand the areas open to the pursuit of recreational off-road cycling. In 1983 several full line bicycle manufacturers predicted the "American Style" bicycle (ie: fat tires) would represent 40% of their sales in the coming three to five years. The market share for fat tire bicycles doubled in 1983 and 1984, with a repeat performance predicted in 1985 for a 13.5% market share. As increased product availability swells the ranks of our constituency, land closures and restrictions are inevitable (and indeed are presently occurring). This is due to competition for use of public land among various special interest recreation groups, as well as a lack of experience and information on the part of government land managers and planners. These closures are sure to have a negative impact on the "broad horizons" image that is a very important component of the appeal of the "American Style" bicycle whether or not the consumer intends to ride in the dirt or not. Your support through membership will enable the NORBA to continue to represent the interests of off-road bicycling enthusiasts to representatives of government agencies and the other recreation constituencies.

NORBA is also the National sanctioning body for off-road bicycle racing. In 1984 over 100 events were sanctioned coast to coast. NORBA supports the racing aspect of off-road cycling as a proving ground to develop continuing improvements in components and bicycle design, as well as to provide an opportunity to expose the sport to future enthusiasts.

If you feel as I do, that the renaissance of the "American Style" bicycle (by whatever name you give it: mountain bike, all-terrain bike, off-road bike, clunker, prairie bike, bayou bike, commuter bike, etc.) has the potential to broaden the base of the United States cycling community and to enhance or sustain the present industry sales projections through the 1980's, please accept this invitation to membership.

Membership for companies with gross annual sales under $500,000.00 is a minimum of $100.00.
Membership for companies with gross annual sales from $500,000.00 to $5,000,000.00 is a minimum of $250.00.**
Membership for companies with gross annual sales over $5,000,000.00 is a minimum of $500.00.**

Industry membership dues are for a 12 month membership.

Membership benefits include:
1. Prominent monthly listing in the Business and Industry Roster of the Association's newsletter.
2. 20% Discount when advertising in the Association newsletter.
3. Access to the Association's mailing list on a rental basis.
4. A handsome plaque to display your commitment to excellence in off-road cycling.
5. Membership in the only national off-road cycling organization.

**Designation of a voting delegate on the NORBA Advisory Committee.

A one time donation in excess of $1500.00 receives Life Membership status.

Please join us in shaping the future of this exciting new sport...

Glenn Odell
President

(DETACH HERE AND MAIL)

NATIONAL OFF-ROAD BICYCLE ASSOCIATION INDUSTRY MEMBERSHIP APPLICATION

Send to: **NORBA** • 2175 Holly Lane • Solvang, CA 93463 • Telephone (805) 688-2325

Please print legibly...

Industry Name: _____

Contact Person: _____

Mailing Address: _____ Phone #: ( ) _____-_____

City: _____ State: _____ Zip: _____

Enclosed $_____ Date: _____

APPENDIX VII

A Study on Mountain Bike Use

Riding Mountain National Park

Phil
Monty
Kirk

To: Ron Routledge
Wayne Stetski
Jim Cuthbert

Date: 86/03/10

Our File: 3-15-6-1

Re: Use of Mountain Bikes

I have attached a copy of a study done for Parks Canada on mountain bike use for your review. It would probably be worthwhile to share this information with regional planning and technical services staff.

Note especially comments on page 13. RM

-M. Zaskar

for John Block
Senior Operations Officer
Park Programs Branch

cc: B. Dalziel
: A. Campbell
: D. Moffatt
Att.

HJB/nl

cc. Districts (4).

A STUDY ON MOUNTAIN BIKE USE

on backcountry trails, their impact and future trends in Riding Mountain National Park.

Prepared for:

S.E. Langdon
Chief Visitor Services
R.M.N.P.

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SECTION I

i) Abstract

During the summer of 1985 the activity of mountain biking was researched and field observations made on the trail system of Riding Mountain National Park.

Theoretical research was supplemented by extensive field research, including hiking and riding most of the potential trails in R.M.N.P. There are 32 trails in the park, however, only 25 were considered and of these 22 were field tested. Seven of these were found to be suitable for use by mountain bike riders either for day or overnight use.

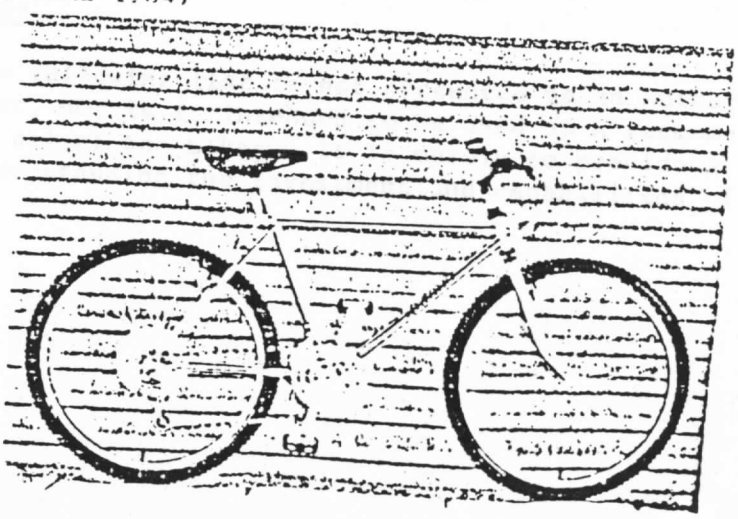
This report is the result of that research and covers areas such as the history of mountain biking, techniques, future trends, user conflicts and environmental impacts. The result is a document that will help park managers to better supervise and control the use of mountain bikers in Riding Mountain National Park.

The use of mountain bikes in the backcountry of national parks in Canada is increasing in popularity, particularly in western Canada.

ii) History of Mountain Biking

The activity of mountain biking dates back to the mid 1970's when the first mountain bikes were developed in Marin County, California. These first mountain bikes were originally modified one speed Schwinn Klunkers.

It was not until 1977 that the mountain bikes were starting to be refined, when cantilever brakes, a frame with 'relaxed' geometry, twin lateral reinforcing stays from the head tube to the rear drop outs (Figure 1). (Explore 17, Fall 1984)



There were other minor refinements of the bike as well, but the last major technological breakthrough came in 1979 when Araya and Ukai developed lightweight alluminum alloy rims. This development was closely followed by the introduction of 'snake-belly' tires by Cyclepro in 1980. The snake-belly tires had a size of 26 X 2.125 inches and were inflated to a pressure of 15 psi. The result of these two technological breakthroughs were improved handling and responsiveness of the mountain bikes.

Trail biking as an activity is a relatively recent phenomenon, having it's roots in California and then spreading to Canada in recent years. In Canada, most of the trail bicycling is occuring in the western provinces.

At the present time, trail bicycling is mainly a day use activity. In the future, as will be explained in the trends section of this report, this situation may have changed.

There are several different types of trail bicycling. These are:

1. Recreational touring - day and overnight trips taken by individuals and small groups in parks, recreational areas and other backcountry environments.
2. Organized trips - sponsored by clubs and outfitters. These are single to multiple day trips.
3. Competitions
4. Utilitarian - used in urban situations (activity profile)

Mountain or trail bicycling has the following appeal:

1. Quick access to backcountry and to special sites.
2. Opportunity to enjoy scenery.
3. Challenge of a risk activity.
4. Ability to travel on most terrains. (activity profile, --

iii) Price Ranges

(Note: The following list is not presented as an authoritative or complete list, nor is it intended to be used as a recommendation for any or all of the bikes. It is merely to provide a framework for understanding the investment and capabilities of the machine.)

For those people interested in acquiring a true mountain bike, prices start at $300 (1984) and up. This has been broken down into four price ranges. There are: $300 to $400, $400 to $500, $500 to $600, and $600 and up as taken from the October, 1984 issue of "Cyclist" magazine.

$300 to $400

This is the lowest price range for a true mountain bike, but it is also the most competitive.

The components that you can expect in this price range are as follows: some chromemoly tubing, at least in the three main tubes. All Japanese components including alloy hubs and rims and an alloy triple crankset. Suntour derailleurs, either AG, AG Tech or the more upside Mountech units, along with dia-compe cantilever brakes.

In this price range cyclist recommended the KHS "montana Pro" at $360.00 because it has sealed hubs and a sealed bottom bracket.

$400 to $500

Cyclist has picked the Diamond Back "mean streak" in this price range.

Some of the features include a sealed headset to go along with sealed hubs and bottom brackets, and Sun Tour Le Tech derailleurs.

Some of its other features include a steep head tube angle, long chainstay and a chromed chainstay protector. This bike is designed for middle skill-levels. The steep headtube angle and long chainstays combine to make it a stable bike.

$500 to $600

The Cannondale according to Cyclist* is a totally unique mountain bike. Some of the features that make it unique are as follows. The front wheel is a different size than the rear wheel, the front and rear brakes are of a different type and brand.

Some of the other specialized features include large diameter aluminum tubing, small chainring, specialized sealed hubs and padded Shimano shifters along with Sun Tour Le Tech derailleurs.

This bike does have a few problems, however. The two major problems with the bike according to Cyclist (October, 1984) magazine are that the wheel tries to flop from side to side on descents and that the bike has braking problems going downhills.

* A trade magazine.

$600 and up

Mountain Bikes "Montares"

This bike has short, stiff chainstages, only one-half an inch longer than the Cannondale's. Also the angle of the seat tube is such that the saddle is closer to the rear axle. Some of the other features

include a Shimano biopace chainrings and Shimano Dlore XT cantilever brakes.

iv) Mountain Biking Techniques

Mountain biking backcountry trails will become a lot easier if you know the following techniques for hill climbing and descents.

Hill Climbing:

On hills with a gentle slope and relatively smooth surface, you can and should sit on the back of your seat and spin up in a low gear, just as you do on a road bike (Bicycling, May, 1984, 24).

To scale more difficult hills the cyclist must stand up and pedal. This is achieved by shifting your body weight back on to the rear wheel, and as a result getting better traction and by changing the centre of gravity.

The correct way to stand is to simply bend arms at the elbows and lower your head, keeping your face roughly over the stem (Olsen, May, 1984, 24).

While climbing a hill it is adviseable to forget about steering with the handlbars, but instead to steer the bike by shifting your shoulders from side to side. The stability of mountain bikes is such that the front wheel will naturally follow the direction in which you have moved your shoulders. This method of steering will work on any sort of rough terrain.

Descent Technique

There are two major descent situations which may be encountered while mountain biking a trail. These are the short vertical (boulders, logs) and the long, sustained, steady state descents. It is the steady state descents that will be encountered most frequently along the trail. For each type of descent a different technique is needed.

For a steady state descent, good brakes are necessary, along with the ability to put your weight back and down.

Most of the good all terrain bike cantilever brakes will be able to handle most dry descents.

There are two factors which help to determine proper weight distribution. These factors are:

1. Selecting the proper frame size, and
2. Making good use of the quick release seatpost.

It is recommended that when mountain biking on difficult terrain to have the seat down as far as it will go.

The safest and best way to descend a hill is to maintain as low a speed as possible, since it may not be possible to slow down once the bike has started to pick up momentum.

On steep descents the majority of weight should be on the front wheel, while all braking is done by the front wheel. In this situation the back wheel is used mainly for steering and balance.

On a descent of any sort, steering should never be done by turning the front wheel. Instead steering should be done by shifting your weight and by pushing the back end of the bike around with your feet and your knees which are resting against the sides of the saddles. (Bicycling, May, 1984, 118).

v) Safety

A major area of concern with regards to mountain biking in this backcountry is that of public safety.

This could pose a problem if a cyclist was only prepared for day use and a mechanical breakdown in the backcountry. This could result in the cyclist having to spend the night in the bush when they are totally unprepared for it.

Other hazards that can not be ignored are those resulting from wildlife encounters, especially bear encounters.

At the present time there is no information available on mountain bike/bear encounters and as such this situation should be carefully monitored. The chances of such encounters should be taken into consideration in the future when preparing to open up new trails.

The following is a list of safety concerns that are associated with trail bicycling.

1. Possibility of accidents or breakdowns far from help.
2. Cyclists not being prepared for unexpected overnight trips (food, clothing, shelter, increased chance of hyporthermia).
3. Chance of sudden encounters with bears.
4. Possibility that horses met along a trail will be spooked.
5. Conflict with hikers.

(activity profile, 11)

Before cyclists are allowed into the backcountry, they should be made aware of the eventualities that may occur and instructed in such a way that they can reduce the chances of something happening. For example, suggesting that a spare tire, tool kit, patch kit and first aid kit be taken with them. It a breakdown does occur they have the means of fixing it with them.

When designating trails for mountain bike use, the criteria that is used should include consideration of the environmental impacts, social carrying capacity, public safety and aesthetics. (Trail Bicycling in National Parks, 6)

Another factor that should be taken into consideration when designating trails for mountain bike use is the percent of slope or grade. This is extremely important since on a perfectly smooth surface a mountain bike can only manage a slope of maximum of 20%. On rough terrain this figure drops to 15% as a maximum grade that a mountain bike will be able to manage (Explore 17, July/August, 1984) due to obstacles in the trail surface such as rocks and ruts.

Horse trails should be avoided at all costs as erosion down to root level is common and the ride is extremely bumpy. The erosion is caused by horses' hooves gouging up the trail and exposing the trail surface to the elements.

In Riding Mountain the Clear Lake trail is an example of a trail that should be avoided as a mountain bike trail due to horse use and other factors.

Other ways to improve the safety of the trail is to have loop trails or one way trails, put signs up telling cyclists when they approach a steep hill or turn. By doing this it would give the cyclist a chance to slow down going around a turn and lessen the chances of an accident.

vi) Future Trends

The market trends for trail bicycling is uncertain and will need to be monitored to determine trends in use. (Trail Bicycling in National Parks, 7). In Manitoba at the present time, bicycle shops are seeing an increase in sales over last year of mountain bikes. At one bicycle shop during 1984 sales of mountain bikes were 6% of total sales. Up to June 21, 1985 mountain bike sales had increased dramatically to 20% or 1/5 of the total sales. The owner of the bicycle shop, expects the trend in sales of mountain bikes to continue to increase.

The trend in Manitoba is confirmed by the situation in Banff. At one of the bike shops there, sales of mountain bikes were 75% of the total sales.

As the activity spreads eastward across Canada the popularity of mountain biking can be expected to increase dramatically. While there is a wide variety of people buying mountain bikes they are at the present time being mainly used in the cities.

The first people to buy mountain bikes were those people with cottages and those people who lived in the country.

It can be expected that those people with cottages and who own mountain bikes would make use of mountain bike trails. Especially since there are very few places where a person can ride a bike in and around the townsite.

However, at the present time, it appears that overnight travel on trail bicycles will be unpopular for all but the most avid cyclist. (Trail Bicycling in National Parks, 4). This situation may change as people become aware of the facilities that Riding Mountain offers in the form of bike trails. This would occur through a dissemination of information about mountain bike trails in the park.

It is reasonable to expect, that the maximum distance someone would be willing to travel to enjoy a backcountry experience would fall within a 200 mile radius centered on Wasagaming. (personal opinion). This radius would include most major population centres in Manitoba and some in Saskatchewan. As a general rule people do not travel long distances to participate in mountain biking. This may change as the popularity of the activity rises and reputations of specific sites, trails and events become more widespread. (activity profile, 3)

If this situation does occur it may be necessary to consider opening up some of the old fireroads as mountain bike trails, providing that the demand for such trails is there.

The amount of use of the trails will have to be carefully monitored to determine what impacts there are on the trail, number of users and trends.

The facilities necessary for the parking of vehicles and trailers used to transport the mountain bikes will add to the space required. These will probably be new park users therefore a slight increase in demand for parking space can be anticipated at the trailheads.

vii) Monitoring

The system that would be set up would have to do the following:

1. control the number of mountain bikers on each trail through a registration system.
2. monitor the environmental impact caused by mountain bikes through visual observation and through actual measurements.
3. monitor user conflicts
4. monitor the present condition of trails so any problems areas, such as windfall on trail, can be taken care of immediately
5. monitor the trends of use.

All of these five points are important in determining trail usage not only by mountain bikes but also by hikers and horsepackers. Public safety should be one of the primary concerns of the park where multiple use trails are involved.

viii) Outfitting

Mountain bike outfitting is a factor of mountain bike use in R.M.N.P. that should be carefully considered before any permanent decisions are made about it. At the present time mountain bike outfitting is non-existent in Riding Mountain. Once some of the trails are opened up to mountain bikes it can well be expected that there will be pressure put on the park to allow this sort of activity to take place. If as expected this pressure does come to bear on the park, it would be advisable to limit mountain bike outfitting as it would be difficult to control otherwise. For those

people who would want to guide groups of mountain bikers into the back-country they should be made to have certain qualifications. These qualifications should be that they are able to maintain the bike, have at least standard St. John's ambulance first aid, know CPR, have some survival skills and be able to pass a practical test on all of the above areas before they are considered a qualified guide. While this may seem to be rather harsh, it is absolute necessity that the guide knows what they are doing in the bush. The speed and instability of the machine significantly increase the potential for accidents. It will also make sure that the guide knows what to do in an unexpected situation.

It may also be necessary in the near future to add a "Bike Guide" to the National Parks' regulations showing only mountain bike trails.

SECTION II

i) User Conflicts

A way in which user conflict can be reduced is by providing needed information at the regional and site level to the trail bicyclist.

This should include information on acessible trails including the location of facilities, state of the trail, possible hazards, total distance, branch trails, rules or regulations governing the use of the trails, etc. (activity profile, 8).

The majority of this information is already available from the Information Centre for the asking but should be made available on a much wider basis.

There are those poeple who argue that a high-speed mechanical device, such as a mountain bike, may be an unwelcome and unacceptable intrusion into the backcountry where traditionally it is explored at a slow, relaxed pace. Another part of their argument is that the opening of trails to mountain bikes would trigger severe erosion problems.

This is not necessarily the case with some of the trails in Riding Mountain. Trails that have a hardpacked surface and were once access roads or old fireroads are in many cases ideal for mountain bike trails as the major environmental impact had already occured when the trails were originally contructed.

"Anti-bikers" also argue that simply allowing bicylists and hikers to share to the same narrow paths with blind curves is asking for trouble. (Backpacker, July, 1984, 33).

In the case of Riding Mountain the narrower trails are not suitable for mountain biking for other reasons as well, so there will be little conflict in this area.

The opposite side of the argument, that of the backcountry cyclist, is that cycling compliments hiking and horseback riding. They argue that the bikes smooth over the ruts that are left by the horses which in turn is suppose to make it more comfortable for hikers.

This is not necessarily the case, since mountain bikes often make the situation worse by creating a linear track in the already damaged trail, which when filled with water will contribute towards soil erosion and make

trail conditions worse. Once the process of soil erosion has started it becomes difficult and expensive to upgrade the trails that are affected.

User conflicts could potentially occur between bicycles and horses and bicycles and hikers. (Trail Bicycling in National Parks,).

This would especially occur on areas of trail where the visibility is limited. Since mountain bikes are relatively silent and quick and could startle other users or result in an accident. It is this type of situation that the park should try to avoid. Another type of conflict that could occur in the backcountry is a chance encounter between bikers and wildlife, more specifically bears. There is at present no data to indicate how a bear would react but it would be assumed that they would probably be startled.

It has been suggested that when a conflict situation does arise that the traditional use be given priority. In such cases it would be up to the park staff to assess the situation and take action on an individual basis as all situations will not be the same. For example, you might have a ratio of bike users to hikers to horseback riders, or you might allow only 2 of 3 users on the trail at any one time.

ii) Environmental Impact

The environmental impact from mountain bike use would vary from minor to severe depending upon the conditions of the trails at that time.

The following potential forms of environmental impact were identified:

1. Trail degradation caused by cyclists on steep grades, wet terrain, sensitive areas, and currently eroded trails. Also note that use of trail bicycles in the off-season (spring, fall and winter) may lead to increased trail degradation.
2. Off-trail degradation resulting from cyclists straying from the trail.
3. protection of wildlife, particularily bears
4. increased impact to remote wilderness areas due to increased accessibility. The problem may be aggravated where bicycles provide access to areas where there currently exists no trails.
5. campsite degradation associated with wilderness camping for those who engage in overnight or multiple day trips. (Trail Bicycling in National Parks, 2)

It should be noted that the addition of mountain bikes to the backcountry may result in putting additional pressure on not only the trails but the campsites as well. The affect that this pressure will have is hard to predict. It may well be that the effect on the environment is minimal, but until the situation is monitored and the data collected analized it is hard to predict what will occur.

The environmental impact from mountain biking is minimized when trail conditions are dry. The reason for this is that the tires of the mountain bikes will not create ruts in the trail in dry conditions. Under wet conditions there is a greater possibility of erosion occuring, since a wheeled vehicle on a wet trail creates a linear track that carries water, over time the trail starts carrying water instead of shedding it, creates erosion problems. Where the erosion problems will be the most severe is on steep bare slopes. Mountain biking in such a situation increases the rate of erosion dramatically. If the trail gets in this condition through mountain biking or other uses it would be advisable to close the trail down completely to give it a chance to recover naturally.

Any trail that has a clay or any other fine textured soil surface will be subject to erosion more readily than coarser soils. Some examples of this type of soil in Riding Mountain occur in the Crawford Creek area, Ochre River trail and the Scott Creek trail.

Mucking is an affect that is caused when a badly rutted trail is saturated with water. Mucking which is caused primarily by hiking and horse use, results in increased deterioration of the trail. (Environmental Screening, 7). This will occur during wet periods in areas with very little slope and that have fine textured soils. A second effect of mucking is the widening of trails by hikers avoiding wet areas. This not only will widen the trail, but it will also result in considerable damage to the adjacent vegetation. Other areas that are susceptible to mucking and should be avoided are those areas with poor drainage, fine textured glacial till, seepage, heavy shade and dense vegetation. (Environmental Sceening, 8).

Another concern is the effect that mountain bikes will have on wildlife. It has been suggested that they may affect feeding or migration patterns of the elk and deer. At the present time there is little evidence to suggest that mountain bikes would be any more detrimental or aggravating than the presence of backpackers and horses. This type of situation may

have to be monitored by park staff, if there is sufficient reason to believe that the elk and deer are affected by the presence of mountain bikes in the backcountry.

There may be some concern about the off trail use of mountain bikes and the associated environmental impacts. However, this should not be a problem since the terrain and vegetation types present are not condusive to off trail bicycling.

iii) Current Policy

In 1982, Parks Canada's policy towards mountain bikes was one of 'wait and see'. Today with the increasing trend towards mountain bikes, this type of policy is no longer sufficient.

The policy that the western regional office has put in place has determined that trail bicycling is an appropriate activity in National Parks, given the following terms and conditions:

1. Opportunities for the public to appreciate a "wilderness experience" are not compromised
2. Given that the activity provides opportunities for the public to experience, understand and appreciate the resources in a national park, the activity be allowed on designated trails (Western Region Directive, May 15, 1985, 1).
   As part of Parks Canada's policy, an information program was set up and targeted at mountain bikers. This was done in complete cooperation with the CCA, cycling clubs, bicycle retailers, and rental outlets. The information program that was set up deals with the following:
   a) location and nature of designated trails
   b) trail etiquette and the responsibilities of trail bicyclists
   c) safety precautions and backcountry travel
   (Western Region Directive, May 15, 1985, p. 3-4).

iv) Field Observations

The suitability of the trails for mountain biking was determined by visual observation of both the day use and overnight use trails. Each of the trails were evaluated on the basis of soil surface types, vegetation, trail damage, length of the trail. Other factors were taken into consideration when the trails were being evaluated but are not considered as

important as the factors listed above. For example, it was noted whether or not a trail was rutted due to horse use or vehicle use as in the case of the Grey Owl Trail. If a trail was badly rutted it was noted whether it was a recent development or had occured years before and had stabilized and become revegetated. If the area that was rutted was stabilized and had a coarse textured soil type it was considered as a possible mountain bike trail. In the case of fine textured soil surfaces, mountain biking was not considered to be an appropriate activity for that area as fine textured soils are highly erodable.

It was on this basis that the recommendations for each trail and its use were based.

SECTION III

TRAIL ASSESSMENT

A. Not Recommended

1. Lakeshore - It is a paved trail designated for the handicapped and the result of allowing bikes of any sort on this trail would be to create a great deal of conflict. It is also one of the few trails that are available to the handicapped in the park.

2. Clear Lake - The north shore part of the trail is very narrow, badly rutted due to horse use, flooded in sections and in generally bad condition. Mountain biking would only add to the problems already there and would also increase the rate of erosion.

3. Arrowhead - Is in excellent condition and could support the activity with minimal impact but should remain as a self-guiding trail. It is also too short for a proper mountain bike trail.

4. Brûlé - should remain as a self-guided trail.

5. Grey Owl - This trail is in bad shape and can not support biking of any sort any longer. It is very badly rutted in places from vehicle use, there is frequent flooding of the trail due to heavier activity and the nearness of swamps and is badly eroded in some sections. For these reasons mountain biking should not be allowed on the Grey Owl trail.

6. Gorge Creek - This trail should remain as it is for several reasons:
   1) The trail is narrow and composed of fine textured soils
   2) The trail runs close to the edge of a cliff in places
   3) It is too dangerous for mountain biking

7. Moon Lake - This trail is in bad condition in several areas due to flooding and ruts. The trail is also extremely narrow in places. As bears are mostly concentrated in the east end of the park, bears in my opinion may be encountered on this trail.

8. South Escarpment - The trail from four corners to the Muskrat Lake campsite needs extensive rehabilitation and in no way be able to support mountain biking. Further down the trail there are several branch trails that make the trail confusing. The soil is also composed of fine textured soils as a result easily erodable.

9. Muskrat Lake - While Muskrat Lake can support the activity with minimum impact it is too short to be viable as a mountain bike trail.

10. North Escarpment - Mountain biking is only possible on the limited access road up to east Deep Lake. The remainder of the trail is not suitable for mountain bikes as the slopes are steep and the trail becomes very narrow. As well the trail surface is composed of fine textured soils.

11. Ochre River - For several reasons this trail is unsuitable for mountain biking.

    1) trail composed of fine textured soils, easily eroded
    2) trail crosses creeks knee deep in four places
    3) slopes are too steep for mountain biking
    4) area has not stabilized after the initial construction (see Diane Kunec's report for details)

12. Crawford Creek - This trail is unsuitable for mountain biking for the following reasons:

    1) fine textured soil surface
    2) trail overgrown and hard to distinguish
    3) trail flooded in some sections
    4) steep slopes too great for a mountain bike to manage
    5) too narrow to be viable as a mountain bike trail

13. Cowan Lake - As Cowan Lake is a side trail off of the Grey Owl trail it would not be feasible to make it a mountain bike trail as the Grey Owl trail is in such poor condition. The Cowan Lake trail is in good overall condition.

14. Tilson Lake - Unsuitable for the following reasons:

    1) trail surface composed of fine textured soils
    2) badly eroded slopes
    3) badly eroded trail in other places due to flooding
    4) trail surface bare of vegetation
    5) some slopes too steep for mountain biking

    (For more details, refer to Diane Kunec's report.)

B. Recommended

1. Strathclair - This trail is in very good condition and could support mountain biking with minimal impact.

2. Central - This trail is long enough and is in good enough condition to support mountain biking with minimal impact.

3. Baldy Lake - Though the trail is rutted from vehicle use in places which makes cycling difficult, the trail could support mountain biking with minimal impact.

4. Sugarloaf - This trail is in good to very good condition and is ideal for mountain biking as it connects with Central Trail which allows access to other trails.

5. Long Lake - This trail is in generally good condition, although beaver activity has flooded the trail in one small section.

C. Potential Mountain Bike Trails

1. Grasshopper Valley - This trail is a groomed, cut trail that is in very good shape. If there is sufficient demand to justify it this trail could be opened up as a mountain bike trail.

2. Birdtail - This trail is also bikeable, though there are some areas where bikes would have to be pushed up hills. Should be left as is for now.

ii) Other Recommendations

1. If there is sufficient demand, some of the old fireroads and fireguards could be opened up as strictly mountain bike trails.

2. That mountain biking should be allowed on the recommeded trails on a 2 year experimental basis over which time use, trends, user conflicts,

and environmental impact should be monitored.

3. That an information program be set up in cooperation with interested groups.

   This program should deal with:

   1) location and nature of the designated trails
   2) trail etiquette and the responsibilities of trail cyclists
   3) safety precautions and backcountry travel
   4) create an awareness about the environment

4. That those mountain bikers planning overnight or multiple day trips register out at the Information Centre before entering the backcountry.

5. That outfitting be limited and only allowed on a trial basis until the effects of mountain bikes on the environment can be properly assessed.

6. That there be set rules and regulations for mountain bike use in the Park.

7. That the Grey Owl Trail be turned into a hiking trail only.

8. That all other trails listed in the trail guide remain the same.

iii) Conclusion

It has been determined that mountain biking is an appropriate activity for National Parks. However, this type of activity will have to be carefully monitored as it is a relatively recent occurence in western Canada. This report provides the means for setting up such a monitoring system to control mountain biking in Riding Mountain and also provide information on future trends of the activity.

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APPENDIX VIII

Brochures

re. Mountain Bicycling

Parks Canada Parcs Canada

Trail Bicycling Areas

Photo Credit: Don Hollingshead

Cycling on trails in Canada's national parks is in acceptable activity that Parks Canada welcomes and endorses. Parks managers hope you have a great time doing it. But national parks are special places and they need special care, because of the heavy wear and tear imposed on them by visitors who love them.

We would commend these following pointers to all cyclists using the trails, which have multi-purpose users, including horses and hikers.

Please:

Stay on the trails – riding off them causes environmental damage and it is illegal as well.

Pass those travelling more slowly with care.

Let others know you are coming by; signal in advance, either by voice (say hello to your fellow trail user) or use handle bar chimes. Scaring the wits out of fellow trail users with a silent approach from behind merits retribution.

Control your speed according to the bike, the terrain and your experience.

Don't give the animals a bad time; they don't deserve it. Give them time to move off the trail. Bears don't put up with anybody's nonsense, so be careful of them. Travelling with a partner is always a good idea in this country.

Keep the trail clean please, keep your garbage to yourself.

It is a good idea to check trail conditions, potential hazards, closures, weather forecasts, campsite locations and on the permits required for overnight travel. All this information may be obtained from park warden offices.

Have a good time and watch how you go.

Trail Bicycling Areas 1985

Banff National Park:

Sundance Road
Spray Fireroad to Spray Reservoir
Goat Creek Trail
Redearth to Egypt Lake via Pharaoh Creek
Bryant Creek Trail to Assiniboine Pass
Brewster Creek to Bryant Creek
Lake Minnewanka Trail to Devil's Gap
Cascade Fireroad to Stoney Creek
Skoki, Red Deer Lakes and Pipestone
Forty Mile Creek, Elk Lake summit to Stoney Creek
Trails in the immediate townsite vicinity

Jasper National Park

With the exception of the Skyline Trail, Tonquin Trail and Lake Annette Trail, all trails in this park may be used by trail bicycles.

Kootenay National Park

East Kootenay Fireroad from the Concorps Camp to Hector Gorge on Highway 93

West Kootenay Fireroad from Crook's Meadows to the Kootenay Crossing Warden Station (Dolly Varden Fireroad) to the park boundary

Yoho National Park

Kicking Horse/Van Horne Fireroad
Amiskwi Fireroad to Amiskwi III Campsite
Ottertail Trail
Ice River Trail

Waterton Lakes National Park

Snowshoe Trail from Red Rock Canyon to Snowshoe Cabin
Akamina Pass Trail
Park Line Trail from Bison Paddock along the park boundary to the Oil Basin Warden Cabin.

Bicycles are not allowed on trails in Elk Island, Pacific Rim, Mt. Revelstoke or Glacier national parks.

Published by authority of
the Minister of the Environment
Minister of Supply and
Services Canada 1985
QS-W190-000-BB-A1

Canada

Sentiers pour la bicyclette de montagne 1985

Parc national Banff

Route Sundance
Route coupe-feu Spray jusqu'au réservoir Spray
Sentier du ruisseau Goat
Redearth jusqu'au lac Egypt par le ruisseau Pharaoh
Sentier du ruisseau Bryant jusqu'au col Assiniboine
Ruisseau Brewster jusqu'au ruisseau Bryant
Sentier du lac Minnewanka jusqu'au Devil's Gap
Route coupe-feu Cascade jusqu'au ruisseau Stoney
Skoki, Pipestone et des lacs Red Deer
Ruisseau Forty Mile, sommet du lac Elk jusqu'au ruisseau Stoney
Sentiers dans les environs immédiats de Banff

Parc national Jasper

Tous les sentiers peuvent être utilisés à l'exception de Skyline, Tonquin et de celui du lac Annette.

Parc national Kootenay

Route coupe-feu East Kootenay du camp Concorps jusqu'à la gorge Hector sur la route 93

Route coupe-feu West Kootenay des prés Crook's jusqu'au poste des gardes de Kootenay Crossing (route Dolly Varden) et à la limite du parc.

Parc national Yoho

Kicking Horse/route coupe-feu Van Horne
Route coupe-feu Amiskwi jusqu'à l'emplacement Amiskwi III
Sentier Ottertail
Sentier de la rivière Ice

Parc national des lac Waterton

Sentier Snowshoe du canyon Red Rock jusqu'à la cabine Snowshoe
Sentier du col Akamina
Sentier Park Line de l'enclos des bisons le long de la limite du parc jusqu'à la cabine des gardes Oil Basin

Les bicyclettes ne sont pas admises sur les sentiers dans les parcs nationaux Elk Island, Pacific Rim, Glacier et du mont Revelstoke.

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Ministre des Approvisionnements
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QS-W190-000-BB-A1

Canada

Mountain Bicycling

Photo by David Ross

A guide to safety in British Columbia

INTRODUCTION

This is a mountain bike safety guide intended to inform you of the basic knowledge you should have before going into the wilderness on bicycle trips. This brochure is intended for use by people who will be using established trail systems. For those unfamiliar with wilderness bicycling, it is advised that they first gain experience on local bicycle trails.

EQUIPMENT

The choice of equipment should not be dependent on price, but on safety features and personal experience. Maintenance is just as important as quality. Keeping your bicycle in good condition plays an important role in enhancing the recreational experience. Knowing how to make simple repairs on your bicycle before you leave on a trip will help you avoid the chances of an emergency situation.

Before you leave on a trip it is always best to do a quick bike check. This will cover: tires, brake and gear cables, brake pads, and all structural bolts, ensuring that everything is working well. It is also recommended that you carry the following items on your bike or in your pack.

- -T-shirt
- -Sunglasses
- -Gloves
- -Extra socks
- -Windproof jacket
- -Rain gear
- -Head cover (sun hat or toque)
- -Water bottle
- -Food for the day & extra for unexpected delays
- -Waterproof matches, candle, & firestarter
- -Knife
- -Map and compass (make sure you know how to use these two items)
- -Sun cream
- -First aid kit (learn how to use it)
- -Whistle
- -Survival kit
- -Insect repellent
- -Flashlight or headlamp
- -Repair kit which should contain the following items: spare tube, patch kit, chain breaker, tire levers, allen keys, wrenches, tire pump, and a screwdriver (multihead)

Note:

You should assess each trip and determine which of the above equipment is necessary to have in your pack. For a short ride in an area close to your home or camp, not all of this equipment is needed.

TRAIL AND ROAD SENSE

The first and most important rule is to obey all traffic signs, signals, and markings. Ride in single file, looking ahead, and keeping well to the right, looking both ways before moving off, turning or stopping. Give way to pedestrians at authorized crossings. Look behind and in front before you pull out to pass a stationary object to make sure the road is clear. Clearly signal to someone that you are about to pass or overtake them. On steep or treacherous terrain push of carry your bike.

SURVIVAL

If you get lost or injured, do not panic!

-Stop, count to ten and then make a decision to go or stay

-If you decide to go on, ride slowly

-Move toward a definite objective

-Use creeks as direction indicators, but avoid travelling in the creek bed as they often lead into canyons

-If you must leave your bicycle, make your walking path obvious to searchers

-If you stay make use of natural shelters such as hollows around tree trunks and under logs

HYPERTHERMIA (HEAT STROKE)

What is it?

A raising of the body core temprature. Your normal body temperature is 37.4°C (98.6°F). An increase of only 5° is serious. Few people whose body temperature goes above 41°C (106°F) survive without immediate treatment.

How does it happen?

The air is drier and the sun hotter the higher you go. You can lose up to 20 pints a day just from sweating and breathing. When you sweat you lose salt which must be replaced.

What are the symptoms?

A hot, dry, red face, dizziness, headache, muscle cramps and high body temperature.

What can I do?

Treat immediately. Cool the body, using cold water, snow, shade, fanning, cold salty drinks and rest. Unconsciousness, delirium or convulsions are symptoms of more serious heatstroke; rapid cooling and medical assistance are usually essential to recovery.

HYPOTHERMIA

What is it?
A lowering of the body core temperature. Your normal body temperature is 37.4°C (98.6°F). A drop of only 5 degrees is very serious. Few people whose body temperature drops below 31°C (88°F) survive. Hypothermia can occur in an air temperature as high as 5°C (41°F).

How does it happen?
Being cold and wet and exhausted all contribute. Many people have died of hypothermia because they thought they could keep warm by moving and not stopping to take the necessary precautions; such as adding a sweater or putting on raingear.

What are the symptoms?
EARLY — shivering; continued shivering means continued deterioration.
SERIOUS SYMPTOMS — slurred speech, impaired judgement, weakness, loss of coordination.
FINAL SYMPTOMS — unconsciousness.

What should be done?
Dismount in a sheltered area and remove horse to a safe distance. Get the victim into warm clothes. Make him rest. Give him warm drinks (alcohol should be avoided). If his condition is very serious, put him in a dry sleeping bag making skin to skin contact with another person. Make a fire. Put up a tent or make a shelter for the victim. As soon as the patient is able, evacuate him to a hospital for further treatment. Never think that you can continue your trip after one of your party has had hypothermia — go home and recover and return another time.

REMEMBER, WARMTH IS IMPORTANT TO YOUR SURVIVAL. HIGH RATES OF HEAT LOSS OCCUR TO THE HEAD, (up to 60%), SIDES OF THE CHEST AND THE GROIN REGION. WEAR A HAT TO CONSERVE BODY HEAT. YOU LOSE HEAT IN THREE MAIN WAYS:
CONDUCTION — HEAT LOSS TO THE COLD GROUND
CONVECTION — HEAT LOSS TO MOVING AIR
RADIATION — HEAT LOSS TO THE ATMOSPHERE

IF CONDITIONS ARE BAD, KEEP TALKING TO OTHER RIDERS TO OBERVE IF SYMPTOMS OCCUR.

TRAIL COURTESY AND ETHICS

-Stay on the trails - riding off them causes environmental damage and is illegal
-Pass those travelling more slowly with care
-Let others know you are coming by signalling in advance, either by voice or handle bar chimes. Scaring fellow trail users with a silent approach from behind shows a lack of courtesy
-Control your speed according to the bike, the terrain, and your experience
-Don't give animals a bad time; they don't deserve it. Give them time to move off the trail. Bears are unpredictable, please be careful
-Travelling with a partner is always a good idea
-Keep the trail clean please, keep your garbage to yourself
-It is a good idea to chech trail conditions with Park Rangers before you start on it

REMEMBER THE WILDERNESS CODE
IF YOU PACK IT IN
YOU PACK IT OUT

There are many areas in the province which allow bicycles to use trails and access roads, but not all trails and roads are open to bike use. The best rule to use when cycling in a nnew area is to "know before you go." Regional and District offices of the B.C. Ministry of Forests and the Parks and Outdoor Recreation Division of the Ministry of Lands, Parks, and Housing will be pleased to inform you of the areas that are open.

Useful Phone Numbers

Recorded weather information:	
Vancouver	273-2373
Victoria	656-3978
Kamloops	376-3044
General weather information (Vancouver) (or consult your local weather office)	273-2345
Outdoor Recreation Council of B.C.	687-3333
Forest Fires:	Dial '0' ask for Zenith 5555

Remember:
take nothing but photographs,
leave nothing but tire tracks

NEVER GO OUT ALONE AND ALWAYS LEAVE WORD OF WHERE YOU ARE GOING AND WHEN YOU PLAN TO RETURN.

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ANNOTATED BIBLIOGRAPHY

District Managers, B.C. Provincial Parks. Mountain bikes in Provincial Parks. Recommended guidelines for 1986.

A committee was formed to produce interim guidelines to manage mountain bike activity.

Environment Canada, Parks Canada. 1985. In trust for tomorrow. A management framework for four mountain parks. 1985.

Block Statement B
Trail bicycling will be permitted on designated trails to an extent and level in each park that will be decided in the individual park management planning process.

Environment Canada, Parks Canada. 1985. Western region directive-trail bicycling (non-motorized). Number WRD-61. May 15, 1985.

Following Parks Canada Policy that trail bicycling is an appropriate recreational activity in National Parks, a number of guidelines were made up.

Fat Tire Flyer. May/June, 4(3); Sept/Oct, 4(5); Nov/Dec, 4(6); 1984 Feb/Mar, 5(1); Apr/May, 5(2); 1985.

This bi-monthly magazine is put out by people who ride all-terrain bicycles. It is timely, informative, and aware of the things that you want to know, and the issues facing all-terrain cycling. The use of all-terrain bicycles in U.S. Wilderness Areas. Trail etuquette guidelines.

Hillsbery, Kief. 1985. Riding high. Backpacker, July 1985.

Article dealing with the use of mountain bikes with U.S.

Wilderness Areas, damage to trails that can occur, and why or why not bikes are a part of the wilderness experience.

Parks Canada, 1985. Public response report, Planning scenario (draft). The four mountain parks planning program. October, 1985.

Three levels of feedback: Support/Conditional,
Support/Unconditional
Non-support/Unconditional

Spence, Stewart, 1985. A study on mountain bike use on backcountry trails, their impact and future trends in Riding Mountain National Park.

A report that is the result of theoretical and field research in R.M.N.P. to determine what trails are suitable for mountain biking including user conflicts and environmental impacts. A document that will help managers to better supervise and control the use of mountain bikes in R.M.N.P.

Work Diary | Wasa District Headquarters
WR 280 Practicum

April 28, 1986 Leave Robson, BC 11:00 am. in 1976 Datsun p/u, Licence # MTC 771, driven by Shannon Sonmor. Leave Castlegar, after various stops, at 12:00 noon.
Arrive Wasa, BC via Hwy 3 & 3A.
Met Mike Daigle and Andrew Daizer at Wasa Pub. at 4:40 (1 hr time change zone)
Windy, snowing, sunshine, rain.
Obtained accommodation at Wasa Lake Resort
David Coldie

April 29. 08:00 - Arrive at Wasa District Office with A. Daizer - clear & windy

08:30 - briefing with Ron Quilter & Dennis Herman

09:30 - reorganized map cabinets

12:00 - Lunch
David Coldie

12:30 - continue with map work.

2:30 - key for map cases - make up.

3:30 - completed for day
David Coldie

April 30 08:00 - arrive at office - partly cloudy & windy
08:15 - look up map for Premier Lake, 1:50000
- check in files for " " info.
- look up air photos
- preliminary brochure make-up - v. general.

12:00 - lunch
Dave Coldie

12:30 – brochure layout
– more air photo searches

3:30 – end

David Goldie

May 1, 1986

08:00 – Arrive At work. Cloudy
–prepare At field day at Premier Lake.

08:30 – Depart for Premier Lake Provincial Park in Gov't truck, driven by Shirley Johnson, with Andrew Paizer. Becoming sunnier.

Equipment – personal, Suunto clinometer, compass, 20m tape

Ride trails to Yankee & Canuck Lakes, and Cat's Eye Lake. Completely sunny.

12:00 Back to Premier Lk for lunch with Shirley.

David Goldie

12:45 Start up old Wolf Creek road travelling south to get to South end of Quartz Lk.

3:00 Back down road & check out access road to north end of Quartz Lk.

4:00 Back to Premier Lk. campground to meet Shirley for ride home.

David Goldie

May 2.

08:00 – Arrive at District Office, Cloudy

08:10 – Start on trail assessment form.

09:45 Start typing assessment form
11:20 Form completed.
Fill out details

12:00 Lunch
David Goldie

12:30 Fillout assessment forms

2:00 Calls to other Prov. park offices.

3:30 End David Goldie

May 5

08:00 Make changes on trail assessment form. - Sunny.
08:45 Form redo completed
-re fillout.

10:15 Forms completed.

10:45 Draft viewpoint constructions for Ron.

12:00 Lunch.

David Goldie

12:30 Spoke to Manning Pk. re. mtn. bikers
12:45 Continue with drafting of viewpoint plans.
3:22 Clean-up
3:30 End
David Goldie

May 6.

08:00 Arrive - read directive re mtn bikes for western Region - Parks Canada. Sunny.

08:15 Start on Annotated bibliography for final report

09:45 Prepare outline for final report, & do some preliminary writing for report.

12:00 Lunch
David Goldie

12:30 Continue with rough draft of final report.

3:30 End
David Goldie

May 7

08:00 Arrive - work on rough draft of report & rough brochure. - sunny - patchy cloud.

12:00 Lunch
David Goldie

12:30 Start on typing of final report

3:30 End
David Goldie

May 8

08:00 Continue with typing of final report.

10:30 - typing complete.
- arrange report & make copies.

12:00 Lunch
David Goldie

12:30 Copy report & assemble.

2:30 Do some work on brochure

3:00 Do some sanding in the woodshop on a cabinet.

3:30 End
David Goldie

May 9.

08:00 Arrive and retype brochure w corrections

10:00 staining cabinet & paper boxes w A. Daizen.

12:15 lunch David Goldie

2:45 Resume box staining
2:30 staining complete
2:35 Open mail - magazine - photocopy etiquette rules.
3:00 Load 1 ton with picnic table pieces.
3:25 Get feedback on our report.
Certificate of Appreciation.
3:35 End.

David Colder.