A Plan for Developing New Hampshire's Statewide Trail System for ATVs and Trail Bikes 2004 – 2008

December 2003

PREPARED FOR

STATE OF NEW HAMPSHIRE
DEPARTMENT OF RESOURCES AND ECONOMIC DEVELOPMENT
DIVISION OF PARKS AND RECREATION
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EXECUTIVE SUMMARY

In the span of a few short years, the use of all-terrain vehicles (ATVs) and trail bikes, otherwise known as wheeled off-highway recreational vehicles (OHRVs), has come to the forefront of New Hampshire's recreational management issues. Wheeled OHRV recreation continues to be one of the fastest-growing outdoor activities, with both users and non-users strongly divided as to how this form of recreation should be managed. Many wheeled OHRV users feel that the state has expended little effort to date in providing an adequate supply of trails in relation to the demand and number of participants. On the other hand, non-users and other citizens contend that wheeled OHRV use is a significant source of problem in terms of both personal property and environmental impacts.

Approximately 22,000, or 2 of every 100, New Hampshire residents and 4,500 non-residents currently have wheeled OHRVs registered in the state. Over the last several years, the state has designated 23 wheeled OHRV trails throughout New Hampshire totaling approximately 776 miles. However, a general disparity currently exists between trail availability and user demand as 40 percent of these trails are located in the northern portions of the state while 79 percent of resident vehicles are registered in the southern portion of the state.

In addition to issues of overall trail availability, there continues to be a significant rise in the number of trail riders. Based on the number of registrations over the previous 8 years, total wheeled OHRV registrations are expected to increase by 42 percent to more than 37,000 in the year 2008. To maintain a comparable amount of trail mileage for the expected increase in OHRVs in the next 5 years, the State would need to develop nearly 350 miles of additional trails.

Concerns expressed by both wheeled OHRV supporters and opponents are warranted as the number of participants is expected to increases in the coming years. In recognition of both its popularity and its accompanying controversy, public land managers have consequently determined that providing safe and well managed wheeled motorized recreation in New Hampshire is an appropriate task and in alignment with statewide recreational goals. As a result, the state general court declared it to be in the public's interest to manage the demand for wheeled OHRV trails on state lands in conjunction with other recreation objectives.

This document serves as the New Hampshire Department of Resources and Economic Development's Statewide Trails Plan for ATVs and Trail Bikes (the Plan). As such, it calls for providing designated seasonal trails for ATVs and trail bikes, identifies major issues related to developing and managing these trails for use by wheeled OHRV during the snow-free months, and offers suggestions for addressing these issues. Based on the projected demand, it is recommended that the State take appropriate measures now in order to design, construct, and implement an established system of trails over the next five years. Primary objectives would be to develop a safe and finite system that can be readily maintained using standard best management practices for natural resource protection in conjunction with up-to-date management methods for motorized recreation.

The Plan sets forth the following recommended steps for adopting the finite system:

- Educating wheeled OHRV users and re-aligning user expectations in terms of meeting multiple use and resource protection objectives;

- Developing a long-term and sustainable trail system based on landscape-level recreational objectives that incorporate sound trail construction and maintenance methods designed to protect natural resources; and

- Planning new trail locations and expansions in keeping with the State's overall goals as stated in the 2003 Statewide Comprehensive Outdoor Recreation Plan (SCORP).

The Plan also suggests locations for trail development and expansion based on the spatial relationships of trails in the existing system. The Plan further recommends that the State monitor the trail system for trail damage and environmental impacts, enforcement effectiveness and rider compliance with regulations, and multiple user conflicts. All new trails should be required to be maintained in compliance with the standards and guidelines for trail care as declared by the Bureau.

In addition, the Plan examines the current wheeled OHRV registration fee structure, program fund sources, and fund allocation. Since the wheeled OHRV financial structure has only been in existence for one year, the Plan makes suggestions for maintaining detailed records of all accounting activities over the next five years. A detailed analysis should be conducted in the future to evaluate the program's ability to maintain the wheeled OHRV trail system given the implemented fee structure and fund appropriation.

As the chief steward of New Hampshire's public trail system, the Bureau is required to ensure that adequate and safe recreational opportunities are available for all participants, while maintaining safeguards to protect private property and natural resources. This Plan is a tool designed to help direct the Bureau to fulfill the State's ATV and trail bike needs in compliance with all regulatory requirements, which, in turn, will help protect the public interests. In summary, the Plan presents guidelines for the Bureau to facilitate working with land managers, natural resource specialists, trail users, municipalities, and the general public in the task of developing wheeled OHRV trails that are compatible with the State's overall agenda for public recreation.

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1.0 INTRODUCTION

The New Hampshire Department of Resources and Economic Development (**DRED**[1]), Division of Parks and Recreation's Bureau of Trails (the **Bureau**) administers public recreational trails on state, federal, and private lands. The Bureau assists organizations, municipalities, and trail clubs with the planning and development of trails on both public and private lands, including trails for motorized recreation. The Bureau provides technical and financial support to organized clubs that participate in off-highway recreational vehicle (**OHRV**) activities. The intent of this support program is to encourage the development, maintenance, construction, grooming, and safety of wheeled OHRV trails throughout the State of New Hampshire.

Chapter 233 of the Laws of New Hampshire for the year 2002 directed DRED to prepare a plan for providing trails for wheeled OHRVs, i.e., all-terrain vehicles (**ATVs**) and trail bikes. The plan is expected to address activities for the calendar years 2004-2008, with updates provided every five years thereafter. The Bureau contracted Woodlot Alternatives, Inc. (**Woodlot**) to research and prepare the draft statewide plan. This document serves as the DRED Statewide Trails Plan for ATV and Trail Bikes (hereon referred to as the **Plan**) for developing seasonal (summer/fall) trails for ATVs and trail bikes.

2.0 PLAN PURPOSE AND NEED

2.1 A Recreation Management Conflict – The Current Debate in New Hampshire

OHRV recreation , particularly the use of ATVs, continues to be among the fastest-growing outdoor recreational activities (OSP 2003). In New Hampshire the rising number of registered vehicles and the growing population of organized clubs make plain the increased popularity of ATV riding. Moreover, in 2002 roughly 25 New Hampshire ATV clubs formed their own statewide alliance, the Granite State ATV Association, to promote rider education and involvement and to defend rider issues and concerns.

This growth in use has generated numerous conflicts in the area of recreation management. For example, based on a recent recreation needs assessment study sponsored by the University of New Hampshire (**UNH**) and the New Hampshire Office of State Planning (**OSP**), few households (17 percent) participate in wheeled OHRV riding as compared to other activities such as walking (79 percent) or hiking (73 percent) (OSP 2003). Yet despite these relatively small numbers, wheeled OHRV

[1] A complete list of acronyms in **bold** throughout the text is provided in Appendix C.

use has demanded the attention of land and recreation managers, primarily because of the growing popularity of this recreational experience and the associated impacts on resources and other trail user groups.

Not surprisingly, there are divided opinions between wheeled OHRV users and non-users over OHRV management. Supporters of their use feel that the current trail availability in New Hampshire does not adequately provide for the current number of participants. Wheeled OHRV users also feel that the state has expended insufficient effort toward increasing and improving trail access, despite an annual wheeled OHRV registration fee that is one of the highest in the country. Concerned opponents of this form of recreation offer a different view and regard wheeled OHRV use as an increasing problem. As its popularity continues to grow, non-users contend that wheeled OHRV use is a significant source of negative impacts on the environment, trail conditions, the outdoor experiences of others, and on adjoining property owners. In addition, there is an overall concern for other issues such as trespassing and regulatory enforcement.

Increased OHRV participation and anticipated future demand emphasize the need to plan and manage today's trails for tomorrow's use.

It can be argued that wheeled OHRV users, unlike other trail user groups, have not enjoyed extensive trail systems on public land in New Hampshire. For example, well-maintained hiking trails are found throughout the state on both state and federally owned land. Also for comparison, snowmobile trails make up the majority of trail mileage in the state. There are more than 6,830 miles of snowmobile trails providing roughly 0.12 miles for each of the 55,000 registered snowmobiles.

The relatively few managed wheeled OHRV facilities in the state are receiving increased use and subsequent impacts, to the extent that these areas are determined by some users to no longer provide enjoyable riding opportunities. This is particularly true of the most popular trails in the South Region of the state, such as the Rockingham Recreational Trail.

Both OHRV supporters and opponents offer valid concerns and issues, which form the basis and need for the development of this plan.

2.2 Recent Legislative Requirements

Despite the differing perspectives of wheeled OHRV users and opponents, public land management agencies have determined that providing for motorized recreation is an appropriate task in New Hampshire's overall trail development mission. Increased wheeled OHRV participation and anticipated future demand emphasize the need to plan and manage today's trails for tomorrow's use. In Chapter 233, the general court declared it to be in the "public interest to balance the demand for ATV and trail bike trails on state lands," with other management objectives for state lands (RSA 215-A:41).

The state agencies are not "property custodians" but rather land managers. The mission of the Bureau is to provide safe recreational outdoor opportunities and to coordinate recreational development on state lands, especially DRED parklands. Other state agencies have missions that are resource-conservation based. However, all agencies will collaborate on the various resource issues they face and come to consensus, though not necessarily agreement, over their resolution. The Bureau and other state agencies, including the New Hampshire Fish and Game Department (**NHFG**), Department of Transportation (**DOT**), and Department of Environmental Services (**DES**), are now required to work together to develop a system of wheeled OHRV trails on public and private lands (RSA 215-A:41). Trail development must meet certain guidelines, including the following aspects:

- The trail system is expected to require the use of private land, in agreement with the landowner, to the fullest extent possible;
- The establishment of any wheeled OHRV trail on public lands is not to be in conflict with the existing use and management of these lands;
- Trails in the state system are to be managed cooperatively with formal ATV and trail bike clubs, and are to be monitored for overuse, regulation compliance, and environmental degradation;
- The trail system will be developed in a manner that ensures safe and legal public use through consistent enforcement of all laws set forth in Chapter 215-A; and
- Development of the trail system will provide the opportunity for public participation in the decision-making process for new or revised trail segments on public land.

To ensure the protection of public land, several conditions must be met before wheeled OHRV trails are established based on terms set in RSA 215-A:42. To start, public property custodians (the Bureau, DRED, NHFG, and others) must cooperatively assess any public land proposed for wheeled OHRV trail establishment using a two-step evaluation process, commonly referred to as the Coarse/Fine Filter evaluation process (RSA 215-A:43). The Coarse/Fine Filter is primarily designed to screen for the presence of protected resources. All property custodians must be in full agreement on the development of wheeled OHRV trails on any proposed public land, and a corresponding management plan must specifically include wheeled OHRV access and trails. A written agreement must exist between the Bureau and the local club detailing the club's care and maintenance responsibilities for a state-owned trail. To emphasize the gravity of the conflict over allowing wheeled OHRVs on public land, a state-owned trail may be closed to wheeled OHRV use if the Bureau finds that use on the trail has not been in compliance with Chapter 215-A regulations or any other applicable state laws; this includes the responsible club's failure to assume all required provisions for trail care and maintenance.

The presence of wheeled OHRVs need not result in a detriment to other trail users, particularly in light of a trail plan that helps set the tone for multiple use integration.

Despite the long list of regulations concerning wheeled OHRVs, the establishment of wheeled OHRV trails on public land has been hotly debated. Since the above-described legislation was passed in July 2002, the State of New Hampshire selected Bear Brook State Park for review as a potential location for adding seasonal ATV trails on state-owned land. This prospect has been strongly opposed by residents of the towns in which Bear Brook State Park is located. Citizens fear that their community resources, primarily law enforcement, emergency response, and pollution cleanup, will be severely impacted by the effects associated with ATV users.

The controversy surrounding wheeled OHRV users and trail access continues to fuel a series of House Bills and court cases in New Hampshire, including everything from decibel limits to the issue of state pre-emption of local (town) ordinances regarding trails under the state's trails program. Hence, the expansion of the State's wheeled OHRV trail system is not expected to go uncontested, as best exemplified by the Bear Brook State Park issue. Therefore, it is essential to define the management challenges presented by wheeled OHRV recreation, and explore policies and practices for effectively managing motorized trails. The presence of wheeled OHRVs need not result in a detriment to other trail users or other citizens, particularly in the light of a trail plan that helps set the tone for multiple-use integration.

2.3 Scope of the Plan

This document serves as the DRED Statewide Trails Plan for ATV and Trail Bikes for developing seasonal (summer/fall use) trails for ATVs and trail bikes. The Plan identifies major issues related to managing and developing trails designated for wheeled OHRV use during snow-free months, and offers suggestions for addressing these issues and their related complexities.

This document satisfies the requirements for legislation passed under New Hampshire House Bill 1273 (HB 1273), an act amending planning and procedures for state-owned or leased trails for wheeled OHRVs. Specifically, HB 1273 has required that the Plan shall emphasize development of self-contained trails, although state-owned connecting trails between two or more self-contained trail systems located on private lands shall not be excluded. HB 1273 also directs that the Plan shall accomplish the following:

> (a) Provide an inventory of the ATV and trail bike trails open to the public in the state, including the length and condition of the trails, persons or organizations responsible for maintenance, funding levels for maintenance, and estimated ATV and trail bike use;
>
> (b) Provide an assessment of the amount of ATV and trail bike trail expansion required to reasonably accommodate the public need in the next 5 years;
>
> (c) Propose additional sites of strategically located lands where public/private partnerships will allow development of ATV and trail bike trails;

(d) Propose sites for the acquisition by the state of strategically located lands for the development of ATV and trail bike trails; and

(e) Assess the level of funding necessary for grants-in-aid and purchases of land, easements, and rights-of-way for the purposes of the 5-year plan, and make recommendations for fee structure changes to the legislature.

In conducting the above aspects (a) through (e), this plan also examines the Coarse/Fine Filter evaluation process for development of wheeled OHRV trails on public lands (RSA 215-A:43). The complete text of RSA 215-A:43 can be found in Appendix A.

The Plan is specific to wheeled OHRV use during the snow-free months and focuses on responsible trail planning, implementation, and maintenance. The Plan is to be used as a tool for providing guidelines for the expansion of new and existing wheeled OHRV riding areas in New Hampshire. It can also be used to provide strategies for wheeled OHRV program development in other states. The Plan provides information to recreational managers and other land use planners regarding common problems surrounding wheeled motorized recreation management along with some recommendations for addressing issues. Finally, the Plan makes recommendations for trail funding sources and oversight.

The Plan is not a new set of regulations; it is specific to the requirements of New Hampshire HB 1273 and addresses only those aspects described in the preceding paragraphs. It is *not* within the capacity of this document to provide a comprehensive discussion of the following issues, notwithstanding their relationship to wheeled OHRV use:

- Landowner protection;
- Vehicle user trespass and trail creation in areas completely removed from the state designated trail system;
- Socioeconomic costs/benefits of wheeled OHRVs in New Hampshire;
- Assessment of safety education of wheeled OHRV users; and
- Evaluation of the law enforcement program to ensure wheeled OHRV regulation compliance.

3.0 METHODS FOR DEVELOPING THE PLAN

The controversy surrounding wheeled OHRVs required that several recreation management issues of statewide importance be identified and carefully evaluated.

New Hampshire's existing wheeled OHRV program was assessed through a review of current literature regarding the state's outdoor recreational trails. It also involved staff interviews with the Bureau in Concord and a comprehensive examination of data regarding trail mileage, vehicle registrations, and funding records in New Hampshire over the past five years. Numerous newspaper articles and letters from citizens were reviewed to evaluate the varied opinions on wheeled OHRVs to identify prevalent socio-political issues surrounding trail use and user groups. In addition, other existing and developing recreation management programs on state and federal lands throughout the United States were researched to document nationwide trends in motorized recreation management.

The Bureau and wheeled OHRV clubs provided a variety of maps of state-designated trails, including those on private and public lands. Detailed information about each trail was compiled to provide an overview of wheeled OHRV access in the state.

In summer 2003, Woodlot contacted 55 organizations to survey the subject of trail accessibility for wheeled OHRVs in New Hampshire. The organizations included OHRV clubs, non-motorized clubs, and other trail advocacy groups. All organizations contacted are formally acknowledged by the state and have a strong interest in trail use and development in New Hampshire. The questionnaire was specific to wheeled OHRV user issues and asked respondents to provide information and opinions regarding preferred riding locales and terrain, ideas for new locales, possible additional trail funding sources, trail management priorities, multiple user conflicts, and natural resource impacts. Twenty-four organizations (44 percent) responded, including 18 state-recognized wheeled OHRV clubs and organizations, 2 additional wheeled OHRV clubs, and 4 other special interest groups. The questionnaire and a brief summary of the results are provided in Appendix B.

4.0 EXISTING CONDITIONS

4.1 Trail Supply and Demand

To simplify discussion of trail locations and densities on a statewide level, New Hampshire was divided into three regions where divisions were defined along county boundaries (Figure 1). The North Region contains Coos County; the Central Region contains Grafton, Carroll, and Sullivan Counties; and the South Region contains Cheshire, Merrimack, Hillsborough, Belknap, Rockingham, and Strafford Counties. Although the three regions are not similar in land area, the counties within each of the regions reflect similar population densities.

4.1.1 Trails Designated for Wheeled OHRV Access

The State of New Hampshire currently designates 23 trails as wheeled OHRV-accessible during the snow-free season (Figure 1). The snow-free season is defined as the period in the year between times of consistent snow cover, i.e., summer and fall. With a few exceptions, all

wheeled OHRV operation is prohibited on all state-owned land from the point in time when consistent snow cover ceases to May 23 of each year (mud season restriction).

Other trail riding opportunities for wheeled OHRVs do exist in New Hampshire. Several examples are listed below:

- The New England Trail Riders Association (**NETRA**) owns three trails designed for trail biking, one each in Cheshire, Sullivan, and Grafton counties (DRED and OSP 1997);
- There are several ATV clubs that provide trail-riding opportunities that are not part of the state-supported system;
- Wheeled OHRVs have access to all snowmobile trails on DRED lands and those federal lands under DRED recreation management during full snow cover (excepting one railroad grade); and
- Even though the White Mountain National Forest (**WMNF**) designates no seasonal use trails for ATVs or trail bikes, wheeled OHRVs are permitted to use designated snowmobile trails in winter.

It is beyond the scope of this plan to include discussion of these other riding opportunities. Consequently, the trail system analysis involves only those 23 seasonal trails designated by the state.

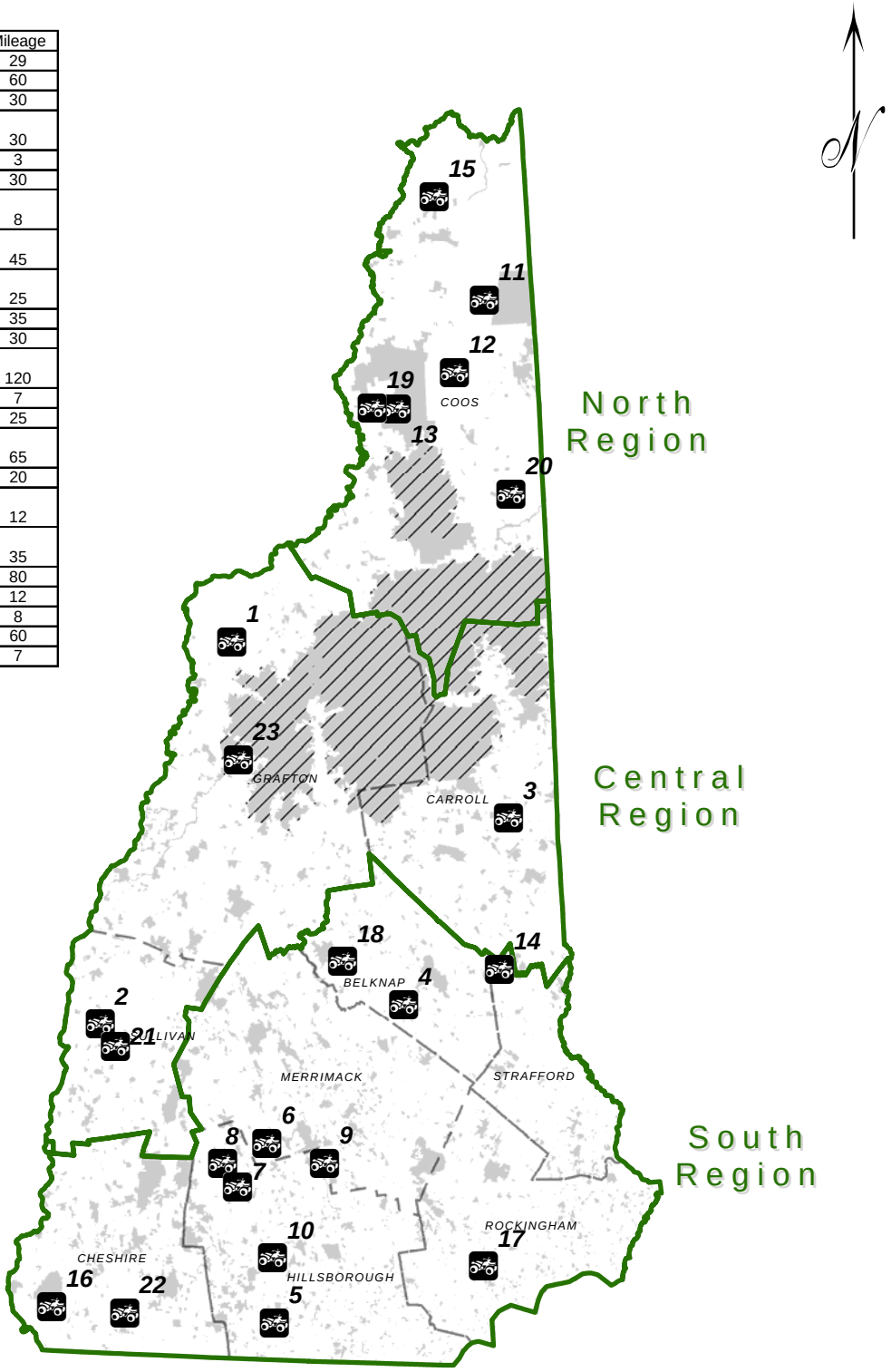
New Hampshire's state-designated trail access for wheeled OHRVs has grown considerably in recent years. In 1997, the state's trails study (DRED and OSP 1997) estimated there were 163 miles of trails with wheeled OHRV access. Trail lengths currently total approximately 776 miles. Growth of the wheeled OHRV trail system has largely been the result of increased participation by locally organized clubs taking full responsibility for the care and maintenance of their regional routes. This responsibility includes obtaining landowner permission (if on private land), providing construction and maintenance plans, and keeping detailed financial statements on club activities and trail care. Nineteen trails (83 percent) are maintained by wheeled OHRV clubs, one trail receives shared cared between a wheeled OHRV club and the Bureau, and three trails are the responsibility of the Bureau.

Growth of the wheeled OHRV trail system has largely been the result of increased participation by local clubs.

Table 1 provides a brief description of each the 23 state-designated trails. Fourteen trails (60 percent) are located on private land or on a combination of private and town-owned property. Eight trails (35 percent) are on state-owned land, and one trail is on federally owned land. No new trails have been designated since HB 1273 made provisions for the Coarse/Fine Filter evaluation process, but three sites have been selected for review.

Figure 1 illustrates the spatial distribution of the current wheeled OHRV trail system in New Hampshire.

Trail Designator	Trail	Mileage
1	Ammonoosuc River Rail Trail	29
2	Claremont Trails	60
3	Freedom Trails	30
4	Gilmanton and Belmont Trails	30
5	Greenville Rail Trail	3
6	Henniker Trails	30
7	Hillsborough-Bennington Rail Trail	8
8	Hillsborough-Washington Trails	45
9	Hopkinton-Everett Flood Control Project	25
10	Lyndeborough Trails	35
11	MEAD Paper Roads	30
12	MEAD Paper Roads and Millsfield Pond Trail	120
13	Nash Stream Forest	7
14	New Durham Trails	25
15	Perry Stream Pulp & Paper Lands	65
16	Pisgah State Park	20
17	Rockingham Recreational Trail	12
18	Sanbornton and Franklin Trails	35
19	Stratford Trails	80
20	Success Trail	12
21	Sugar River Trail	8
22	Troy Trails	60
23	Warren Rail Trail	7



Legend

- 1 Approximate Trail Locations and Trail Designator
- Plan Regions
- Counties
- White Mountain Nat'l Forest
- Conservation/Public Lands

0 12.5 25 Miles

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DATE: December 2003
SCALE: 1" = 25 Miles
JOB NO. 102184
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Figure 1
State-designated Wheeled OHRV Trails in New Hampshire

Table 1. Summary of Wheeled OHRV Trails Designated by the State of New Hampshire

Trail	Town	County	Ownership	Trail Maintenance Organization	Surface and Use Description	Total Mileage	Estimated Wheeled OHRV Use	Trail Condition
MEAD Paper Roads and Millsfield Pond Trail	Millsfield	Coos	Private	Millsfield ATV Club	Gravel roads, trails; open to conventional traffic, no trail bikes	120	Moderate	Good
MEAD Paper Roads	Dix Grant	Coos	Private	The Bureau, Umbagog ATV Club	Gravel roads; open to conventional traffic, no trail bikes	30	Light	Good
Nash Stream Forest	Stratford	Coos	State-DRED	North Country ATV	One trail segment; no trail bikes	7	Light	Good
Perry Stream Pulp & Paper Lands	Pittsburg	Coos	Private	Great North Woods Trails Riders	Gravel roads, trails; no trail bikes	65	Moderate	Good
Stratford Trails	Stratford, Northumberland	Coos	Private	North Country ATV	Gravel roads, woodland trails	80	Heavy	Fair
Success Trail	Berlin, Success	Coos	Private	Androscoggin Valley ATV Club; the Bureau	Trails	12	Heavy	Good
Freedom Trails	Freedom	Carroll	Private/Town	Valley Trail Association	Trails	30	Moderate	Good
Ammonoosuc River Rail Trail	Littleton, Haverhill, Bath, Lisbon	Grafton	State-DOT	Ammonoosuc Valley ATV Club; the Bureau	Multi-use rail trail, open year-round	29	Moderate	Fair
Warren Rail Trail	Warren	Grafton	State-DOT	The Bureau	Multi-use rail trail, open year-round with mud season restriction	7	Light	Poor
Claremont Trails	Claremont, Cornish, Newport	Sullivan	Private/Town	Sullivan County ATV Club	Five trails	60	Heavy	Fair
Sugar River Trail	Newport, Claremont	Sullivan	State-DOT	Sullivan County ATV Club; the Bureau	Multi-use rail trail, open year-round	8	Heavy	Good
Gilmanton and Belmont Trails	Gilmanton, Belmont	Belknap	Private/Town	Belknap ATV Family Adventurers	Trails, open year-round	30	Moderate	Fair
Pisgah State Park	Hinsdale, Winchester	Cheshire	State-DRED	The Bureau	Trails, open year-round with mud season restrictions	20	Moderate	Fair
Troy Trails	Troy, Richmond, Fitzwilliam	Cheshire	Private/Town	Little Monadnock Family Trails, Inc.	Trails, open year-round	60	Moderate	Fair
Lyndeborough Trails	Lyndeborough	Hillsborough	Private	Trail Brook OHRV Club, Inc.,	Trails, open year-round	35	Moderate	Fair
Greenville Rail Trail	Greenville, Wilton	Hillsborough	State-DOT	The Bureau	Multi-use rail trail, open year-round with mud season restriction	3	Light	Good
Hillsborough-Washington Trails	Hillsborough, Deering, Bennington, Bradford, Washington, Henniker	Hillsborough, Merrimack	Private/Town	Tri-County OHRV Club	Trails, open year-round	45	Moderate	Fair

Trail	Town	County	Ownership	Trail Maintenance Organization	Surface and Use Description	Total Mileage	Estimated Wheeled OHRV Use	Trail Condition
Hillsborough-Bennington Rail Trail	Hillsborough, Bennington	Hillsborough	State-DOT	Tri-County OHRV Club, Hillsborough; the Bureau	Multi-use rail trail, open year-round with mud season restriction	8	Moderate	Good
Henniker Trails	Henniker	Merrimack	Private/Town	Contoocook Valley ATV Club, Henniker	Trails, open year-round	30	Light	Fair
Hopkinton-Everett Flood Control Project	Weare	Merrimack	Federal-US Army Corps of Engineers	Merrimack Valley Trail Riders, Derry; NH ATV, Auburn; the Bureau	Trails, open year-round with mud season restriction	25	Heavy	Good
Sanbornton and Franklin Trails	Sanbornton, Franklin, New Hampton	Merrimack	Private/Town	Salmon Brook Trail Riders, Sanbornton	Trails, open year-round	35	Moderate	Fair
Rockingham Recreational Trail	Windham, Derry, Sandown, Hampstead, Fremont	Rockingham	State-DOT	Rockingham County OHRV Assn., Sandown; NH ATV Club, Auburn; the Bureau	Multi-use rail trail, open year-round	12	Heavy	Fair
New Durham Trails	New Durham	Strafford	Private	New Durham Valley ATV Club, New Durham	Trails	25	Light	Good
				Total Mileage for State Trail System		**776**		

4.1.2 Wheeled OHRV User Population

The geographic distribution of wheeled OHRV users in New Hampshire does not necessarily correspond with the availability of wheeled OHRV trails. For example, although only 6 percent of New Hampshire-registered wheeled OHRVs are in Coos County, that area contains more than 40 percent of the available wheeled OHRV trail miles. In contrast, only 28 percent of the available trail miles are located in the South Region where 79 percent of all resident vehicles are registered. Table 2 provides a summary of statewide trail availability in relationship to New Hampshire resident wheeled OHRV vehicle registrations. Overall, there are 0.04 trail miles per resident-registered vehicle, and 0.03 trail miles per vehicle if the number of non-resident vehicles is added.

Only 28% of the available trail miles are located in the South Region where 79% of resident wheeled OHRVs are registered.

Figure 1 and Table 2 clearly indicate the scarcity of riding opportunities in the central portion of the state, particularly near the eastern border. This gap in trail availability is largely affected by the absence of riding areas within the WMNF.

Table 2. Relationship of the Number of State Resident Registered Vehicles to the Location, Length, and Capacity of Wheeled OHRV-accessible Trails in New Hampshire, 2003.

By County				By Region					
County	**County Population [1]**	**Registered Wheeled OHRVs [2]**	**Trail Miles**	**Region**	**Region Population**	**Registered Wheeled OHRVs**	**Trail Miles**	**# trails/Mean trail length (mi.)**	**Trail miles per vehicle**
Coos	33,111	1,371	314	North	33,111	1,371	314	6/52	0.23
Grafton	81,743	1,433	36						
Carroll	43,666	810	30						
Sullivan	40,458	1,034	68	Central	165,867	3,277	134	5/27	0.04
Cheshire	73,825	1,480	80						
Hillsborough	380,841	5,358	91						
Merrimack	136,225	2,501	90						
Belknap	56,325	1,180	30						
Strafford	112,233	1,727	25						
Rockingham	277,359	5,034	12	South	1,036,808	17,280	328	12/27	0.02
Statewide Totals	**1,235,786**	**21,928**	**776**		**1,235,786**	**21,928**	**776**	**23/34**	**0.04**

[1] U. S. Census Bureau 2000
[2] NHFG 2003

The values in Table 2 were scrutinized to examine the relationship between the numbers of wheeled OHRV registrations in relation to the total population of each of the ten counties. The number of registered vehicles per 100 people were calculated for each county and divided into three classes (0.0-2.0 vehicles, 2.1-3.0 vehicles, and >3.0 vehicles per 100 people). Figure 2 illustrates the demographics of wheeled OHRV registrations by county and their spatial relationship to accessible trails.

Trail Designator	Trail	Mileage
1	Ammonoosuc River Rail Trail	29
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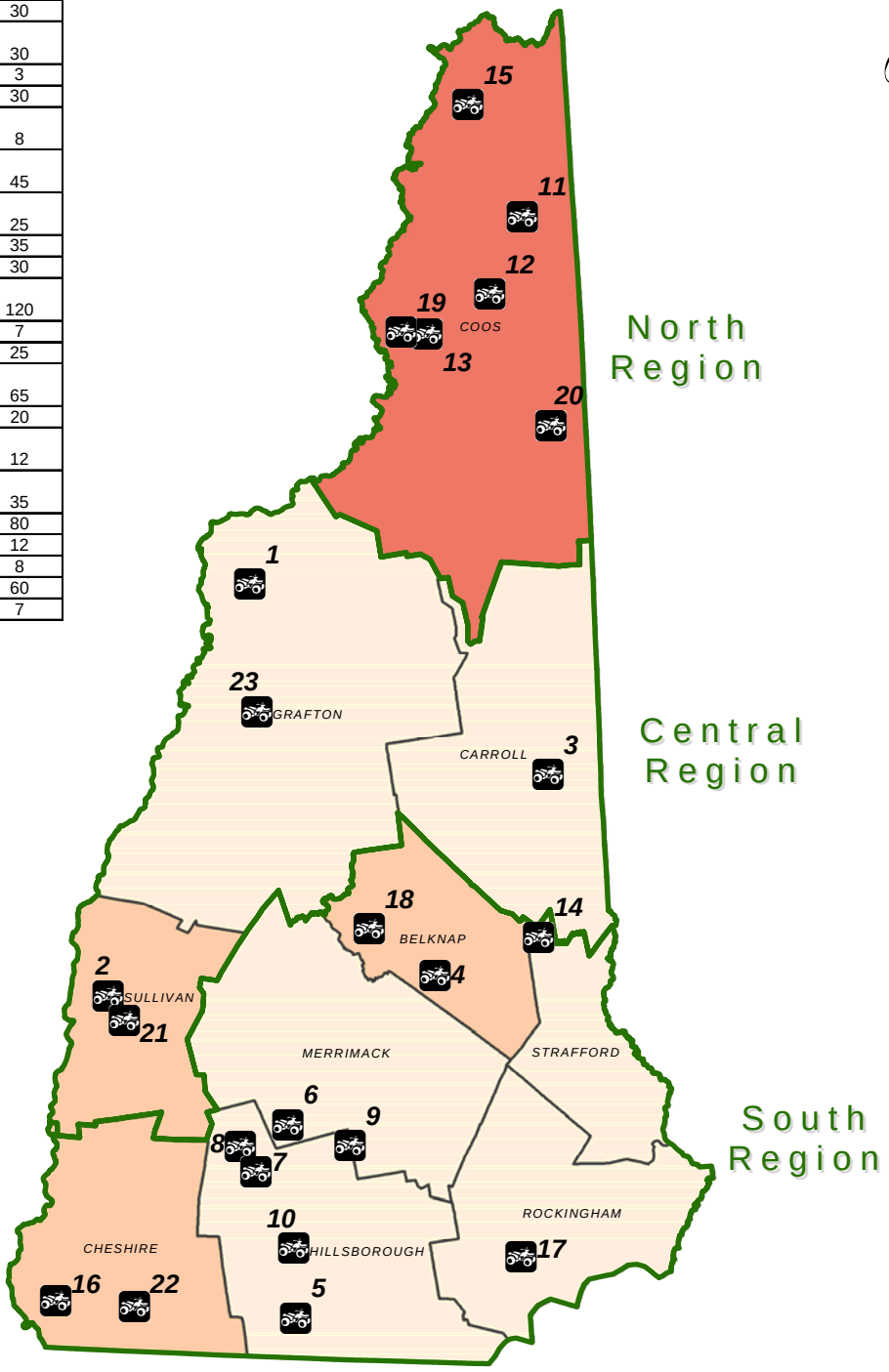

Legend

- 1 Approximate Trail Locations and Trail Designator
- Plan Regions
- Counties

Wheeled OHRV Registrations per 100 People* per County

- 0.0 - 2.0
- 2.1 - 3.0
- > 3.0

* Based on 2000 Census

0 12.5 25 Miles

PREPARED BY:
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ENVIRONMENTAL CONSULTANTS

DATE: December 2003
SCALE: 1" = 25 Miles
JOB NO. 102184
FILE: Figure2_8x11.mxd

Figure 2
Wheeled OHRV Registrations per 100 People by County in New Hampshire

4.2 Current Funding for the Trail System

To evaluate funding of New Hampshire's wheeled OHRV program, past Grant-in-Aid Program (**GIA Program**) and federal Recreational Trails Program (**RTP**) funds were reviewed for years 1999 through 2003. However, information for years 1999-2002 was incomplete and it was only possible to closely examine 2003 account data for fund allocation to individual clubs for trail development, maintenance, and equipment purchases. This is largely due to the fact that the wheeled OHRV account was never kept separate from the overall OHRV account, which includes the much larger snowmobile account.

4.2.1 Fund Sources

4.2.1.1 Grant-in-Aid Program

The GIA Program provides state assistance to organized, non-profit OHRV clubs (including snowmobiles as well as ATVs and trail bikes) and political subdivisions (towns and municipalities). The intent of the GIA Program is to encourage development, construction, maintenance, grooming, and safety of OHRV trails throughout the State of New Hampshire. Funds for the GIA Program are derived from OHRV registration fees and unrefunded gas taxes. These funds are kept in a separate account and cannot be used for any other purpose.

To be considered for GIA Program funds, OHRV clubs must submit a comprehensive and detailed description of the project(s) with their application. This description must include maps, plans, a trail maintenance schedule, and any required written landowner permission. Each club is also required to submit an itemized financial statement. Depending on the nature of the tasks, projects are funded by the program at varying percentages. For example, construction materials are funded at 100 percent of the cost, construction equipment rental is funded at 50 percent, and trail maintenance equipment is funded at 60 percent.

Registration Fees

All OHRVs must be registered if they are to be used on lands other than those belonging to the vehicle owner. Registration fees are the largest source of funding in the GIA Program, and New Hampshire has some of the highest wheeled OHRV annual registration fees in the country. In July 2002, the cost to register a resident ATV and trail bike increased by 46 and 62 percent, respectively; non-resident ATV and trail bike registrations increased by 56 and 69 percent, respectively.

Table 3 specifies how registration fees are appropriated within the state wheeled OHRV program.

Table 3. Distribution of Registration Dollars for Resident and Non-resident Wheeled OHRVs.

Vehicle Type	Resident ATV	Resident Trail Bike	Non-Resident ATV	Non-Resident Trail Bike
Agent Fee	$2.00	$2.00	$2.00	$2.00
Search & Rescue	$1.00	$1.00	$1.00	$1.00
GIA Equipment	$5.00	$5.00	$5.00	$5.00
GIA Maintenance	$11.00	$2.00	$17.00	$8.00
Bureau of Trails Operations	$10.30	$10.30	$12.10	$12.10
Trail Maintenance	$3.00	$3.00	$3.00	$3.00
Land Purchase	$2.00	$2.00	$2.00	$2.00
Registration/Law Enforcement/Safety Education	$9.70	$9.70	$11.90	$11.90
Contract Law Enforcement	$10.00	$10.00	$19.00	$19.00
Total	**$54.00**	**$45.00**	**$73.00**	**$64.00**
Total GIA Funds	**$16.00**	**$7.00**	**$22.00**	**$13.00**

Gasoline Taxes

Currently, for every OHRV vehicle registered to operate in New Hampshire, approximately $9.00 is taken out of the state's gasoline taxes and used to provide funding for OHRV projects. This value is derived from $0.18 per gallon from an estimated 50 gallons of gasoline used annually for each OHRV.

4.2.1.2 Federal Recreational Trails Program

OHRV clubs can also apply for funds available through the federal RTP, which is governed by the Federal Highways Administration (**FHA**). The RTP is a component of the Transportation Equity Act for the 21st Century (**TEA-21**), which allows the transfer of federal gas tax money paid on fuel used by OHRVs. The RTP provides funds to the States to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Trail uses include conventional outdoor recreational sports such as hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, ATV riding, and four-wheel driving. Like the GIA Program, the Bureau administers the RTP in New Hampshire.

Under TEA-21, FHWA may use up to 1.5 percent of the funds for program administration, and trail related research and technical assistance. The remaining funds are distributed to the States. Half of the funds are distributed equally among all States, and half are distributed in proportion to the estimated amount of off-road recreational fuel use in each State, i.e., fuel used by snowmobiles, ATVs, off-road motorcycles, and off-road light trucks. Congress authorized the RTP $50 million annually for 2000, 2001, 2002, and 2003. In 2003, New Hampshire received $636,962, of which $66,044 (10 percent) was distributed to the wheeled OHRV clubs.

Each state has its own procedures to solicit and select recreational trails projects for RTP funding. The RTP requires a 20 percent match in either funds or services from each club that is awarded a grant. In New Hampshire, the Bureau further restricts individual club awards to amounts ranging from $1,000 to $20,000.

4.2.1.3 Other Funding Sources

OHRV clubs often provide funds for their own trail projects. As previously stated, in order to receive federal RTP grants, clubs must provide a match fund. Club funds are often derived from membership dues, fund-raising events, and sponsor donations. Local businesses often donate money to clubs to help facilitate the maintenance and/or development of trail projects. In addition, it is important to note the value of individual donations of money, materials, and other resources, as well as the thousands of hours of volunteer time, willingly provided on an annual basis in support of wheeled OHRV recreation. The true extent and value of these resources is largely undocumented at this time.

4.2.2 Allocation of Funds

All trails listed in Table 1 may compete for funding through the state's GIA Program and the RTP. Table 4 provides a summary of 2003 awards to wheeled OHRV clubs for maintenance costs and equipment purchases for direct care of designated trails. Based on the GIA Program and RTP awards for 2003 and the total mileage of all designated wheeled OHRV trails in the state (roads and trails included), annual costs for maintaining the wheeled OHRV trail system were estimated at approximately $509 per trail mile. This estimate assumes that funds were used to make all necessary repairs to the entire trail system, and that all trails are properly maintained in a relatively satisfactory condition.

Annual costs for maintaining the OHRV trail system were estimated at $509 per trail mile.

Table 4. Summary of Fund Allocation to Wheeled OHRV Clubs from the New Hampshire GIA Program and Federal RTP, 2003.

Trail Club	Trail	Trail Miles	# Members	2003 Funding[1]			
				State GIA Program	Federal RTP	Match	Total Funds
Millsfield ATV Club	Millsfield Pond and Mead Paper Roads	120	>100	$21,768.93	$8,842.00	$8,600.00	$39,210.93
North Country ATV Club	Stratford and Nash Stream Trails	87	>1700	$27,613.88	-	$8,603.52	$36,217.40
Great North Woods Riders ATV Club Inc	Perry Stream Pulp and Paper Lands	65	>100	$29,856.07	$20,000.00	$8,947.58	$58,803.65
Androscoggin Valley ATV Club	Success Trail	12	<50	$11,589.00	$20,000.00	$5,100.00	$36,689.00
Valley Trails ATV Club	Freedom Trails	30	>100	$5,380.71	$15,750.15	$4,521.52	$25,652.38
Ammonoosuc Valley ATV Club	Ammonoosuc River Rail Trail and Haverhill Trails	29	<100	$6,729.05	-	$3,439.75	$10,168.80
Sullivan County ATV Club	Sugar River Rail Trail and Claremont Trails	68	264	$7,419.72	$1,452.00	$1,584.00	$10,455.72
Belknap ATV Family Adventurers	Gilmanton and Gilmanton Trails	30		$6,208.71	-	$3,439.75	$9,648.46
Little Monadnock Family Trails, Inc.	Troy Trails	60	>100	$7,152.37	-	$11,686.41	$18,838.78
Tri-County OHRV Club	Hillsborough-Bennington Rail Trail and Club Trails	53		$3,557.81	-	$1,092.69	$4,650.50
Contoocook Valley ATV Club	Henniker Trails	30	<50	$9,926.84	-	$1,065.81	$10,992.65
Merrimack Valley Trail Riders	Hopkinton-Everett Flood Control Project	25	273	$3,446.66	-	$4,545.00	$7,991.66
Salmon Brook Trail Riders	Sanbornton and Franklin Trails	35	>100	$1,064.12	-	$234.28	$1,298.40
Rockingham County OHRV Association	Rockingham Recreational Trail	8		$44,200.00	-	$22,393.55	$66,593.55
New Hampshire ATV Club	Rockingham Recreational Trail	4	1810	$7,825.00	-	$310.26	$8,135.26
New Durham Valley ATV Club	New Durham Trails	25	<100	$880.40	-	$433.00	$1313.40
Totals		**681**		**$194,619.27**	**$66,044.15**	**$85,997.12**	**$346,660.54**
						Approx. cost for annual trail upkeep	**$509/mile**

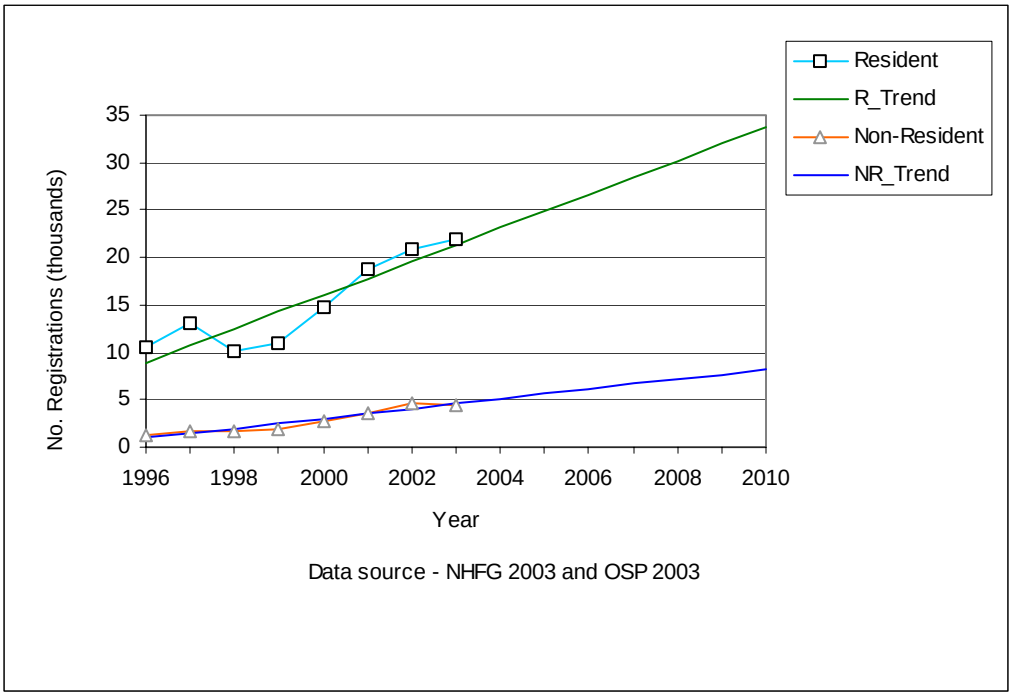
[1] NHBOT 2003

4.2.3 Anticipated Growth of the User Population

There were approximately 22,000 resident and 4,500 non-resident wheeled OHRVs registered in New Hampshire in 2003. In comparison, there are 776 miles of state-funded trails that permit ATV and/or trail bike access during the summer/fall season. Based on the increase in registration numbers in the past eight years, resident and non-resident wheeled OHRV registrations are predicted to be more than 30,000 and 7,000, respectively, by 2008 (Figure 3). This would indicate roughly a 42 percent increase in the total number of registered vehicles from 2003. Figure 3 illustrates the predicted trend for registered wheeled OHRVs in New Hampshire.

A 42% increase in the total number of wheeled OHVR registrations is predicted by 2008.

Figure 3. Predicted Trend for Registered Wheeled OHRVs.



There is a growing concern that New Hampshire's wheeled OHRV trail system will not be able to support the predicted number of riders in the near future. This concern stems largely from a popular conjecture among trail users that the existing trail system is already showing an inability to adequately accommodate the current demand. However, trail capacity in relationship to actual rider use has not been carefully measured along New Hampshire's trail system. It is difficult to diagnose a situation if symptoms have not been properly identified and accurately quantified.

If New Hampshire has a trail availability problem, this issue has predominately been determined through complaints about overcrowding. Some possible indicators of trail overcrowding might include the following:

- *Degraded trail conditions* – Users may report that a trail is heavily rutted, mounded over, or excessively widened; or that bridges and other needed structures are dilapidated. Poor trail conditions could be an artifact of either too much rider pressure or inadequate trail care;

- *Presence of user-created trails* – A trail may be observed to contain routes that were added without any prior approval or regard for trail integrity. The creation of illicit trails could be the result of numerous factors, including unrestrained behavior of a small percentage of riders, improperly signed trails, or inadequate trail care. It is important to note that it is reasonable to suggest that there may always be user-created trails, no matter how perfect the system;

- *Diminished trail experiences by vehicle users and/or other user groups* – Users may complain that trails no longer offer the enjoyment they once provided. This could be the result of multiple factors, such as overcrowding, poor trail management, inadequate trail care, and/or inadequate rule enforcement;

- *Parking lot overflow* – A crowded trail may be the conclusion a user will draw if a parking area is found to be spilling over. Although the trail could be congested, it may purely be that the trailhead is simply not large enough to allow for unloading and to provide parking space for large towing vehicles; and

- *Users involved in accidents* – Crowded trail conditions may be blamed for an accident. Unsafe vehicle operation, deficient riding experience required for trail terrain, poor trail condition, and inadequate signage to alert to a hazardous trail condition could all lead to an accident.

Looking to the rest of the country for relative comparison may not provide answers to how extensive a trail system should be in proportion to the demand, i.e., the number of registered riders. The availability of state-supported trails for wheeled motorized recreation in several larger states is not substantial. Minnesota has 953 trail miles for over 150,000 vehicles (MNOLA 2003); Pennsylvania has approximately 288 trail miles on public land (PADCNR 2003) and an unknown amount on private land for about 180,000 vehicles (PaAtving 2003); Maine has approximately 2,200 trail miles (ATV Task Force 2003) for about 55,000 vehicles (SAM 2003).

Since trail use in New Hampshire is not regularly monitored through the use of devices such as trail registry, vehicle counters, or rider logs, it is difficult to accurately assess the amount of traffic an individual route experiences. Currently, overcrowded trail conditions have been reported principally through anecdotal evidence. Empirical data on trail use are confined to one study conducted at the Hopkinton-Everett Lake Project where an infrared traffic counter tallied riders per day for one month (10 July-10 August 2002) on one trail. Interestingly, the number of riders on weekdays (54) in this location was the same as on weekends. These kinds of studies

would be required at multiple trail locations to allow a proper assessment of trail usage throughout the state.

4.2.4 Projection of needed trail expansion

One of the primary goals of the Plan is to anticipate the growing population of wheeled OHRV users and provide recommendations accordingly to prevent a future explosion of riders overwhelming New Hampshire's trails. As the number of participants is likely to increase, it becomes increasingly clear that it is in state's best interest to plan for improving and expanding the current riding opportunities for wheeled OHRVs.

Conservatively, if the current trail mileage is assumed to be adequate for the current demand, then the 0.03 miles per registered vehicle (total resident and non-resident vehicles) could be used to calculate the adequate future trail requirement. Based on the predicted registered vehicle population (37,400), the state would need to provide nearly 350 miles of new wheeled OHRV trails in the next five years. This would require the state to identify, acquire, plan, and develop suitable areas and incorporate them strategically into the state's trail base in a relatively short period of time. On the other hand, it may not be practical to expect the number of trail miles in the state system to increase proportionally with the number of registered vehicles in the coming years. This may simply not be possible for a state of New Hampshire's size along with its current annual population growth of 1.9 percent (U. S. Census Bureau 2000). Nonetheless, given the controversy surrounding wheeled OHRVs and the recreational priorities identified in New Hampshire's latest Statewide Comprehensive Recreational Plan (**SCORP**) (OSP 2003), a 40 percent trail increase by the year 2008 may not be an appropriate goal.

It would be in the best interest of state land managers and trail developers to plan now for a mature wheeled OHRV trail system.

Based on the ATV and Trail Bike Questionnaire (Woodlot 2003), 53 percent of club respondents (N=19) desired a statewide trail network similar to that of the snowmobile clubs. Of the remaining club respondents, 35 percent preferred to have some trail access relatively close to home, and the remaining 22 percent would like to see an exclusive wheeled OHRV riding area.

The formal snowmobile trail network in New Hampshire was initiated roughly 30 years ago. Approximately 85 percent of the snowmobile trail network in New Hampshire is on private land. This cooperative arrangement has been very successful for several reasons. Primarily, the snowmobile clubs have been organized and consistently diligent about obtaining landowner permission. Secondly, the relatively short riding season allows a more manageable window for enforcement. Last but not least, the frozen ground conditions during the snowmobile season help limit the incidence of trail damage and environmental impacts. All these factors contribute to a set of circumstances that are likely to be reasonable to a landowner that is making an allowance for public recreation on his property.

Conversely, a statewide wheeled OHRV trail network may not be possible due to several factors related to the current recreation policy and the growing public concern. Allowing wheeled

OHRVs to access their property generally does not appeal to private landowners. Possible reasons for this lack of appeal may be the negative public perception of wheeled OHRV users, the long riding season, and the higher likelihood of trail damage and other environmental impacts. Secondly, it is not practical to expect the state to purchase all lands needed to create a statewide wheeled OHRV trail network. In addition, the new evaluation process for creating wheeled OHRV trails on state-owned properties would further complicate the process. Lastly, developing a statewide trail network would likely be in conflict with New Hampshire's overall goals for managing its land and resources as well as outdoor recreation.

It would be in the best interest of state land managers and trail developers to plan now for a mature wheeled OHRV trail system, a finished trail arrangement that is properly maintained and reliably open to trail users. The goals of this mature trail system could include linkages between current wheeled OHRV trails in several locations. It could also provide two or three networked areas in each of the three regions of the state. Finally, the state's overall trail system could allow for a single, large, contained riding area that concentrates varied riding experiences designed primarily for wheeled OHRV use.

4.2.5 Anticipated Funding Needs

Until the passing of HB 1273 in July 2002, the state wheeled OHRV account had been a part of the larger, comprehensive OHRV account, which includes the snowmobile trails program. Therefore, it is difficult to determine the precise annual costs for effectively administering all aspects of the wheeled OHRV program with only one year of specific costs on record.

Based on the predicted future population of wheeled OHRV users in New Hampshire (Figure 3), it was possible to project a snapshot of the program account for the years 2004 – 2008 (Table 5). In doing so, it was assumed that current registration fees and fee structure, as well as the formula for calculating unrefunded state gas taxes would remain unchanged. The federal RTP funds were based on the current 2004 allocation for New Hampshire (FHWA 2003), of which the wheeled OHRV program is predicted to receive approximately 10 percent. It is important to note that only 47 percent of the federal RTP funds have been allocated for 2004, and the remaining apportionment awaits consideration. Conservatively, the relationship of the 2004 allocation to the number of registered resident vehicles was used to derive values for years 2005 – 2008.

Table 5. Fund Projection for the State-supported Trail System for Wheeled OHRVs, 2004 – 2008.

Year	# Registered Resident Wheeled OHRVs	# Registered Non-Resident Wheeled OHRVs	Fees			Federal RTP	State Gas Taxes	Total
			GIA Program	Trail Maintenance	Land Purchase			
2004	23118	5106	$439,033	$84,671	$56,447	$33,920	$138,706	$752,777
2005	24894	5624	$475,337	$91,554	$61,036	$36,526	$149,365	$813,817
2006	26670	6142	$511,643	$98,437	$65,624	$39,133	$160,023	$874,860
2007	28447	6660	$547,950	$105,320	$70,213	$41,739	$170,681	$935,903
2008	30223	7178	$584,256	$112,203	$74,802	$44,346	$181,339	$996,946

Now that the wheeled OHRV account is its own separate entity, unused funds at the end of the year are appropriated within the land purchase reserve. It should also be noted, however, that this balance was not included in the funds for 2004.

Based on the funding provided to wheeled OHRV clubs in 2003 for certain trails, it costs approximately $509 per mile annually to maintain the state-funded trail system (Table 4). This estimate has limited reliability as it is based on total dollars allocated to those clubs requesting aid and their corresponding trail mileages. Trail miles belonging to clubs that did not apply for aid were not included in the calculation. Also, Bureau-maintained trails and their associated costs for maintenance were not included in the calculation. In addition, this estimate assumes that all trails are maintained in satisfactory condition, which is not necessarily the case (Table 1).

If it is assumed that the state-designated wheeled OHRV trail system will increase trail miles to meet the projected rider demand (0.03 miles per registered rider), then the program will be required to support more than 1,100 trail miles by the year 2008. It is reasonable to assume that maintenance and equipment costs could be as much as 60 percent higher in 2008 as compared to 2003. This would bring the cost of annual trail maintenance to approximately $800/mile. Therefore, it will cost the program $880,000 to maintain the state's trail base in 2008. Based on the values in Table 5, all available funds, with the exception of land purchase dollars, will just meet this financial requirement. Although, land purchase dollars could be used for trail maintenance, using this fund for other than land or easement purchases would be less than ideal.

5.0 THE FUTURE WHEELED OHRV PROGRAM

This Plan is designed to provide guidance to DRED for addressing and implementing solutions to problems surrounding the wheeled OHRV trail system in New Hampshire. The Plan promotes the protection of public resources, safety of all trail users, and reduction in trail user conflicts. It identifies gaps in the existing management where staffing and efforts are required to improve overall trail supervision. The Plan also provides suggestions for improving state and public participation in the custody of the trail system.

This Plan was designed to be in full compliance with RSA 215-A, all public resource protection regulations, and all standards and guidelines that direct the Bureau's administration of the wheeled OHRV program. Most importantly, New Hampshire's SCORP (OSP 2003), which defines the state's recreational management goals, provided valuable direction for development of the Plan.

Results from the ATV and Trail Bike Club Questionnaire were instrumental in directing some of the recommendations for the Plan. Vehicle users indicated their views and concerns regarding trail access, multiple user conflicts, and natural resource protection (Appendix B).

The spatial distribution and extent of the existing trail system were examined to ascertain relationships between trail access and wheeled OHRV users. This base evaluation gave direction for a logical progression for future trail development and expansion. As the different aspects of future wheeled OHRV programs are introduced, recommendations are iterated through the use of Action Items.

5.1 The Future Trail System

To generate a practical vision for the future condition of wheeled OHRV access in New Hampshire, the existing trail system should be viewed from a landscape perspective. Working on a landscape level provides the best guidance for observing spatial relationships and land cover settings. Recognizing the existing trails and assuming they will remain accessible to wheeled OHRVs, the state is encouraged to establish a goal for developing the system to full maturity. This would be a finite trail system that is well designed, well maintained, and kept open for use.

The groundwork for developing a mature trail system is already in place. Routes of varying lengths and difficulties are dispersed throughout the state and have the support of local, organized clubs. The goal now is to expand on any untapped potential in a manner that incorporates long-term planning and educated decision-making.

Designing a mature, finite trail system prevents gratuitous trail construction as an emergency remedy. Planning on a large scale with long-term goals also provides the best opportunity for allocating regions where wheeled OHRV use will be emphasized or de-emphasized. Finally, careful, methodical planning that includes public involvement will help minimize the skepticism of all user groups.

Action Item: Design the wheeled OHRV trail system using a landscape planning approach.

5.1.1 Re-Aligning User Expectations

The decision to establish a finite trail system will require educating the affected user group on some fundamental concepts of sound public recreation management; this will be a continuous educational process. The primary goal for the Bureau will be to align the user expectations with state land management goals rather than the other way around. Trail and resource specialists should first explain the regulatory framework in which decisions are made, and then solicit input

from wheeled OHRV users. This is extremely important when stressing the governing agencies mandates to protect public resources.

Chiefly, any unrealistic expectations of the wheeled OHRV user groups need to be dispelled. First of all, managing for multiple-use should not be perceived as meaning providing all uses in all places. Attempting to provide all recreational uses in one park or one forest would not only be poor management, it would be impossible. Quiet, non-motorized areas provide for several uses and are maintained as a highly valued management priority identified in the SCORP (OSP 2003). Secondly, state recreation planners are not proposing to create motorized trails where the various resources in these areas will be significantly compromised.

Attempting to provide all recreational uses in one location would not only be poor management, it would be impossible.

Contrary to popular assertion, providing new trails has not demonstrated a decrease in illicit trail use or creation. It would be a mistake for agencies to perpetuate the perception (often stated in the media) that providing legal trails solves the illegal trail problem. Conversely, the creation of certain trails, such as a through trail into an otherwise prohibited area, could potentially invite illicit use.

Land managers and recreation specialists should not tolerate the creation of illicit trails under any circumstances. Refusing to accept illicit trails would help to establish within the user group that wheeled OHRV riding, like any recreational activity, is a privilege not a right.

Action Item: Align user expectations with the state's overall land and recreation management goals.

5.1.2 Limits to Trail Expansion

While determining the potential of the existing trail system and each of its routes, it is also important to identify the limiting factors that will ultimately check expansion.

5.1.2.1 Land Constraints

Unlimited recreational growth is not a sustainable practice in a landscape with a limited land base, particularly in a small state with approximately 138 people per square mile (U. S. Census Bureau 2000). In general, the public must be made aware that the state's ecosystems have a finite ability to absorb all forms of recreational use. Recreational capacities should be established soon in New Hampshire while choices can still be made. For the wheeled OHRV trail system, the Bureau should define a trail mileage goal along with an established number of routes.

Action Item: Define a practicable goal for the future mileage limits of available, suitable land.

5.1.2.2 Resource Protection

While providing for wheeled OHRV use, it is first and foremost the responsibility of the Bureau to assert their legal mandates to protect New Hampshire's land and resources. In results from a survey conducted by UNH and the OSP, the most important natural resource management objective identified was the preservation of drinking water and groundwater recharge areas (Robertson 1997). Other high priority programs identified in the survey included preservation and restoration of native wildlife, wetland preservation and protection, and environmental law enforcement (Robertson 1997). While it has been determined important to provide trails specifically designed for ATV and trail bike use, it makes little sense to sacrifice valuable resources in the process. The state should consider carefully evaluating the current capabilities of the Bureau to adequately address those resource issues that continue to remain serious problems as a result of wheeled OHRV trail neglect or abuse.

Action Item: Evaluate the Bureau's existing ability to adequately measure and protect valuable resources.

5.1.3 Designing the Finite Trail System

5.1.3.1 Linking Existing Trails

To provide sizeable riding networks, the Bureau should seek to link two or three riding areas within each region. The first locations to investigate possible trail connections would be within existing municipal, state, and federal holdings. Gaining and designating access to parcels that are in proximity to each other and existing OHRV trails have high potential for improving trail opportunities, particularly those parcels with historical pathways. Previously created corridors, such as persistent old roads or paths, should be evaluated for their potential to provide linkages between existing trails to prevent the occurrence of new disturbances.

Potential Resources for Trail Links

- *Abandoned railroad corridors* – Abandoned railroad beds are ideal locations for developing trail networks. They provide unique transects of the landscape and remarkable scenery. Railroad rights-of-ways also tend to link communities so riding rail beds is often compatible with other activities. Although abandoned rail beds are trails, they were not constructed for recreation, especially wheeled motorized recreation, and would need to be enhanced to prevent damage to the bed. It is a common fallacy that an abandoned rail bed will eventually become a trail; however, adopting rail corridors for public trails is not as easy as it seems. These public rights-of-way are preserved to retain the bed for the possibility of returning rail service. Also, the railroad corridors are a unique contribution to New Hampshire's historical legacy. Any rail bed adoption procedure should consider carefully their value as cultural resources.

- *Utility rights-of-way* – Barring restrictive easements, existing utility corridors may also provide ideal locations for trails. This is particularly apparent in the more urbanized settings where new corridor easements would be difficult to obtain. Cooperative use of utility corridors has been used in the past for developing recreational trails (DRED and

OSP 1997), but it has not always been successful in gaining wheeled OHRV access. Most power line rights-of-way are located on easements, so it will be necessary to gain permission from the property owner as well as the utility company to designate a corridor trail for wheeled OHRV use it in these cases.

- *Class VI roads* – Discontinued town roads, also known as Class VI roads, may provide a valuable resource for linking existing trail systems, particularly in the North and Central Regions. Designating certain Class VI roads as wheeled OHRV trails would protect them and the valuable pathway experiences they provide to all interested users. As more and more private land is converted to support development of any sort, there will be fewer and fewer opportunities for all trail activities. Adopting Class VI roads as part of the wheeled OHRV trail system would require the cooperation of the controlling towns, and negotiations to designate these roads as trails should include provisions to maintain their surface integrity, that is, keeping them unpaved. Many of these roads would require some design improvements to sufficiently accommodate wheeled OHRV use.

- *Private land access* – Trail linkages could also be acquired by obtaining landowner permission or purchasing easements along surfaces like snowmobile trails, logging trails, and farm roads, provided the surfaces exhibit characteristics suited for wheeled recreation. The development of state-funded wheeled OHRV trails on private land does not require implementation of the recently adopted evaluation procedure. However, the state should ensure that all trail development and expansion projects follow best management practices and involve environmentally sound mitigation efforts. Trail segments on private land should be, at the very least, evaluated for their suitability to support wheeled OHRV use, even in the light of surface enhancements.

  Notwithstanding any new trail protection measures, obtaining landowner permission may prove to be the most difficult step to gaining new wheeled OHRV access. Private landowners have shown reluctance to open their lands to wheeled OHRVs. To follow up on this disinclination, the state may want to consider providing additional landowner incentives. Below are some suggestions:

  - *Add Wheeled OHRV activities to the Current Use Program* – Under New Hampshire's Current Use Program (RSA 79-A), land is taxed based on its value as open space rather than on development potential. Landowners can accept an additional 20 percent adjustment if lands are kept open to the public for traditional pedestrian recreation (e.g., fishing, hunting, hiking, skiing). The state recently added horseback riding to the list of eligible recreational types, and the statute

could also be amended to offer further tax adjustment for landowners that allow wheeled OHRVs access to lands.

- *Liability Recommendations* – Pursuant to RSA 212:34, a landowner does not incur liability for an injury to a person or property when granting access to his property for recreational purposes. However, this protection is not extended to those landowners that receive any sort of payment for this access. The state may want to consider extending landowner liability insurance protection to those that require some sort of monetary consideration for land access. For example, in Nebraska, *rent* paid by a group, organization, corporation, or the state or federal government to a landowner is not deemed a charge (Revised Statutes of Nebraska Sect. 37-734), which would ordinarily disallow protection. Such an amendment to New Hampshire's laws may encourage landowners to reconsider public access for recreation.

- *Financial Aid for Wheeled OHRV-Related Property Damages* – Although landowners that provide public access are provided liability protection under RSA 212:34, they are still held responsible for protected resources on their land. For example, a landowner is required to repair a wetland that has sustained damage from wheeled OHRV activities if the violating party is not apprehended. The state may want to offer landowners assistance for repairs to natural resources that have been damaged by wheeled OHRVs.

Action Item: To link trails, use existing travel corridors to the fullest extent possible.

5.1.3.2 Expansion of Existing Trails

Some trails provide limited riding experiences if they are short in length (less than 10 miles) or heavily used. Short or heavily used trail systems could be improved by adding trail segments. For example, the state could improve those rail beds that permit wheeled OHRVs and lengthen the existing access to bring more trailside experiences and diffuse the riding pressure. Where wheeled OHRVs are permitted on public lands, existing access could also be expanded to include other trails within the park or state forest system. For example, make all trails within a state park or forest accessible to wheeled traffic in addition to the current designated trails. Using already developed sites avoids or minimizes forest fragmentation effects related to new trail construction.

Action Item: Lengthen trails to the fullest extent possible using adjoining routes or segments where wheeled OHRVs currently are not permitted.

5.1.3.3 New Contained Trail Systems

If the state wishes to provide a self-contained trail network for wheeled OHRVs, the Coarse/Fine Filter stipulates there must be at least 700 contiguous acres available within which the trail network can be situated, either in single state ownership or as a combination of abutting state properties (RSA 215-A:43). The practicality of this criteria is called into question, particularly in

the South Region of the state, due to limited availability and prohibitive costs of such large tracts of land, making the 700-acre threshold requirement difficult to satisfy.

Adding Wheeled OHRV Riding to Certain Public Lands

In all practicality, adding wheeled OHRVs to existing trail systems where they do not currently have access is likely to generate the highest level of public concern. Regardless, the state could consider allowing wheeled OHRV use on some areas of public land, where it has not been previously permitted, particularly within a state park or state forest. Such is the case currently being made, despite some opposition, for the Bear Brook State Park and the Gile State Forest. The Pine River State Forest was also initially considered for its' potential as a wheeled OHRV trail site a few years ago, but the Coarse/Fine Filter evaluation procedure was never applied. This state forest lies in the eastern part of the Central Region where few wheeled OHRV trails are available (Figure 1). The site is, however, known to contain a rare natural (pitch pine) community (NHNHI 2000; NHNHB 2003). With the understanding that any trail development here would therefore require specific and strategic design considerations, further discussions may be warranted concerning future trail riding opportunities in this state forest. .

Purchasing Land to Provide for Wheeled OHRV Riding

As opposed to utilizing existing state-owned land, the Bureau could pursue new acquisitions to locate additional recreational trails, including those suitable for wheeled OHRVs. Although the state should not forego any favorable opportunities to increase the amount of public land, the rising cost of real estate in New Hampshire is a formidable barrier, as is the limited availability of large tracts of land. To better understand the magnitude of these obstacles, a general real estate search was conducted in the fall of 2003. Single blocks of real estate greater than 200 acres were found to be relatively rare in the South Region of the state. Any attempts to locate a contained trail system in the South Region will likely require purchasing multiple abutting properties. Greater opportunities may be afforded by first looking at larger tracts adjacent to already publicly owned lands. It will be difficult to obtain sufficient funding to purchase real estate in the South Region, further complicating the initial impediment of locating a 700-acre tract of land.

A review of real estate for sale on the open market indicated no single tracts of land greater than 700 acres were available for purchase in the South Region.

Table 6 provides per-acre estimated costs by county in New Hampshire. For each county, prices for single parcels of land greater than 100 acres were compiled and then averaged to derive the cost estimates.

Table 6. Average County Real Estate Costs.

County	Average cost per acre
Belknap	$2,007
Carroll	$1,807
Cheshire	$3,031
Coos	$731
Grafton	$2,267
Hillsborough	$1,462
Merrimack	$2,619
Rockingham	$6,176
Strafford	$2,860
Sullivan	$3,382
Statewide Average	**$2,634**

An Exclusive Wheeled OHRV Riding Area on Public Land

Although not specifically directed in HB 1273, a park designed expressly for wheeled OHRVs is a conceivable option. Notably, a park designed to specifically attract wheeled OHRV use may reasonably be located on a parcel of land that is less than 700 acres. A wheeled OHRV park could potentially take some of the riding pressure off other existing trails. To effectively accommodate demand, a developed setting in the South Region would provide the most suitable backdrop for this level of motorized recreation. A practical search for appropriate sites should focus on disturbed places with commercial zoning and steer clear of residential, backcountry, or pristine locales as much as possible. Sites with strong potential would include light industrial areas, sand or gravel pits, and abandoned quarries, all with some adjacent surrounding land capable of supporting trails for recreational riding. The primary goal of such a park would be to concentrate high-quality riding experiences in a disturbed locality. Goals would not necessarily include providing an aesthetic trailside experience. Rather, the park could be considered an outdoor recreational center that provides various riding opportunities for all skill levels. The contained riding area would need space for basic facilities, such as ample parking, flush toilets, and a potable water supply. A suitable location is most likely to involve multiple real estate purchases and may necessitate the use of easements.

The creation of a trail park targeting wheeled OHRV users in summer should be constructed from user funds. The project should not be expected to increase the local tax burden for infrastructure, enforcement, or emergency services. Using funds raised by the wheeled OHRV program, NHFG would contract area Police Departments for costs attributed to enforcing safety and compliance within the park. DRED would pay for costs for public sewer, water, and

electricity extensions to the site. In addition, DRED would take full responsibility and legal liability for accidents and associated injuries that may occur if the park is located on leased property. In order to avoid creating user conflicts within a wheeled OHRV park, the trail system could be designed so that it is suitable for motorized activity only in summer and fall. Non-motorized trail users would not be excluded from the riding area, but they should not be encouraged.

The Iron Range Off-highway Recreation Area, which is currently under construction at the site of an abandoned mine in Minnesota, is a good example of a wheeled OHRV park (MDNR 2002). A large part of the park is already in use. Managed by the Minnesota Department of Natural Resources, it is the state's first designated recreation area for off-road motorcycles, ATVs, and four-wheeled drive automobiles. The park is more than 1,200 acres and contains 30 miles of recreation trails, scramble areas, hill climbs, rock crawls, and racetracks. It is open to the public for recreational riding, but also hosts state and national competitive events, which include obstacle course rides, tough-truck competition, sand and mud drags, motorcycle races, snowmobile events, and even bicycle motocross and mountain bike races. Trails and play areas are mapped and signed with the degree of difficulty for users. There is no charge for park admission, but vehicles must be properly registered for off-road use and equipped with standard safety equipment and muffler. Last but not least, the park is also the site of a safety training and teaching facility.

Action Item: Consider developing a park exclusive to wheeled OHRVs to provide quality riding experiences that are concentrated in one central location.

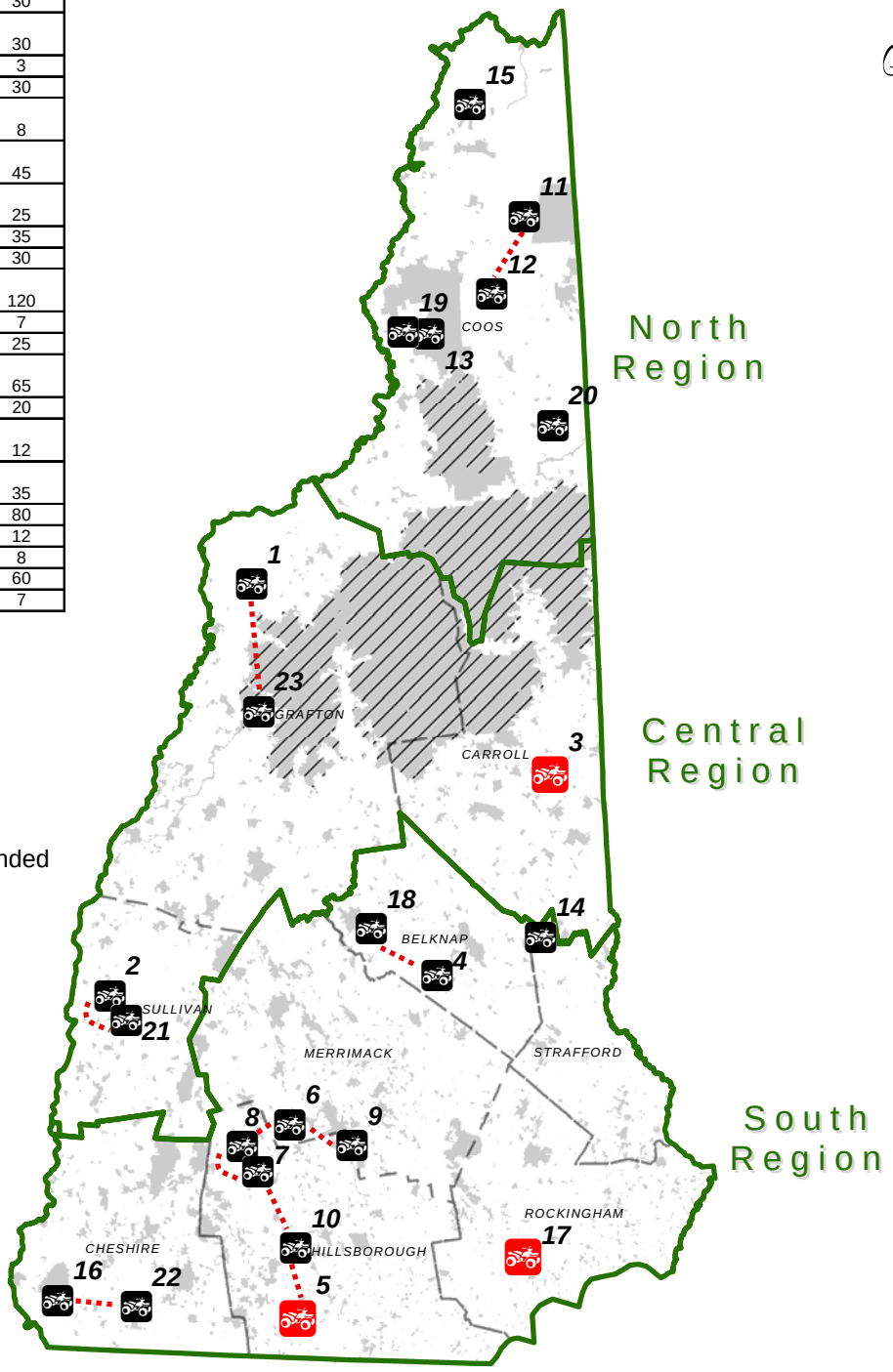
5.1.4 Sites for Possible Trail Expansion

Suggested sites with potential for adding riding opportunities to the existing state trail system are listed in Table 7. These recommendations are depicted in Figure 4. Linking the existing systems in the South and Central Regions would provide large networked areas to sites with heavy riding pressure.

Each site suggestion in Table 7 further describes how that particular trail expansion may benefit wheeled OHRV users. Also included are those factors that might facilitate or obstruct the development of the suggested site. Possible trail linkage locations were principally based on the presence of those trails in reasonable proximity to each other. The three sites recommended for further trail expansion were chosen either because they are heavily used, short in length, or in a part of the state that currently has few riding opportunities.

Suggestions for contained riding areas include the two possibilities of locating a trail system somewhere on existing state lands or purchasing a parcel to develop a wheeled OHRV park. In New Hampshire, a specialized wheeled OHRV riding area would be ideally located near another heavily used trail, such as the one at Pisgah State Park or the Rockingham Recreational Trail. This situation could potentially relieve some of the riding pressure that these two trails currently experience.

Trail Designator	Trail	Mileage
1	Ammonoosuc River Rail Trail	29
2	Claremont Trails	60
3	Freedom Trails	30
4	Gilmanton and Belmont Trails	30
5	Greenville Rail Trail	3
6	Henniker Trails	30
7	Hillsborough-Bennington Rail Trail	8
8	Hillsborough-Washington Trails	45
9	Hopkinton-Everett Flood Control Project	25
10	Lyndeborough Trails	35
11	MEAD Paper Roads	30
12	MEAD Paper Roads and Millsfield Pond Trail	120
13	Nash Stream Forest	7
14	New Durham Trails	25
15	Perry Stream Pulp & Paper Lands	65
16	Pisgah State Park	20
17	Rockingham Recreational Trail	12
18	Sanbornton and Franklin Trails	35
19	Stratford Trails	80
20	Success Trail	12
21	Sugar River Trail	8
22	Troy Trails	60
23	Warren Rail Trail	7



Legend

- Approximate Trail Locations and Trail Designator
- Trail Locations with Recommended Trail Expansions
- Recommended Trail System Linkages
- Plan Regions
- Counties
- White Mountain Nat'l Forest
- Conservation/Public Lands

0 12.5 25 Miles

PREPARED BY:

WOODLOT ALTERNATIVES, INC.
ENVIRONMENTAL CONSULTANTS

DATE: December 2003

SCALE: 1" = 25 Miles

JOB NO. 102184

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Figure 4
Potential Locations for Trail Development and Expansion in New Hampshire

Table 7. Suggestions for Wheeled OHRV Trail Expansion Locations for Years 2004-2008.

Site	Towns Possibly Affected	Benefits to Expansion	Increased Opportunities	Facilitators	Obstacles
Linking Existing Systems					
Pisgah State Park to Troy Trails	Chesterfield, Hinsdale, Winchester, Troy, Swanzey, Richmond, Fitzwilliam	Diffuse existing trail pressure	Potentially challenging riding; scenic	Relatively unpopulated area between trail systems	None known
Lyndeborough System to Greenville Line	Wilton, Temple, Lyndeborough	Extend riding from a short trail to a large contained system	Variable terrain; scenic	One organized club to maintain the system	Few facilities; high potential for public opposition
Lyndeborough, Hillsborough Line, Henniker Trails, and Hopkinton-Everett Project	Lyndeborough, Greenfield, Hancock, Francestown, Bennington, Deering, Windsor, Hillsborough, Henniker, Weare	Centrally located trail network Diffuse existing riding pressure at Hopkinton-Everett Project	Long interconnected system with highly variable terrain	Cooperation of four organized clubs to maintain the system	Many residential areas
Gilmanton-Belmont and Franklin-Sanbornton Trails	Sanbornton, Belmont, Laconia, Tilton	Centrally located trail network	Potentially challenging riding terrain	Cooperation of two organized clubs to maintain system	None known
Sugar River and Claremont Trails	Claremont, Newport	Connect a single segment with a large contained system	Diverse terrain	One organized club currently maintains both trails	None known
Warren Line to Ammonoosuc Rail Trail	Benton, Haverhill	Connect a shorter trail with longer trail	Flat terrain	Existing railroad corridor could serve as link	Few facilities; possibly need participation of an additional club
Millsfield and Dix Grant Trails	Berlin, Millsfield, Dix Grant, Dixville	Combine two large systems	Scenic trail riding	Potentially make use of existing gravel roads and trails	Few facilities; trail construction or improvement can be expensive
Expanding Existing Trails					
Rockingham Trail	Freemont, Epping	Lengthen a heavily used trail	Popular trail; flat, safe riding	Existing rail bed	Residential areas
Greenville Line	Wilton, Mason	Lengthen a short trail	Needed trail expansion in South Region	Existing rail bed	Few facilities; high potential for public opposition; may require participation of a club
Pisgah State Park	Chesterfield, Hinsdale, Winchester		Needed trail expansion in South Region	Existing trails open to other public use	High potential for public opposition
Freedom Trails	Freedom, Madison	Needed trail expansion in the east part of Central Region	Moderate terrain	One organized club	None known
Creating New Contained Areas					
State Forest or Park	Towns with state-owned land	Expanded recreational opportunities	Varied terrain	Typically large tracts of contiguous public ownership No land or easement purchases required	High potential for public opposition; increased potential for user conflicts
Wheeled OHRV Riding Park	Town in South Region	Additional riding area in the South Region	Constructed system with variable riding experiences	Use a disturbed location Abundant nearby facilities	Will likely require multiple land purchases; expensive to construct

5.1.5 Review of Proposed Trail Site

Once a site has been selected for review, it must meet the criteria outlined in the Coarse/Fine Filter. Due to the exacting nature of the procedure, it is recommended that the coarse portion of the filter be applied to as many site alternatives as possible for either a potential contained system or trail linkage. Once prospective sites have been identified, at least two alternatives should proceed into the planning and layout phase and then be further evaluated using the criteria provided in the fine filter.

Along with effects to natural resources, each proposed trail should be fully analyzed for all recreation effects. Factors such as accessibility, seasonal operation, and varied types of riding experiences are important trail attributes for wheeled OHRV users, and no site should be considered if key elements cannot be supplied. Each aspect should be weighed carefully with particular emphasis on long-term projections of costs and benefits. For every proposed trail alternative, the Bureau and the responsible trail group should analyze the costs of construction and long-term maintenance. This process will help ascertain the project feasibility as it relates to available funds.

Action Item: Review simultaneously as many location concepts as possible when applying coarse filter for proposal.

Analyze proposed trail for recreational effects as well as protected resources effects.

5.1.6 Implementing the System Design

Once the proposed trail site has been successfully evaluated and determined to be suitable, longer term comprehensive planning is necessary to avoid unreasonable development and maintenance costs or unsatisfactory user experiences. Other land management agencies (NHFG, DOT, OSP) should be consulted in order to ensure consistency and understanding across various agency planning goals. The best wheeled OHRV trails meet safety, environmental, and recreational objectives through a knowledgeable team of trail builders, maintenance providers, program coordinators, and land managers. All trail personnel, staff and volunteers, should receive training and education in trail construction and maintenance.

Action Item: Design trails based on long-term planning goals.

5.1.6.1 Employing Best Management Practices for Trail Improvement and Construction

Developing trails for wheeled OHRV use will require application of sound construction and maintenance techniques. The position and surface should reflect a careful consideration of the projected use. All trails should be designed for long-term, sustainable use. There should be no gratuitous construction of spur or duplicative trails for the sake of creating more base miles. Certain practices should be employed as much as possible in order to protect resources, enhance riding experience, and ensure safety. The Bureau provides some guidelines for best management practices to be implemented during trail construction (NHBOT 1994, updated 1996). Along with the Bureau's guidance, practices could also include the following concepts:

- Safe alignment of trails with bordering roadways to simply add width to an already existing travel corridor;

- Improvement of an already existing path or road to accommodate motorized recreation, instead of clearing a new trail through a continuous forest;

- No spur or duplicative trails created purely for the sake of making trails;

- Creation of trails to allow shared use whenever possible; and

- Management of speed, noise, and numbers by keeping trails challenging, i.e., narrow with tight turns and uneven surfaces.

5.1.6.2 Putting the New Routes or Segments Into Operation

Before making access available, all new and expanded trails should be thoroughly signed to allow no user misinterpretation to occur. Consistent and adequate use of easy-to-understand signs is key. There should be no ambiguities associated with the condition or required riding skill of any routes or segments. Brochures and trail maps should be provided for all trails clearly indicating open and closed routes. The brochure should rate each route according to difficulty, contain a useful map of the trail system, and present the rules of the trail. Such simple information could help to reduce the incidence of riders getting off designated trails and coming into conflict with other users. Assigning each segment a required skill level could prevent some riders from getting into an undesired or hazardous situation.

Once a new route has been completed and opened, trail use and environmental impacts should be monitored to track changes resulting from trail implementation. The extent of monitoring will largely depend on the intensity of use in combination with the trails relationship to sensitive areas. Currently, trail managers and recreation specialists conduct regular visual inspections. However, trails that are predicted to experience high use or that are in proximity to sensitive areas may need more regular and intensive monitoring. Whatever methods are used, monitoring will indicate when, where, and how resources are threatened by, or are already experiencing, significant impacts. In addition, trail impact monitoring may help to alleviate any public skepticism regarding trail care. Reporting could be in the form of an annual or biennial report to the legislature.

When a new area becomes available, the state may want to supervise how news of the trail is advertised or promoted. Some promotional material may be generated that attracts use beyond the level of effective management. Information broadcasts are likely to appear at Internet web pages that advertise promotions for tourism and motorized recreational opportunities in New Hampshire. If so, it may be necessary to further inform the user population about the problems associated with

wide-scale advertisement of new riding opportunities. The trail management program is given no time to gradually observe and work through any imperfection if huge influxes of users show up at the opening of a new trail.

In any new system or expanded trail, the law enforcement should be adequate and in place before the area is open to public use. User violations should be tracked and scrutinized at the end of every riding season to diagnose and remedy problems in time for the following season. Trails should permit wheeled OHRV use as long as the following criteria are met:

- An acceptable number of violators are being apprehended;
- Users are staying on designated routes;
- Route closures are effective;
- Seasonal closures are effective;
- Resources are not experiencing intentional damage; and
- Multiple user conflicts are at an acceptable level.

Action Items: Provide trail brochures and maps for all new trails. Check that all trails are adequately signed.

Monitor all new routes to ensure trails are maintained within environmental standards and resource impacts are within specified levels.

Make some effort to control as much as possible the level of advertising and marketing for a new trail.

Evaluate and remedy user violations in a timely and effective manner.

5.1.6.3 Overall Maintenance for the Finite Trail System

The points described above could also apply to trails within the existing system as well as any new or expanded trails. A detailed trail inventory could include an assessment as to whether any current trail provides a map, a brochure, and properly signed routes. Trail brochures could be provided at the vehicle staging site of each state designated trail. Based on results from the ATV and Trail Bike Questionnaire, 89 percent of wheeled OHRV club respondents supported the idea of making trail maps available at access points.

To further manage the state's trail system, clubs and club trails should be audited to assess compliance with grant requirements. Grant recipients should be held accountable for promoting higher standards with regard to trail condition. Public pressure is likely to demand that trails on public land are well managed, but resources on private land should be looked after as well. Club representatives could report annually to the Bureau, where a database could be used to document and analyze trail conditions related to wheeled OHRV use.

The state should evaluate each trail in the existing wheeled OHRV system and assess the issues that continue to remain serious problems. First, all significant identified ecological problems on any existing trail related to wheeled OHRV use should be repaired. This includes closing any user created trails, constricting unintended trail widenings in association with designated trails, redoing poorly designed stream crossings, and repairing damaged trail surfaces.

Currently, the state does not collect trail data used to estimate utilization by motorized and non-motorized users. It would be beneficial to derive estimates for traffic volume, percent of use by type, and effects of different uses. Traffic counters and/or trailhead registrations could be employed to gather use parameters, which then could be entered in a database developed for use analysis. Having such information would be practical if the state were to ever consider employing capacity limits on heavily used routes or those routes susceptible to damage. Capacity limits would be preferable to closing the trail entirely.

Pursuant to RSA 216-F:5, there is currently a Statewide Trail System Advisory Committee that meets quarterly each year for the purposes of advising the director of parks and recreation on matters related to the state's trails. The committee serves as a non-regulatory counsel of volunteer members representing various state agencies, trail interest groups, and the general public. The committee is integral to building trust and promoting communication with and among stakeholders, and encouraging problem solving. The committee is strongly encouraged to maintain communication among all of the participating groups, and also to seek out opinions and concerns of other experts regarding trail care and development in New Hampshire.

OHRV enthusiasts, non-motorized trail users, environmental groups, landowners, public land managers, law enforcement agencies, community organizations, businesses, and many others make up the assemblage of wheeled OHRV stakeholders. As the Plan is implemented and modified over the years, it will be increasingly important to include stakeholders in the decision-making process. Communication lines between trail users, managing clubs, and the Bureau should be encouraged to keep everyone informed of problems as they arise and to post area closures or changes. Once a trail has been designated for wheeled OHRV use, interested parties should work together to *keep* it open and designated.

To improve the existing wheeled OHRV program, the Bureau should consider the following:

> Require clubs to regularly update publications and map trail information, develop and maintain appropriate and consistent trail signage, and provide adequate accessibility to maps. Maps should indicate trail access and segment locations, with accurate mileage recordings, and provide information on sensitive or difficult trail segments, where appropriate.

Hold grant recipients accountable for promoting higher standards with regard to maintaining safe and ecologically appropriate trail conditions. Require clubs to submit a brief annual report describing trail conditions and problems.

Identify and repair significant and persistent trail problems.

Increase efforts to collect numerical information on trail use by wheeled OHRVs throughout the state.

Encourage organized group and public participation in resolving trail development issues as they arise through the activities of the statewide Trail System Advisory Committee and other local committees.

5.2 Future Program Funding

Just as the trail inventory does not entirely identify the necessary trail base in relationship to the demand, the funding analysis does not properly determine whether or not the program has adequate financial support. There are currently not enough years of detailed accounting reports to adequately audit the existing program's finances.

Fund projections for years 2004 – 2008 for the state supported wheeled OHRV trail system are presented in Table 5. This information was interpreted to suggest that the program would have sufficient funds for caring for and maintaining a trail system of roughly 1,100 miles. However, the cost of purchasing real estate and/or acquiring easements for the addition of 324 miles of trails still must to be addressed.

If the state decides to purchase land for trail linkages and a wheeled OHRV park before the year 2008, it can be theorized that necessary land purchases are likely to be at least as much as 400 acres. Based on expected real estate values researched in 2003, a statewide average cost of one acre of land is approximately $2,634.00. Real estate purchases to satisfy the need of acquiring 400 acres could therefore be predicted to cost $1,054,000.00. In the case of creating trail linkages, the state could purchase the right to use the land for wheeled OHRV activities, which would be significantly more cost effective than purchasing land.

Currently, $2.00 from each OHRV registration is deposited in a restricted fund to be used only for land purchases, easements, and rights-of-way for wheeled OHRV trails and facility development (RSA 215-A:23 V11 (c)). Based on this current fee breakdown, 2003 registration dollars should have generated $52,852.00 exclusively for land purchase, easements, and rights-of-way for ATV or trail bike trail development.

The cost of new trail construction also remains to be addressed in the funding analysis. Expanding trails or creating entirely new trails will vary considerably depending on a number of factors, including the site location, character of terrain, and proximity of sensitive resources. The Nash Stream State Forest recently added a trail segment allowing wheeled OHRV use. The cost of developing this trail from start to completion (including planning, designing, construction, and environmental monitoring) could be used to help predict the cost of new trail construction.

Nonetheless, trail construction and improvement costs are going to vary considerably from site to site.

5.2.1 Changes within Funding Sources

5.2.1.1 Registration Fees and Fee Structure

Established in July 2002, the current registration fee structure has only been in operation for one year. The significant increase in annual fees was primarily driven by the need to increase funding for enforcement. The importance of enforcement for a type of recreation with known resource impacts and a relatively long season of use cannot be emphasized enough. The recommendation for monitoring user violations is reiterated here to stress the value in having reliable data for appraisal of the increased funding for enforcement. Nonetheless, it is too soon to evaluate the effectiveness of current fund appropriation. In the meantime, the state may want to consider reducing registration fees for resident vehicles belonging to individuals that are members of a state-recognized wheeled OHRV club.

5.2.1.2 Gasoline Taxes

In New Hampshire, the percentages of gasoline taxes attributable to OHRVs were determined by the Legislature in 1993 (RSA 260:61). This determination is based on data from years prior to 1993. To equitably apportion funds for the RTP, the FHWA asked the Oak Ridge National Laboratory (**ORNL**) in 1993 to estimate annual motor fuel use by recreational vehicles. The study estimated fuel used by vehicles for off-road recreational activities annually for each state (ORNL 1994). ORNL has since updated these estimates (ORNL 1999 as cited in ORNL 1999), and determined a national 27 percent increase over the 1992 estimated fuel use. New Hampshire should consider reevaluating the state's estimate for wheeled OHRV annual fuel use, which is currently 50 gallons, using the latest reassessment from ORNL (1999).

5.2.1.3 Additional Possible Funding Sources

In order to generate more funds for trail care and maintenance, the Bureau may want to consider implementing trail fees at certain trails. This may be particularly appropriate for trails that receive heavy use and are sustaining severe trail condition problems. Using trail fees would be favorable to closing a trail or trail segment entirely.

Increasing fines for violations could be used to further fund enforcement and provide funds for natural resource cleanup, particularly for resource damages that have resulted from wheeled OHRV use on private land. This is one approach that would be preferential to holding the affected landowner entirely responsible.

5.2.1.4 Recommendation for Future Financial Analysis

A more detailed, updated financial analysis would be useful to better reflect precise program costs and effectiveness of fund appropriation. It is recommended that the Bureau keep detailed records of all fund allocation and program encumbrances. Registration fee structure and program effectiveness should be evaluated in 2008.

Action Items: Keep an organized and detailed account of the program's finances and update frequently to facilitate a timely analysis upon demand.

Develop and maintain a system for estimating the value of donated materials, resources, and volunteer time to better understand the true costs of maintaining an active and viable wheeled OHRV program.

6.0 THE COARSE/FINE FILTER EVALUATION PROCESS

Any new ATV or trail bike trail proposed on state-owned property is to be evaluated by DRED using a two-step Coarse/Fine Filter evaluation process (RSA 215-A:43) (Appendix A). The first step initially screens six coarse-grained criteria, including requirements for deed restrictions, absence of high value resources (e.g., critical habitats), presence of a minimum 700 contiguous acres for contained trail systems, and absence of existing property management conflicts. A proposed trail that passes the coarse filter criteria may then proceed into a planning and layout phase to then be further screened using 29 finer-grained criteria. Some criteria of the fine filter require review of certain applicable laws at all government levels, a management plan for trail maintenance and environmental protection, and the extensive mapping of protected resources.

6.1 Criteria Review

The Plan, as recommended in this document, is compatible with implementation of the two-step evaluation procedure. The process is already greatly enhanced by the Bureau's ready access to existing GIS resource data for the purpose of assessing various trail alternatives, which include: recreation facilities, land cover assessment, soil units, National Register of Historic Places, roads and trails, Natural Heritage Inventory, National Wetlands Inventory, and conservation/public lands. However, understanding the limitations of these data sets, particularly in terms of accuracy, precision, updates, and a comprehensive understanding of what the map data do *not* reveal, is key to the analysis.

More critical, however, is recognition that a strict application of the existing Coarse/Fine Filter approach, particularly in regard to several of the fine-grain criteria, may prove to be counter to the goals of meeting the trail supply demand, and would likely result in the elimination of many otherwise qualified candidate trail sites. Following are several examples that may warrant further review and consideration.

Soil Types: Criterion II (n) indicates the "*proposed trail avoids areas having soil types classified as important forest soil group IIA or IIB as defined and mapped by the Natural Resources Conservation Service, unless there is an existing soil condition or surface roadway*

that can be used to reduce adverse environmental impacts." This restriction could be considered too narrowly scoped for a soil recommendation. Both groups IIA and IIB represent a wide and diverse assemblage of soil mapping units that have been generated in countywide soil surveys at a scale of 1:20000 or 1:24000. Made available by USDA Natural Resources Conservation Service, these maps are developed for general planning purposes only and restrict minimum map areas to no less than 3 to 5 acres in size. Improper reliance on these maps can essentially result in deleting large areas from consideration (Figures 5, 6, and 7). Beyond map scale issues, it is important to recognize the types of restrictions represented in both groups, as IIA reflects physical limitations that restrict forest management activities (including areas with bedrock outcrops, surface boulders, etc.) and IIB essentially depicts poorly drained, or hydric, soil types. As impacts to soil associated with wheeled recreation are a legitimate concern (rutting, erosion, compaction), consideration for avoiding soil groups IIA and IIB could be an appropriate background screening approach. However, due to the map scale and use issues, it may inappropriate to rely exclusively on the use of these maps to define soil types. On lands that otherwise might qualify, it may be more constructive to evaluate soils on a site-specific basis.

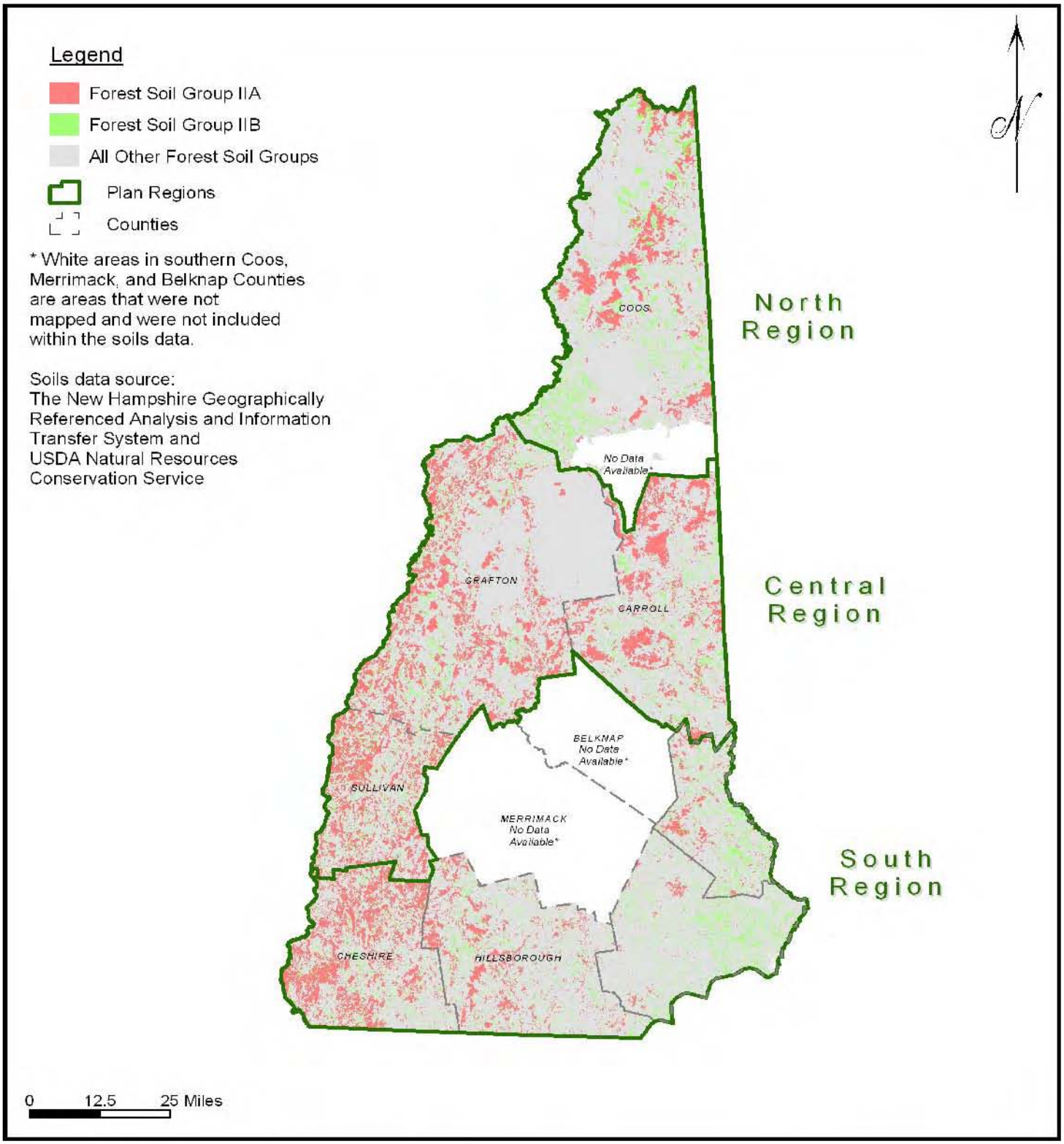

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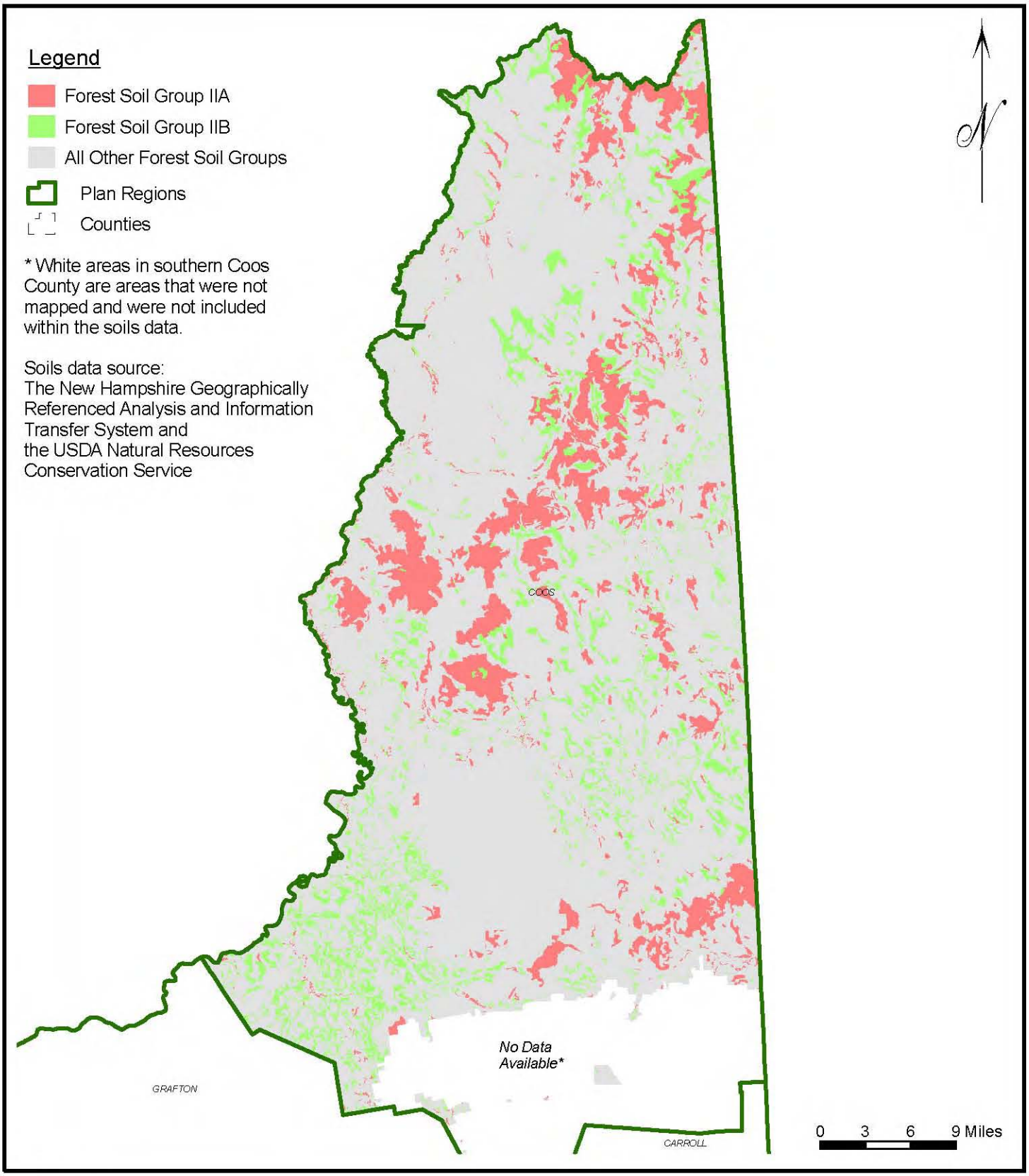
Figure 5
Distribution of Restricted IIA and IIB Forest Soils in New Hampshire



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	SCALE: 1" = 9 Miles
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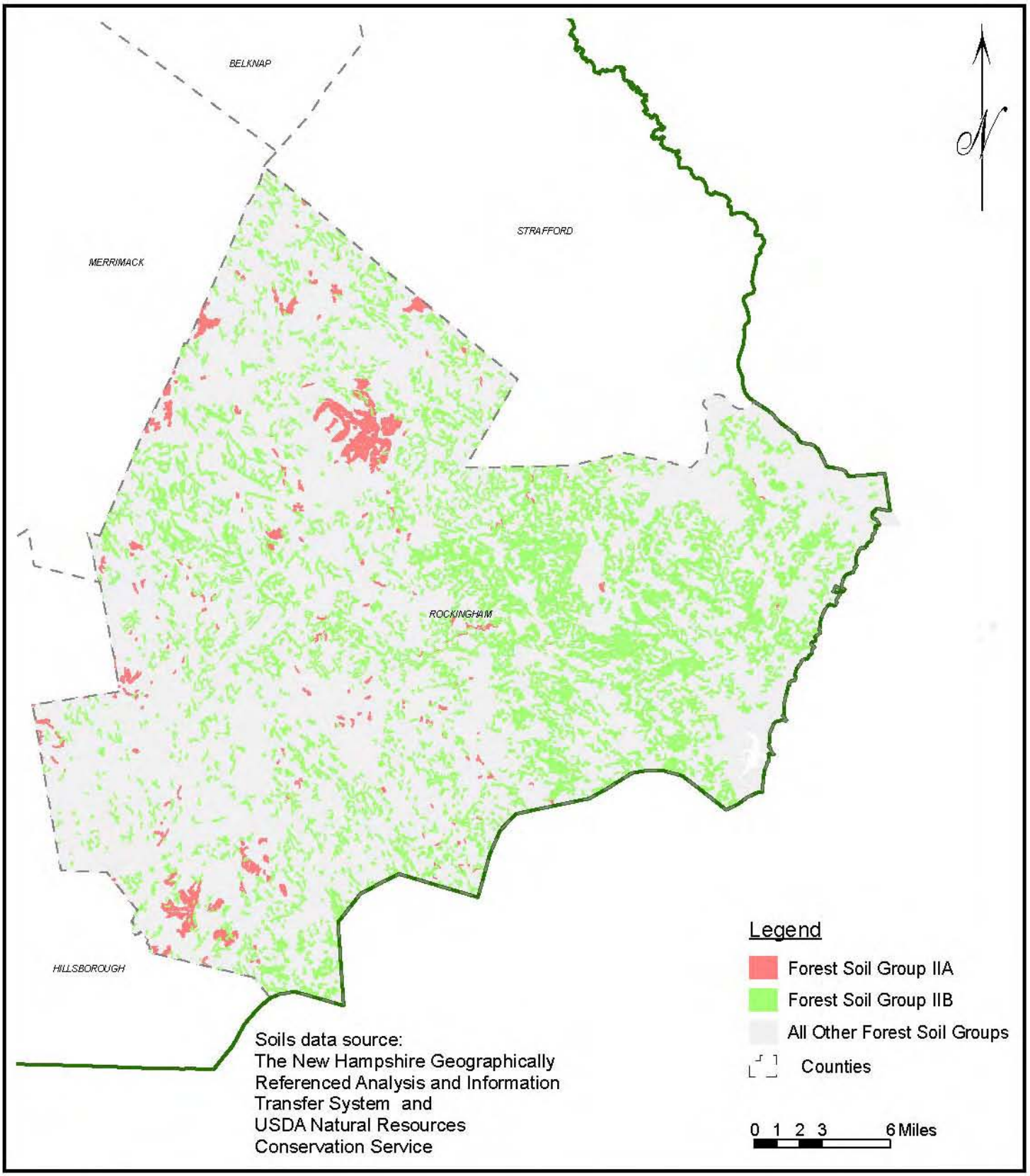
	FILE: CoosSoils_8x11.mxd

Figure 6
Distribution of Restricted Type IIA and IIB Forest Soils in Coos County



PREPARED BY: WOODLOT ALTERNATIVES, INC. ENVIRONMENTAL CONSULTANTS	DATE: December 2003
	SCALE: 1" = 6 Miles
	JOB NO. 102184
	FILE: RockinghamSoils_8x11.mxd

Figure 7
Distribution of Restricted Type IIA and IIB Forest Soils in Rockingham County

Stream Setbacks: Criterion II (o) requires proposed trails not be "*within 100 feet of the ordinary high water mark of first and second order streams, 330 feet of third order streams, and 600 feet of fourth order and higher streams, except for purposes of stream crossing*." Due to potential soil erosion, water quality, and habitat impacts, the importance of avoiding riparian and wetland floodplain conditions typically associated with water bodies and streams, including headwater wetlands, remains a key concern. However, broad and widespread prohibition of ATV-related activities within buffers surrounding unmapped or undefined resources, particularly for such resources as first order streams, would likely have an unreasonable and inordinate effect on meeting the trail siting goals. As with the soil criterion, stream setback criterion should be for guidance purposes only, and reviewed on a site-by-site basis in accordance with established water quality and habitat maintenance standards. Those cases not meeting the standards, or unable to incorporate an appropriate mitigative approach, would be ineligible for siting consideration.

Water Body, Wetland, and Vernal Pool Setbacks: Criterion II (q) requires proposed trails not be "*within 200 feet of any water body, forested or non-forested wetland, or vernal pool.*" Concerns over this criterion are similar to those expressed above in that a broad and widespread prohibition on ATV-related activities in these resource buffers would likely have an unreasonable and inordinate effect on meeting trail siting goals. Water body, wetland, and vernal pool setback criterion should be for guidance purposes only, and reviewed on a site-by-site basis in accordance with established water quality and habitat maintenance standards. Again, instances where site conditions do not meet established standards, or are unable to incorporate an appropriate mitigative approach, would be ineligible for siting consideration.

Hawk, Eagle, and Osprey Nests: Criterion II (x) requires positioning a trail "*beyond 330 feet of any known raptor nest trees or within 650 feet of trees containing eagle or osprey nests.*" Due to the Endangered Species status of bald and golden eagles in New Hampshire, any ATV-related activities near or within known nesting or roosting sites requires a more sensitive management approach. Nesting eagles in New Hampshire are still quite rare (<10 breeding pairs), and all locations are carefully monitored (ASNH 2001, 2003a). As such, efforts to manage ATV use near these sites can be more cooperatively and individually managed. Furthermore, many of these restrictions at active sites are better regulated with the use of seasonal restrictions or closures between early March through July if active nesting activity is observed, or minimally between early March through late May if no nesting occurs, to ensure adequate opportunities for nesting are maintained during the critical breeding and nesting seasons.

Keeping clear of raptor nests in general may be problematic in a heavily wooded place such as New Hampshire, which is more than 80 percent forested. Furthermore, as noted above, these restrictions, when required, should not apply year round but only to seasonally sensitive periods, i.e., 3- to 4-month breeding, nesting, and fledging period, usually in late winter through early summer. Especially sensitive trails or trail sections could be seasonably closed until fledgling activities have been concluded, or until it has been firmly established that nesting activity has not or will not occur in a particular year. In addition, some consideration should be made to the proximity of a trail to a known nest site as well as to the type of disturbance generated by ATVs, i.e., travel only versus other activities involving stopping, or excessive changes in speed or ATV noise levels, as these types of activities are typically more behaviorally disruptive in sensitive

breeding and nesting periods (typically March through mid June). By the same token, more species management opportunities exist for nesting ospreys, which are fairly numerous with 26 active nests in the 2002 season (ASNH 2003b). As with the identified eagle and hawk nests, it may be possible to determine whether known osprey nests are active during the spring breeding and nesting periods, and if so, to close or modify the distance requirement if the trail position is unavoidable. In addition, if questions remain as to the suitability of a management technique or approach, some monitoring may be advisable to better understand and determine vehicle user influence on nest sites during the vulnerable nesting periods.

Eagle Winter Roosts and Heron Rookeries: Criterion II (y) requires the proposed trail to "*be more than 650 feet from eagle winter roosting areas and 330 feet from the edge of wetlands containing heron rookeries*." In New Hampshire, wintering bald eagles can be found along unfrozen waterways bordered by large trees that offer commanding views and protection from harsh weather (UNH Cooperative Extension 1998). Defined as critical habitat (USFWS 1983), winter roosts are also tracked by the state, so knowledge of these sites allows proactive opportunities for avoiding user conflicts. It is unclear if or how seasonal trails affect wintering bald eagles, but the effects can be monitored if desired during crucial roosting times. With regard to both known winter roosting areas and heron rookeries, it may be more feasible to impose a seasonal closure or restriction on trails or trail segments until after critical nesting periods.

Additional Recommendations: Recognition of rare species habitat associations and critical seasonal events would best be accomplished through the creation of an interdisciplinary team of natural resource experts or professionals and trail user groups (motorized and non-motorized). This group could review potential conflicts between proposed or existing trails and critical natural community or rare species, and help advise the Bureau or the Statewide Trail Advisory Committee on resolving habitat or species sensitive issues.

Action Item: The Bureau should review and reassess the applicability of certain fine-grained criteria.

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Appendix A. The Coarse/Fine Filter Evaluation Process

TITLE XVIII

FISH AND GAME

CHAPTER 215-A

OFF HIGHWAY RECREATIONAL VEHICLES AND TRAILS

ATV and Trail Bike Operation on State Lands

Section 215-A:43

215-A:43 Evaluation Process. – Any new ATV or trail bike trail proposal on state-owned property shall be evaluated by the department of resources and economic development using a 2-step process.

I. The new ATV or trail bike trail proposal shall be considered to have passed the initial screening process if the following coarse filter criteria are met:

(a) There are no deed restrictions, laws, or purchase funding source restrictions that prohibit the use of ATVs or trail bikes on the property.

(b) Less than 90 percent of the property is composed of the following types of areas in combination:

(i) Exemplary natural communities as identified in the natural heritage inventory program as defined in RSA 217-A:3, XVI;

(ii) Habitat necessary for the successful breeding or survival of federal or state listed endangered or threatened species; and

(iii) Forested wetlands consisting of group IIB forest soils as defined and mapped by the Natural Resources Conservation Service or non-forested wetlands as defined by the department of environmental services.

(c) If it is to be a self-contained trail network, at least 700 contiguous acres are available within which the trail network can be situated, in either single state ownership or as a combination of abutting state properties.

(d) If it is to be a trail corridor link, the trails which are being connected exist or will exist when the trail corridor link is established, or shortly thereafter.

(e) The use of ATVs or trail bikes on the property does not conflict with the purpose for which the property was acquired by the state as provided by law, or as attested to by letters from grantors, department memoranda, historic records, or other credible documents, or, if such conflict exists, it has been set aside by some legal means that includes a formal review process by the custodial state agency.

(f) The use of ATVs or trail bikes on the property is not prohibited by an existing management plan for the property.

II. A new ATV or trail bike trail proposal that has passed the initial screening process of the coarse filter criteria under paragraph I shall proceed into a planning and layout phase and shall be considered to have passed such phase if the following fine filter criteria are met:

(a) The new trail is supported by an organized ATV or trail bike club recognized by the bureau.

(b) ATVs or trail bikes operated on the trail will comply with maximum decibel limit established by law.

(c) Adequate parking exists or will be developed for the type of trail being proposed and the number of expected riders.

(d) The bureau has given due consideration to local planning and zoning ordinances.

(e) The proposed trail does not pass through a parcel with deed restrictions.

(f) The bureau has given due consideration to local noise and obnoxious use ordinances.

(g) The proposal is reasonably compatible with existing uses.

(h) The proposal does not violate federal, state, or local laws.

(i) The proposal includes a monitoring and response system designed to detect and correct adverse environmental impacts.

(j) The proposed trail layout incorporates existing motorized travel corridors whenever possible.

(k) The proposed trail layout minimizes further fragmentation of blocks of forestland by locating trails on areas with existing development whenever possible.

(l) The proposed trail does not pass through a wellhead protection area as determined by the department of environmental services under RSA 485:48, II.

(m) The proposed trail is not located on earthen dams, dikes, and spillways.

(n) The proposed trail avoids areas having soil types classified as important forest soil group IIA or IIB as defined and mapped by the Natural Resources Conservation Service, unless there is an existing soil condition or surface roadway that can be used to reduce adverse environmental impacts.

(o) The proposed trail is not within 100 feet of the ordinary high water mark of first and second order streams, 330 feet of third order streams, and 600 feet of fourth order and higher streams, except for purposes of stream crossing.

(p) All stream crossing structures meet 5-year flood design criteria.

(q) The proposed trail is not within 200 feet of any water body, forested or non-forested wetland, or vernal pool.

(r) The proposed trail avoids elevations over 2700 feet.

(s) The proposed trail avoids important wildlife habitat features for species of concern.

(t) The proposed trail avoids known locations of federally and state listed endangered or threatened species, or their habitat, as specified on a site-specific basis by the fish and game department.

(u) The proposed trail avoids known locations of rare plants and exemplary natural communities, as specified on a site-specific basis by the natural heritage inventory.

(v) The proposed trail avoids alteration or disturbance of unique geologic features, formations, and designated state geologic waysides, as specified on a site-specific basis by the state geologist.

(w) The proposed trail avoids alteration, disturbance, and adverse impacts to cultural and historic resources.

(x) The proposed trail is not within 330 feet of known raptor nest trees, or within 650 feet of trees with eagle or osprey nests.

(y) The proposed trail is more than 650 feet from eagle winter roosting areas and 330 feet from the edge of wetlands containing heron rookeries.

(z) The proposed trail layout has a safe and appropriate trail design.

(aa) Safety standards for highway crossings are met.

(bb) Any planned use of the proposed trail with other uses is safely accommodated.

(cc) Local enforcement officers have been contacted to review and provide input regarding enforcement issues.

III. The bureau shall hold at least one meeting to inform the public and local cities and towns of the plan and layout for a proposed ATV or trail bike trail, consistent with the fine filter criteria in paragraph II, and to provide an opportunity for the public to comment. Information on the plan and layout shall be made available to the public at a place in the local area in which the proposed trail is to be located, at the bureau's office in Concord, and on a public accessible Internet site maintained by the bureau. The meeting and the places to obtain the information on the plan and layout shall be advertised at least 14 days prior to the meeting in a newspaper of statewide circulation and also in any local newspapers to the cities and towns in which the state property is located.

IV. No person shall operate an OHRV wider than 50 inches or over 1000 pounds on any state-owned trails.

V. This section shall not apply to the change in use designation of rail trails to include ATV and trail bike use.

Source. 2002, 233:16, eff. July 1, 2002. 2003, 295:8-10, eff. July 1, 2003.

Appendix B. ATV and Trail Bike Club Survey

ATV and Trail Bike Club Questionnaire

To complete the questionnaire, we request the participation of a majority of club members. If your club is too large to make this possible, then we suggest that several representative members work together to answer the questions.

General Club Information

1. Please provide your club name and address.

   Club Name: _____

   Contact Person: _____

   Address: _____

   Town: _____ Zip Code: _____

   County: _____

   Telephone:_____ Email:_____

2. How many **total** members are in your club? (Please check one.)

   ____ 1 – 10 ____ 26 – 50 ____ >100

   ____ 11 – 25 ____ 51 – 100

3. How many **active** (i.e., regularly involved) members are in your club? (Please check one.)

   ____ 1 – 10 ____ 26 – 50 ____ >100

   ____ 11 – 25 ____ 51 – 100

4. Provide percentage of active members in each of the following age groups.

   <18 _____%

   18 – 29 _____%

   30 – 49 _____%

   50 – 65 _____%

   >65 _____%

   Total 100%

Club Issues

5. Is your club formally involved with the care and maintenance of any state-owned or state-funded trails? ___ Yes ___ No

   If yes, please list these trails: _____

   _____

   _____

6. Does your club ride on private land? ___ Yes ___ No

7. Please provide a rough percentage of time that club members spend riding on public land versus private land?

   _____ % time on public land _____ % time on private land

8. If yes, how is access most often granted to ride on private land? (Please check one.)

   ___ Verbal permission ___ Do not ask permission; assume it is fine with landowner

   ___ Written permission ___ Unconcerned about landowner permission

9. Does your club own any of its own land for riding? ___ Yes ___ No

10. If yes, how much land? _____ acres

11. Does your club lease private land or have other formal agreements to access private land for riding?

    ___ Yes ___ No

12. If yes, how much land? _____ acres

13. If yes to either question 9 or 11, which sports does your club actively manage these lands for? (Please check all that apply.)

    ___ Recreational trail riding ___ Competition (racing or stunts)

    ___ Play riding (e.g., mudding, stunts, sandpit riding) ___ Hunting/fishing

14. Approximately how much does your club spend **annually** on trail maintenance on club-owned and/or leased lands? (Please check one.)

    _____ Nothing _____ $500 _____ $1000 _____ $5000 _____ >$5000

15. Does your club share these trails with other motorized recreational vehicle users that are not members of your club? ___ Yes ___ No

16. If yes, please check all OHRV users that are permitted to access these trails:

    _____ Other ATVs _____ Other trail bikes _____ Snowmobiles

17. Does your club encourage use of these trails by non-motorized trail users? ___ Yes ___ No

18. If yes, please check all trail user groups that are permitted to access these trails:

    _____ Horses _____ Hikers _____ Mountain bikers _____ Cross-country skiers

19. Does your club access other trails managed by other ATV/trail bike clubs? ___ Yes ___ No

20. Which of the following is the **most preferential** riding situation to members of your club? (Please check one.)

___ a trail of moderate length (10 – 20 miles) in close proximity to your town

___ a single large network of multiple trails located in one region of the state

___ an array of smaller trail networks scattered throughout the state

___ a few moderately sized trails (10 – 20 miles) scattered throughout the state and reserved only for motorized wheeled vehicles

21. Does your club organize group rides among its members? ___ Yes ___ No

22. On average, what is the usual participation on these rides? ____ # of people ____ # of vehicles

23. What is the average distance your club travels within the state to conduct a group ride? _____ miles

24. How many times a year will your club participate in a group ride? _____ # of rides

25. According to club members, where are the best places to ride an ATV or trail bike for recreational purposes in New Hampshire? List up to 5 places, and please provide the approximate distance one-way you must travel to each site.

	Area name or trail name	County	Miles
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

26. For those places listed above, when you stay in the area for more than one day, do you usually:

_____ Camp _____ Stay in a motel or hotel _____ Other

27. According to club members, what trails would they like to see designated for ATV or trail bike recreation in New Hampshire? List up to 5.

	Area name or trail name	County
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____

Individual Rider Issues

The following questions address issues generally experienced by ATV or trail bike users as individual riders. As much as possible, please try to answer the questions in a manner that best represents the overall view of the club.

28. Please identify the approximate percent of time that you use your ATV/trail bike in each of the general activities listed below.

Competition	_____%
Organized events (such as group rides or club meets)	_____%
Work	_____%
Recreational trail riding	_____%
Hunting/fishing	_____%
Total	__100%

29. When making a choice to ride an ATV or trail bike, do you generally prefer to: (Please check one answer in each pair of lettered phrases.)

a.	_____visit the same areas	or	_____seek new areas
b.	_____ride flat, open terrain	or	_____ride hilly, mountainous terrain
c.	_____ride trails with few obstacles	or	_____ride steep, rocky trails
d.	_____ride marked trails	or	_____ride unmarked trails
e.	_____ride designated trails	or	_____ride off-trail

30. How much would you be willing to pay **per vehicle per day** (e.g., a day use fee) to use a fully developed OHRV area if all fees go back into the maintenance and management of that area? (Please check one.)

_____Nothing _____$5.00 _____$7.50 _____$10.00 _____$15.00 _____$20.00

31. How much would you be willing to pay **per vehicle for an annual license** to use certain state-owned and developed motorized recreational vehicle areas if all fees go back into maintaining and improving these areas and opportunities, including an ATV/trail bike education program in NH? (Please check one.)

_____Nothing _____$20.00 _____$30.00 _____$40.00 _____$50.00 _____$75.00

32. Below is a list of specific management actions that could be employed to increase ATV and trail bike opportunities and experiences on public and private land. Please check one box that best describes **your club's position** on each listed action.

Action	Strongly Oppose	Somewhat Oppose	Neutral	Somewhat Support	Strongly Support
Require ATV/trail bike annual license fees in addition to registration fees					
Require day use fees to ride certain trails					
Require registered ATVs be of a specified design, weight, size, etc. to reduce impacts					
Limit the number of daily ATV/trail bike users to reduce crowding					
Permanently close those trails where natural resources continue to remain at risk					
Further limit seasonal use of ATVs and trail bikes on certain trails					
Provide trail maps at access points					
Provide more law enforcement patrols at trails areas					
Increase the emphasis on improving and maintaining trails on public land					
Keep ATV and trail bike riding on public lands free of use fees					
Provide additional ATV/trail bike play areas for stunt riding, racing, etc.					
Provide long distance, overnight ATV/trail bike riding opportunities					
Permit primitive camping at appropriate places along long distance OHRV trails					
Develop additional campsites designed specifically for OHRV users					

33. To what extent do you think each of the following statements is a problem for areas with ATV/trail bike access **where you most often ride in New Hampshire**? Please check one box that best describes **your club's position** on each listed statement.

Statement	No Problem	Small Problem	Moderate Problem	Serious Problem
Lack of trails available to ATV/trail bike users in NH				
Lack of varied ATV/trail bike experiences in NH				
Lack of trail(s) in close proximity to your residence				
Lack of suitable campsites for ATV and trail bike users				
Lack of state management for ATV/trail bike opportunities				
Lack of trails patrolled by a designated official				
Too many rules/regulations regarding ATV and trail bikes				
Not enough rules/regulations regarding ATV and trail bikes				
Lack of understanding of rules/regulations by OHRV users				
Unsafe operation of ATVs and trail bikes by users				
Unsafe riding associated with play, such as mudding				
Motorized traffic creating unsafe conditions for other users				
Unnecessary trail closure due to ATV/trail bike damage				
Insufficient trail closure due to ATV/trail bike damage				
ATV/trail bike noise				
ATV/trail bike exhaust pollution				
Litter associated with ATV/trail bike users				
ATV/trail bike impacts to vegetation				
ATV/trail bike impacts to trails				
ATV/trail bike impacts to wildlife				
ATV/trail bike impacts to stream crossings				
Other problems you recognize. (Please list.)				

34. We would like to get your club's opinions on how motorized and non-motorized trail users view themselves and others as trail users. Please **check one box** that best describes how your club agrees or disagrees with each of the following statements.

Statement	Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree
For the most part, ATV and trail bike users respect landowners' wishes					
ATV and trail bike users respect the safety and enjoyment of non-motorized trail users					
Non-motorized trail users show respect for ATV and trail bike users					
ATV/trail bike users have adequate concern for the environment					
The general public has an inaccurate negative perception of ATV/trail bike users					
ATV and trail bike users in NH are sufficiently educated and organized to advocate their sport					
ATV and trail bike users understand and employ low impact riding practices					
ATV and trail bike users understand the risks posed if their vehicles are handled irresponsibly					

Thank you for your participation. If you have any questions or comments, please contact Steve Pelletier at 207-729-1199 or Chris Gamache at 603-271-3154. Please return this questionnaire **before August 30, 2003,** to:

New Hampshire ATV/Trail Bike Survey
c/o Woodlot Alternatives, Inc.
30 Park Drive
Topsham, ME 04086

A Summery of the Survey Results

Participation Results:

Organization Type	Contacted to Respond to Survey	Completed Survey
State-Acknowledged OHRV Clubs (incl. Granite State ATV Association)	23	18
Other OHRV Clubs	4	2
Other Type Trail User Groups	28	4
Total	55	24

Typical age distribution among members of wheeled OHRV clubs in New Hampshire:

Age group	Average percent of club members (N=19)
<19	6
18-29	18
30-49	52
50-65	19
>65	5

On average, OHRV club participants tend to ride on private land 67 percent of the time (N=18). Favorite trails most often mentioned included the following:

Trail Name	Trail Management Organization
Stratford Trails	North Country ATV Club
Pittsburg Trails	Great North Woods Trail Riders
Millsfield Pond	Millsfield ATV Club
Success Trail	Androscoggin Valley ATV Club
Ammonoosuc Rail Trail	Ammonoosuc Valley ATV Club

Travel distances to preferred riding areas averaged 60 miles.

Two popular requests for seasonal trail access were Class VI roads and seasonal riding at Bear Brook State Park. Clubs were divided on a preferred overall trail system, with roughly half preferring a quality, contained trail system in close proximity to their residence. The other half of the clubs would like to see made available a state-wide network of trails similar to that belonging to the snowmobile clubs. Only two clubs stated they would like to see exclusive OHRV riding areas in New Hampshire.

Breakdown on how OHRV riders tend to use their vehicles:

Vehicle Use	Percent Time
Recreation	45
Organized Events	26
Work	16
Hunting/Fishing	11
Competition	3

Specific management actions that could be employed to increase ATV and trail bike opportunities and experiences on public and private land. Numbers indicate percentages of responses falling within each column (N=18).

Action	Strongly Oppose	Somewhat Oppose	Neutral	Somewhat Support	Strongly Support
Require ATV/trail bike annual license fees in addition to registration fees	77	6	6	11	
Require day use fees to ride certain trails	44	33	6	11	6
Require registered ATVs be of a specified design, weight, size, etc. to reduce impacts	44	11	11	17	17
Limit the number of daily ATV/trail bike users to reduce crowding	50	33	6	11	
Permanently close those trails where natural resources continue to remain at risk	22	33	33	17	6
Further limit seasonal use of ATVs and trail bikes on certain trails	44	11	28	11	6
Provide trail maps at access points		6	6	6	83
Provide more ranger patrols at trails areas			28	39	33
Increase the emphasis on improving and maintaining trails on public land				11	89
Keep ATV and trail bike riding on public lands free of use fees	6		17	17	61
Provide additional ATV/trail bike play areas for stunt riding, racing, etc.		17	6	28	50
Provide long distance, overnight ATV/trail bike riding opportunities			6	6	89
Permit primitive camping at appropriate places along long distance OHRV trails		6	6	6	83
Develop additional campsites designed specifically for OHRV users		6		17	77

Survey participants were asked to what extent they thought that each of the following statements is a problem for areas with ATV/trail bike access **where they most often ride in New Hampshire**? Numbers indicate percentages of responses falling within each column (N=18).

Statement	No Problem	Small Problem	Moderate Problem	Serious Problem
Lack of trails available to ATV/trail bike users in NH			6	94
Lack of varied ATV/trail bike experiences in NH		11	44	44
Lack of trail(s) in close proximity to your residence	28	6	22	44
Lack of suitable campsites for ATV and trail bike users	6	28	6	61
Lack of state management for ATV/trail bike opportunities		11	17	67
Lack of trails patrolled by a designated official	11	44	22	22
Too many rules/regulations regarding ATV and trail bikes	28	39	17	17
Not enough rules/regulations regarding ATV and trail bikes	61	33		6
Lack of understanding of rules/regulations by OHRV users	6	33	28	33
Unsafe operation of ATVs and trail bikes by users		44	33	22
Unsafe riding associated with play, such as mudding	17	56	17	11
Motorized traffic creating unsafe conditions for other users	33	61	6	
Unnecessary trail closure due to ATV/trail bike damage	17	6	33	44
Insufficient trail closure due to ATV/trail bike damage	72	22	6	
ATV/trail bike noise	22	39	17	22
ATV/trail bike exhaust pollution	72	22	6	
Litter associated with ATV/trail bike users	56	33	6	6
ATV/trail bike impacts to vegetation	28	61	11	
ATV/trail bike impacts to trails	39	44	11	6
ATV/trail bike impacts to wildlife	77	22		
ATV/trail bike impacts to stream crossings	39	50	11	

Clubs were also asked to list specific problems. Examples of problems recognized by some of the wheeled OHRV clubs (not exact quotes):

- The education of young riders is a moderate problem.
- Bad press exposure causes trail closure for the wrong reasons.
- The state is showing no support for this type of recreation.
- Trail bikes are a serious problem.
- Those currently addressing ATV issues are not appropriate for the task.
- Lack of linked trails with food and fuel stops.
- Keeping riders on designated trails is a moderate problem.
- The lack of trails with ATV access in Carroll County is a serious problem.
- The lack of posted speed limits on some trails is a serious problem.
- Litter in parking areas in a moderate problem.
- The State shows reluctance to work with clubs to provide trails on public land.
- There is a lack of firm rules/regulations allowing too many different interpretations.
- Non-motorized users wanting areas closed to OHRVs is a serious problem.
- Insufficient percentage of registration fees applied to develop trails is a serious problem

Survey participants provided their opinions on how motorized and non-motorized trail users view themselves and others as trail users. Numbers indicate percentages of responses falling within each column (N=18).

Statement	Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree
For the most part, ATV and trail bike users respect landowners' wishes	61	28	6	6	
ATV and trail bike users respect the safety and enjoyment of other unmotorized trail users	72	17	11		
Unmotorized trail users show respect for ATV and trail bike users	17	28	6	22	28
ATV/trail bike users have adequate concern for the environment	39	39	11	11	
The general public has an inaccurate negative perception of ATV/trail bike users	89		6	6	
ATV and trail bike users in NH are sufficiently educated and organized to advocate their sport	17	44	6	22	11
ATV and trail bike users understand and employ low impact riding practices	17	44	17	17	6
ATV and trail bike users understand the risks posed if their vehicles are handled irresponsibly	39	39	6	17	

Some participants provided additional comments (not exact quotes):

- A well-designed trail is one with terrain for beginners and experts with challenging aspects and relaxing stretches.
- Additional fees should not be enforced along with the current fee schedule.
- We like to see a statewide trail system like that of the snowmobile clubs. We promote the creation of ATV clubs to work with landowners to get the network.
- Current best science does not support that ATV use causes significant impacts to trails, vegetation, wildlife, or streams. Neither litter nor air pollution associated with ATV users is a significant problem.
- We need to bring back OHRV registration reciprocity with bordering states. Otherwise riding areas and opportunities are limited. In addition, the absence of reciprocity makes it financially difficult for a family to register multiple vehicles with another state.

Appendix C. List of Acronyms

ATVs	All-terrain vehicles
Bureau	Bureau of Trails
DES	Department of Environmental Services
DOT	Department of Transportation
DRED	Department of Resources and Economic Development
FHA	Federal Highways Administration
GIA Program	Grant-in-Aid Program
HB	House Bill
NETRA	New England Trail Riders Association
NHFG	New Hampshire Department of Fish and Game
OHRV	Off-highway recreational vehicle
ORNL	Oak Ridge National Laboratory
OSP	Office of State Planning
RTP	Recreational Trails Program
SCORP	Statewide Comprehensive Recreational Plan
TEA-21	Transportation Equity Act for the 21st Century
UNH	University of New Hampshire
WMNF	White Mountain National Forest
Woodlot	Woodlot Alternatives, Inc.