

## Appendix B: Outdoor Recreation Resources-- Achievements and Issues



This appendix of the *Vermont Outdoor Recreation Plan 2005-2009* contains a summary of various resources and issues that have been identified by those who participate in and by those who supply outdoor recreational opportunities in Vermont.

The outdoor opportunities

included in this plan occur on land and in water. Air-related recreational activities are not included. Please refer to Chapter 4 (the trails and greenways plan) for similar information pertaining to trails-, roads-, and greenways-related recreation. Paddlers' trails are included in the water resources section of this chapter. Birding trails are included in the wildlife-based recreation section of this chapter.

Many of the challenges faced by Vermont's recreation industry will be articulated and discussed in this chapter. While considering these challenges, it's also important to keep in mind that nearly 85 percent of Vermont residents, when surveyed in 2002, agreed that the outdoor recreation opportunities being offered in the state satisfied their needs.

*This appendix organizes various activities and suppliers into a few major headings, as follows:*

1. Public Recreation Resources
2. Fish- and Wildlife-Based Recreation
3. Water-Based Recreational Opportunities
4. Winter Recreational Activities
5. Private Lands
6. Commercial Recreation Providers
7. Field Sports
8. Court Sports
9. Camping
10. Outdoor Recreation Opportunities at Historic Sites
11. Other Activities
12. Special populations

More information is included about some activities that are relatively new or may be misunderstood. As this is a statewide plan, organizations mentioned represent the entire state or are regional organizations with statewide

significance. Overlaps occur with many activities and resource suppliers, and efforts have been made to avoid duplication. Organizations included here would be the first to credit the many partnerships and collaborations that are needed to make things happen, but all of them cannot be mentioned in this plan.

### 1. Public Recreation Resources

An inventory of various recreational resources was conducted for the state between 1990 and 1997. Published in 1999, it is known as the Vermont Recreation Resources Inventory. Through this inventory, 1,909 publicly operated sites for outdoor recreation were identified. Of these, 987 were operated by municipalities, counties, or school districts; 648 were operated by the State of Vermont; and 104 were operated by federal agencies.

Significant increases in public property holdings in Vermont occurred after 1990. Although these provided permanent public access opportunities for recreation and other uses, serious challenges remain for managing these lands and facilities. The next three sections will discuss the current situation for municipal, state, and federal recreation suppliers.

#### a. Municipal Recreational Providers

Each of the state's 251 organized towns, cities, and villages offers many outdoor recreational opportunities. The 1999 *Vermont Recreation Resources Inventory* identified publicly operated sites for outdoor recreation in Vermont. Of those, 91 were operated by a city, 525 by a town, 22 by a village, and 338 by a school district. These ranged by county from lows of 7 in Grand Isle and 24 in Essex to highs of 95 in Rutland, 100 in Windsor, 106 in Washington, and 166 in Chittenden.

There are a few types of public recreational facilities that are most often provided by municipalities. These include outdoor swimming pools, sports fields, outdoor courts, and playgrounds. The 1999 *Vermont Outdoor Recreation Inventory* revealed that the state has 43 outdoor public swimming pools. With regard to sports fields, the inventory indicated there are 255 public baseball fields, 288 public softball fields, 182 public Little League fields, 265

public soccer fields, and 73 public football fields. The inventory showed there are 130 public tennis courts, 207 public basketball courts, and 105 public volleyball courts in the state. With regard to playgrounds, the inventory revealed that there are 304 public playgrounds in the state.

*There are a number of mechanisms that support efforts of municipalities to provide outdoor recreation opportunities. These are described next in two sections: financial support and other assistance.*

### **Financial Support**

In 1912 Vermont was among the first states to pass legislation that enabled communities to use tax dollars to purchase public playgrounds and lands as well as to construct and maintain buildings and equipment for public recreation.

The most reliable, single source of funding for outdoor recreation projects for Vermont municipalities since 1965 (excluding 1995-1999) has been the Land and Water Conservation Fund (LWCF). By 2004, the program provided more than \$30 million in matching funds to this state.

For the years 2000 to 2004, the LWCF program awarded more than \$1.7 million in grants to over 53 cities and towns for acquisition, conservation, and development of public parks and outdoor recreational facilities. Of the 55 projects funded by LWCF between 2000 and 2004, 20 of them included the development of new playgrounds. Most of these playground projects replaced old, outdated and unsafe playground equipment with new playground equipment. Each project included ADA accessibility components. Additional details about LWCF are presented in Chapter 1 (Introduction) of the plan. One fact about the status of towns and LWCF funds remains constant: the number of projects and funds that are requested each year exceeds what is available to be awarded.

In 2003 an additional source of funds for recreation facility development became available to municipalities and not-for-profit organizations for three years--the Recreational-Educational Facilities Grants Program from the Vermont Department of Buildings and General Services, providing more than \$500,000 during that period towards such projects.

### **Other Assistance**

Since the 1960s, the Vermont League of Cities and Towns (VLCT) has provided technical assistance to towns, including their municipal call center. Specific examples of VLCT's support for outdoor recreation concerns are their 2003 and 2004 day-long workshops regarding outdoor recreation grant opportunities available to municipalities.

The Vermont Department of Forests, Parks and Recreation (FPR) has long provided outdoor recreation-related assistance to Vermont communities. Since 1965, FPR has administered the grants for the Land and Water Conservation Fund program and prepares the required Statewide Comprehensive Outdoor Recreation Plan (SCORP) every five years.

Since the late 1990s, the Vermont Recreation and Parks Association (VRPA) has offered a weekly email networking communication to its members. It coordinates the annual Governor's Conference on Recreation. Other activities include holding workshops such as the 2002 National Playground Safety Institute. As a result of this training, 35 people were certified to conduct playground safety audits and inspections.

### **Achievements**

*The following are a few achievements indicating the breadth of outdoor recreational offerings of municipalities throughout the state:*

More than 30 towns created conservation commissions between 1994 and 2004, for a total of 94 towns. Besides conservation activities, many commissions also get involved with development of trails.

In 1997 the towns of Barnard, Bridgewater, Stockbridge, and Killington appointed town representatives to develop a plan to conserve about 60,000 acres of public and private lands where the towns meet, known as the Chateaugay No Town Area.

The City of Barre's after-school program Cityscape was recognized in 1998 by the Mott Foundation as a exemplary school-community collaboration. It was also awarded one of the

original 21<sup>st</sup> Century Schools grants. Outdoor program activities included clearing bike trails of debris, snowshoeing, and cross-country skiing.

Beginning with one school in 1999 to 17 in 2003, students from across the state celebrated International Walk to School Day, which educates children, parents, and motor vehicle operators about keeping walkers safe.

In 1999 some schools around the state began sponsoring the Girls on the Run<sup>®</sup> program for third to fifth graders. This is an 8- to 12-week experiential physical training program, culminating in a 5-kilometer run or walk event. By 2004, 500 girls participated.

In 2000 the annual “Bike the Bed” event was instituted by the Twinfield Union School on part of the Cross Vermont Trail on an abandoned railbed between Plainfield and Marshfield. In 2003, nearly 100 students “biked the bed” to and from school.

In 2001 the Run Girl Run! program, free to middle-school aged girls for leading healthy, active, and outgoing lives, created a survey entitled “Is Your Town a Heart-Healthy Town?”

In 2002 the Burlington Department of Parks and Recreation became responsible for the Burlington Conservation Legacy Program, which was designed to maintain and acquire natural areas including parks, gardens, and shoreline along Lake Champlain and the Winooski River.

Royalton first received funding from the Land and Water Conservation Fund in 2003 to build a new playground. The town surveyed local children to help determine how the project would be done. The new custom design equipment cluster included all eight components voted most desirable by the children.

The Town of Brighton and the Northern Vermont Resource Conservation and Development Program collaborated for 12 years

towards the 2003 dedication of the Island Pond Pedestrian Timber Bridge.

In 2003 the Upper Valley Trail Alliance received a five-year grant to support “Upper Valley Trails for Life,” a local partnership to increase active living and encourage healthier life styles. Partners include local schools and recreational departments, Dartmouth Hitchcock Medical Center, Dartmouth Medical School, and the National Park Service.

The Burlington and Colchester Trail Bridge across the Winooski River near the mouth of Lake Champlain connected the two towns in 2004 for recreational purposes and handicapped access. Demand for the bridge became clear after a ferry crossed the river for three years with about 20,000 boardings per year.

In 2004 the Safety and Health Promotion Program of Vermont League of Cities and Towns sponsored a step-counting initiative “Adventure.” About 1,800 employees and family members from 74 municipalities participated.

### *Issues*

A brief presentation of just a few of the issues and concerns that municipalities face in delivering recreational services to today’s recreationists illustrates how inadequate the supports are for this sector of the industry in Vermont. As part of the information gathering for this plan, each of Vermont’s 12 (now 11) regional planning commissions prepared a report about the outdoor recreational needs of the towns in its region. When compared with 1993, more towns included some discussion of recreation in their town’s plan. Overall, however, these reports indicate that towns face growing and unmet needs in providing outdoor recreational opportunities for their residents and visitors. Some major concerns include the following:

The demand for outdoor recreational opportunities is growing in every town. Unfortunately, the majority of Vermont’s municipalities, other than in the schools and larger towns, have no staff dedicated to recreation. Some towns have volunteer committees instead, and these especially need

assistance to organize, build capacity, and plan for and establish outdoor recreation facilities.

Formal recreational services in some towns exist only at school facilities. At a minimum, towns need to find ways of coordinating use of existing facilities to serve multiple towns, organizations, schools, and the public.

Although regional planning commissions have produced more accurate and informative maps via use of spatially-related databases and Geographic Information Systems (GIS) technology, they do not have the ability to provide staff dedicated to assisting towns with regard to their recreational needs and concerns.

Approximately two full-time recreation positions were lost when the Vermont Department of Forests, Parks and Recreation's recreation division was eliminated due to budget cuts in the mid-1990s. The Vermont Recreation and Parks Association (VRPA) picked up some of the functions of those jobs, but other support and planning services previously available free to towns were lost.

Many towns stated that access to recreation lands was an issue. Finding and retaining open space for public recreation is becoming more difficult, partly because many new landowners post their land, effectively closing out acres that were traditionally used by the public.

Many towns cited the need for more facilities that are accessibility by handicapped persons.

Many towns need different types of sports fields, courts, playgrounds, and trails.

Some towns have need for multiple fields and open space in town centers and along travel corridors.

In summary, nearly all municipalities in Vermont would like to provide additional outdoor recreation opportunities and require assistance with planning, improving facilities, staffing, grant writing, and securing funding for operations, maintenance, and capital improvements.

## b. State-Managed Recreational Opportunities and Support

The 1999 Vermont Recreation Resources Inventory identified 648 public outdoor recreation sites operated by the State of Vermont. Agencies and departments in Vermont state government that directly supply recreational opportunities or that support the outdoor recreation industry in some way include the Agency of Natural Resources, Agency of Development and Community Affairs, Division for Historic Preservation, Agency of Transportation, Agency of Agriculture, Food and Markets, Department of Aging and Disabilities, and Department of Public Safety. Please refer to the chapter representing the Vermont Trails and Greenways Plan for information regarding transportation related achievements and issues.

### **Vermont Department of Tourism and Marketing**

In the mid-1990s, following the direction of new brand studies, the Vermont Department of Tourism and Marketing (VDTM) began a promotional focus based on five themes: Agricultural Heritage; Natural Heritage; Cultural Heritage; Quality Vermont Made Products; and Four Season Outdoor Recreation. In fiscal year 1997, the department established 12 marketing regions to enhance marketing efforts from the local level. Consolidated to 11 regions in 2002, the program then developed more cooperative marketing efforts between and across regions.

Under Act 190, passed by the legislature in 1996, other state agencies and departments engaged in marketing activities could enter into agreements with VDTM for coordinated marketing, promotion, and advertising services.

In 1997 development of an Intelligent Transportation System (ITS) began in Vermont. The ITS uses technology to assist travelers throughout the state. Components include a website, signage, and the 511 project, in which Vermont joined with some other states to pilot a telephone number providing directional information. By 2003 the Welcome Centers in Guilford and Fair Haven offered computer terminals for travelers to get directions to places throughout the state.

As part of Vermont's Intelligent Transportation System (ITS), the Vermont Tourism website, the Vermont Travel Planner, was initiated in 1997 and officially launched in

2001. It is one feature of [www.VermontVacation.com](http://www.VermontVacation.com) which averages about a half million page views per month.

In 2003 the Vermont Department of Tourism and Marketing created the Heritage Tourism Coordinator position, which provides training for outdoor recreation providers in the use of marketing resources.

### **Vermont Agency of Natural Resources**

The agency has three departments: Environmental Conservation; Fish and Wildlife; and Forests, Parks and Recreation. It is responsible for administration of major natural resource programs and regulations in Vermont. Public outdoor recreation sites identified through the Vermont Recreation Resources Inventory included 56 parks, 38 forests, 86 wildlife management areas, 151 fishing access areas to lakes and ponds, and other properties managed by the Vermont Agency of Natural Resources (ANR).

The fee and non-fee lands managed by ANR total more than 480,000 acres. Please refer to the section on Fish and Wildlife-Based Recreation found later in this appendix for more information about the Department of Fish and Wildlife's achievements and issues.

#### **Achievements**

Between 1994 and 2003, the Vermont Agency of Natural Resources (ANR) acquired more than 70,000 acres of lands in fee and conservation easements on an additional 120,000 acres. More detailed inventories began taking place in 2000 for many of the resources found on ANR lands.

In 1994 there was one program to prevent the spread of aquatic nuisance species (ANS). By 2003, Parker, Island, and Joes ponds and Caspian, Seymour, and Maidstone lakes had such programs.

In 1996 minimum flow standards for streams were established so that development operations can maintain sufficient water in streams to protect aquatic habitat and organisms. The Vermont Agency of Natural Resources developed these in collaboration with the Vermont Ski Areas Association. By 2004, five ski areas had snowmaking systems that met these standards, five others had plans in place for meeting the standards, and nine operated under old permits that allowed lower standards for streamflow.

Recommendations for shore land and streamside buffer protection, as developed for the 1997 Connecticut River Corridor Management Plan, were adopted by some towns on both the Vermont and New Hampshire sides of the river.

In 1998 the Department of Environmental Conservation created a Rivers Management Section with the addition of eight full-time staff positions by 2004. The section manages, restores, and protects river corridors and helps educate people to use a variety of bioengineering techniques for restoration projects. A protocol for stream geomorphology and physical habitat assessment was developed to evaluate rivers throughout the state.

The Department of Environmental Conservation began the process of developing watershed-wide plans for the 17 major water basins throughout the state.

In 1999 the Vermont Department of Forests, Parks and Recreation published the *Vermont Outdoor Recreation Inventory Summary Report*, which summarized the availability and accessibility of outdoor recreational opportunities provided by both the public and private sectors.

In 1999 game wardens from the Vermont Department of Fish and Wildlife began receiving some financial compensation for more actively enforcing laws for all terrain vehicles, snowmobiles, and boats. Wardens have a complete set of outdoor skills that make them well-suited to these activities, and they are in the out-of-doors in the course of their normal work. They are the law enforcement unit able to do this work most efficiently.

The Vermont Agency of Natural Resources (ANR) adopted "Uses of State Lands" as a policy in 1999. This policy provides criteria and guidelines for commercial use of ANR lands. On an annual basis, the Land Division issues or oversees over 100 licenses and special use permits for appropriate uses of ANR lands, including compatible commercial uses.

In 2001 the Vermont Department of Fish and Wildlife sponsored a wildlife congress which helped define a land ethic for the state and developed ideas for how to implement it.

A Lands and Facilities Trust Fund was created in 2001 to assist the stewardship and management of ANR properties. The fund receives receipts from timber sales on state forests and accepts donations. Expenditures from the trust fund were expected to begin in 2005.

In 2002 Vermont adopted a quarantine regulation for noxious weeds. The movement, sale, and distribution of 32 designated noxious weeds, including some invasive aquatic plants, became illegal. Federal grant dollars were allocated to game wardens and state police to write tickets for the civil offense of spreading Eurasian watermilfoil and water chestnut. Other species include purple loosestrife and common reed (non-native phragmites), which compromise many wetlands in the state.

In 2002 the Vermont Agency of Natural Resources adopted a procedure whereby river corridors may be protected from development that could cause flooding. With this procedure, limits of floodways became a consideration under Act 250 criterion 1(D).

As a result of growing recognition that dams can impede streams' ability to transport flow and sediment, cause streambank erosion and flooding problems, degrade, alter fisheries habitat, create barriers to migratory fish passage, and degrade water quality, the legislature passed an act in 2003 to encourage private and municipal dam owners to remove their dams voluntarily, where appropriate. The Vermont Dam Task Force, a statewide cooperative effort among agencies and private organizations, started up in the past decade to restore streams by removing dams that no longer have economic or social value.

In 2003 the state adopted a Clean & Clear Water Action Plan to foster efforts, including finding financial resources, to ensure that Vermont's waters meet high water quality standards.

In July 2003, a nature center was opened at Molly Stark State Park in the Town of Wilmington.

### *Issues*

Between 1994 and 2003, the Vermont Agency of Natural Resources (ANR) increased its land holdings by about 60 percent. With just three staff positions added during this period for stewardship of these lands, managing these holdings has become increasingly challenging.

Since the late 1990s, demands on law enforcement personnel for search and rescue operations have increased. More skiers and hikers appear to be going off trails.

In a 1997 survey of Vermont residents for the Agency of Natural Resources Land Conservation Plan, 67 percent responded that the percentage of state-owned lands should increase, while 2.7 said it should decrease.

In 1998 State Parks infrastructure needs were assessed through an independent study and found to be in excess of \$31 million. The legislature appropriated \$4 million subsequently to begin remedying the problems, but much more needs to be done to address these critical needs and provide safe and satisfying experiences.

Changing recreational interests and behavior, such as the trend toward shorter trips and demand for more amenities, have contributed to a gradual decline in visitation to Vermont State Parks over the past ten years, especially with respect to day use.

Illegal use of all-terrain vehicles caused extensive damage to many sensitive areas on ANR lands. There are not enough law enforcement officers to stem the tide of illegal use. Refer to the trails and greenways plan, Chapter III, for more information regarding this.

Conflicts have continued to occur between motorized and non-motorized recreation activities, especially between snowmobiles and cross-country skiers in winter and between users of personal watercraft and those who wish for more quiet experiences on lakes and ponds.

The possibility of using certain ANR lands for large-scale wind energy development was the subject of much controversy and debate in Vermont. In 2004 ANR solicited public comments on this issue as part of a comprehensive policy development effort on this subject.

Lack of roadside pull-offs and handicapped access to ANR lands are issues in certain areas.

Vandalism of signs and facilities at ANR sites continues to be a problem.

Illegal dumping of trash and possibly toxic waste occurs sometimes at access points.

### c. Federally Managed Recreational Opportunities

#### **U.S. Fish and Wildlife Service**

*Please refer to the wildlife-based recreation section found later in this appendix for more information about issues related to fishing.*

The U.S. Fish and Wildlife Service maintains two refuges in Vermont. The Missisquoi National Wildlife Refuge, located in Swanton, includes 6,560 acres along the Missisquoi River delta where it empties into Lake Champlain. The Silvio O. Conte National Fish and Wildlife Refuge was established by Congress in 1991 for key portions of the Connecticut River Valley from the Canadian border through the states of New Hampshire, Vermont, Massachusetts, and Connecticut.

#### **Achievements**

From 1991 to 2001, the U.S. Fish and Wildlife Service's Partners for Wildlife Program, along with many partners, restored 935 acres of wetlands and 102 miles of stream-banks across Vermont.

#### **Missisquoi National Wildlife Refuge:**

721 acres were added to the refuge between 1994 and 2004.

A handicapped-accessible fishing access area was created at the Missisquoi refuge in 1994.

A new Refuge Headquarters/Visitor Contact Station will open in 2005.

A new 2300-foot long trail was constructed from the Old Railroad Passage trailhead parking area to Stephen J. Young observation platform. Many refuge trails now are constructed of a gravel base topped with "rock fines" providing a firm surface that can be used by many people including mobility impaired and wheelchair confined visitors. An elevated observation platform and handicapped accessible ramp were constructed at Stephen J. Young Marsh.

A floating dock was purchased to accommodate access to boats for refuge boat tours.

#### **Silvio O. Conte National Wildlife Refuge:**

In 1999 26,250 acres were added in Vermont to the Conte National Wildlife Refuge. These lands are located in the state's Northeast Kingdom, are known as the Nulhegan Basin Division, and provide public access for wildlife-based recreation on previously private lands.

#### **Issues**

#### **Silvio O. Conte National Fish and Wildlife Refuge:**

National refuges were not fully funded in 2003, which made setting up and managing the Nulhegan Basin Division in Vermont particularly challenging.

Some user groups are concerned that their activities are not compatible with these new public lands due to the mission of the Fish and Wildlife Service to offer wildlife-based recreation opportunities.

Private camp owners are concerned about their leases expiring in 50 years and the subsequent loss of the hunting experience and culture in this area of the state

#### **Missisquoi National Wildlife Refuge:**

No law enforcement personnel on staff.

Illegal use of all-terrain vehicles and snowmobiles enter closed areas and cause damage to sensitive habitats and disturb other recreational users.

Conflicts occur between motorized and non-motorized recreation activities, especially between users of motorized watercraft and those who wish for more quiet experiences in canoes and kayaks; conflicts occur between big game hunters; conflicts occur between waterfowl hunters.

Visitation has increased each year while staffing and funding have not.

There is great need for more funding to manage and protect wildlife species, conduct programs, and find and train volunteers.

Illegal camping.

Access areas are being used for a variety of activities other than the intended fishing and wildlife-based recreation pursuits.

Littering, trash dumping, and inconsiderate behavior. In some places and instances, water-based recreationists access closed areas of the refuge.

Dogs off leash and conflicts with other users.

### **U.S. Army Corps of Engineers**

The U.S. Army Corps of Engineers (Corps) maintains eight flood protection dams in Vermont, five in the Connecticut River basin and three in the Winooski River basin. On many of its more than 6,000 acres, the Corps operates recreational facilities in conjunction with each of the Connecticut River dams--Union Village Dam, North Hartland Lake, North Springfield Lake, Townshend Lake, and Ball Mountain Lake.

The Corps conducts two water releases, one in spring and one in fall, from Ball Mountain Lake Dam specifically for recreational purposes. The releases provide excellent whitewater boating opportunities on the West River.

The Corps maintains fish passage facilities at Ball Mountain and Townshend Dams to allow for upstream and downstream migration of Atlantic Salmon.

The Corps regulates dredge and fill activities on wetlands and navigable waterways by issuing permits [Rivers and Harbors Act of 1899, Section 10; the Federal Water Pollution Control Act; and the Clean Water Act, Section 404. These permits are needed for establishing recreation paths and greenways.

### **Achievements**

Over the past decade, the Corps added trails and shelters and implemented the National Recreation Reservation System for these facilities, including the eight-mile West River Trail.

A three-year agreement, between the Corps, U.S. Fish and Wildlife Service, and the Vermont Agency of Natural Resources, for maintaining river flow and ramping rates (gradually change in water levels) at dams in Vermont, to reduce negative impacts of rapid changes of flow on fish and other aquatic wildlife, was put into effect in 2004.

The Corps changed their bioengineering standards to take a more geomorphic systems approach to river restoration projects.

### **Issues**

Corps dam facilities in southeastern Vermont receive particularly heavy recreational use due to the relative scarcity of large lakes and ponds there.

Reduction of the fall whitewater release at Ball Mountain Dam to one day from two days in 2003, to comply with Vermont Water Quality Standards, resulted in concern by kayakers that this would reduce opportunities and threaten recreational businesses in the area. In 2004, American Whitewater and New England F.L.O.W. commissioned a study of the economic impacts of the ACOE fall release schedule changes.

### **National Park Service**

*The National Park Service (NPS) administers a number of recreation-related facilities and programs in Vermont, and a brief description of each of them is given here.*

#### ***National Historic Park***

Vermont's single national park, the Marsh-Billings-Rockefeller National Historical Park, opened in Woodstock in 1998. Besides tours of the mansion, the estate features a 550-acre forest. Working in partnership with the Billings Farm and Museum, it chronicles three generations of stewardship and the emergence of a national conservation ethic.

#### ***River and Trails Conservation Assistance Program***

This program provides technical assistance to local communities and organizations for the conservation, planning, and management of rivers and trails in Vermont.

#### ***National Register of Historic Places, National Historic Landmarks, and National Natural Landmarks Program***

The National Register of Historic Places and the National Historic Landmark Program are administered by the NPS through the Vermont Division for Historic Preservation. All three programs provide public recognition and protection of significant historic and natural resources. More than 8,000 sites in Vermont are listed on the National Register of Historic Places. Ten sites are designated as National Natural Landmarks.

### ***Appalachian National Scenic Trail (AT)***

The Vermont sections of this trail are managed in partnership by the NPS, the U.S. Forest Service, the State of Vermont, the Appalachian Trail Conference, the Green Mountain Club, and the Dartmouth Outing Club. Refer to Chapter 4 regarding trails and greenways for more information about this.

### ***Land and Water Conservation Fund Program***

The NPS administers the Land and Water Conservation Fund program in Vermont through the Vermont Department of Forests, Parks and Recreation. Refer to the Introduction chapter for more information about this program.

### ***Historic Preservation Fund***

The NPS administers this fund, which provides technical assistance for partial funding of historic preservation programs in every state.

### **Green Mountain National Forest**

The U.S. Forest Service is a branch of the U.S. Department of Agriculture and is responsible for managing the nation's national forests. The 383,000-acre Green Mountain National Forest (GMNF) is located entirely within Vermont, making the Forest Service the largest single landowner in the state. In 1992 the Proclamation Boundary of this forest was extended into the Taconics region of the state, encompassing all of Bennington County. Since that time, some lands in that region have been added to the forest, including Dorset and Grass mountains. More than 37,000 acres in all were added to the forest between 1994 and 2003.

Like other national forests, the GMNF is managed for multiple uses. The 1987 Land and Resource Management Plan for the forest cited recreation as a major use. Developed recreation opportunities include campgrounds, about 600 miles of trails, day-use areas, alpine and nordic ski areas, and picnic areas. Dispersed activities include hunting, fishing, and wilderness hiking and backpacking. The forest has six federally-designated Wilderness Areas and a 36,400-acre National Recreation Area, which includes 13,600 acres of wilderness area.

A revised plan for the forest has been in progress over the past few years, involving a great deal of public input

through meetings in towns throughout the forest. An additional area designated for wildlife habitat has been proposed for the new plan. The primary purposes of lands under this designation would be to: (1) provide a mix of different-aged forest habitats for wildlife species, from early successional to mature; (2) employ a full range of timber management techniques as the primary tool for manipulating habitat; and (3) de-emphasize recreational uses to minimize disturbance to wildlife.

#### **Issues**

Revising the plan for the forest is a long process. A draft plan based on the preferred alternative is expected to be released in 2005.

The plan will need to cover 90,000 more acres than the previous plan, representing a 20 percent increase in the area of the forest.

Conflicts continue to exist between those who wish to access the forest via roads and have timber production be a top priority and those who favor more wilderness and creation of old growth forests in the state.

## **2. Fish- and Wildlife-Based Recreation**

For the purposes of this plan, wildlife-based recreation refers to fishing, hunting, trapping, and observing or photographing wildlife. Wildlife-based recreation consists of consumptive (hunting, fishing, and trapping) and non-consumptive (viewing, tracking, photographing, and studying) activities.

Significant new funds have been made available for wildlife-related projects, including many with recreational ties, from conservation license plates and federal wildlife grants. From 1998 to 2004, Vermont's Conservation License Plate program made available to not-for-profit organizations and other entities more than \$350,000. State Wildlife Grants monies provided more than \$1.35 million to Vermont in 2004 and 2005.

Residents' attitudes toward the quality of fish and wildlife habitats in Vermont from recreation polls conducted in 1992 and 2002 remained relatively constant. Additionally, Vermonters indicated that the loss of wetlands was less of a

problem in 2002 than in 1992. Still more than 84 percent of respondents indicated that destruction of wildlife habitat was a problem, and nearly 70 percent said loss of wetlands is a problem in the 2002 resident recreation survey.

There are a number of organizations that represent hunting, fishing, and trapping interests in Vermont. The Vermont Federation of Sportsmen's Clubs had a membership of 48 organizations by 2003. The Hunters, Anglers, and Trappers Association of Vermont and the Vermont Traditions Coalition were both formed in 2003 as statewide organizations dedicated to furthering traditional recreation uses and multiple use management of public lands in the state.

### a. Hunting

The 2002 Vermont resident recreation survey revealed that 16.3 percent of respondents indicated that hunting was one of the top two outdoor recreational activities they engage in between November and April. Between May and October, this percentage was 7.6. Statistics are available from the National Survey on Recreation and the Environment for the numbers of people who hunt from the combined states of Vermont, New Hampshire, Massachusetts, and New York. The number of people from those states who engaged in this activity increased by nearly seven percent between 1995 and 2003, from 1.29 million to 1.38 million. This survey found that the national increase in participation in hunting for this period exceeded 29 percent.

The U.S. Fish and Wildlife Service's 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation found that the number of Vermont residents who hunted in 2001 (75,000) was statistically identical to the number in 1991 (70,000). The number of U.S. residents who hunted in Vermont in 2001 (100,000) was statistically the same as the number in 1991 (101,000). Likewise the number of days U.S. residents hunted in Vermont was statistically the same in 2001 (1,510,000) as in 1991 (1,778,000).

In a 1997 survey of Vermont residents for the Agency of Natural Resources Land Conservation Plan, 65 percent responded that it was important "to provide public hunting opportunities."

Just over half the respondents in the 2002 Vermont resident recreation survey gave the hunting experience in the state a grade of A or B. It's important to note that approximately one-third of those surveyed said they did not know the quality of the experience, indicating unfamiliarity with the hunting experience by a large segment of the population. More than 84 percent of that survey's respondents said the destruction of wildlife habitat was a problem in Vermont, while nearly 70 percent said the same for loss of wetlands.

White-tailed deer is the most popular game species in the state. The 2002 Vermont Deer Season Report of the Department of Fish and Wildlife stated that 53 percent of deer hunting in Vermont occurs during the regular season with the rest of hunting divided between archery, muzzle loader and youth seasons.

Achievements and issues of hunt testing and field trials for dogs are presented in section 11f, dog-based recreation, of this appendix.

### **Achievements**

Vermont's first moose hunting season was held in 1993 in certain areas of the state. The season was extended from four to six days in 2003. Moose hunting was allowed in additional areas of the state incrementally over the years as the moose population expanded. The number of permits more than doubled between 2003 and 2004 from 365 to 850.

The number of resident turkey hunting licenses sold increased steadily from 1994 to 2002. Resident sales in 2003 of 14,098 exceeded 1994 sales by nearly 61 percent.

In 1996 the VDFW started the Becoming an Outdoors Woman (BOW) program, patterned after the national program. BOW is designed for women with little or no experience in traditional outdoor activities and offers hands-on learning in a safe, supportive, and non-competitive environment.

In 1999 legislation requiring landowner permission to place a tree stand for hunting purposes became effective.

In the fall of 2002, the National Wildlife Federation brought together interested parties from a wide spectrum

of opinions for a “Conversation on the Conservation of Wildlife.” Additional meetings were held around the state during 2003.

In 2003 the states of Vermont and New Hampshire initiated a reciprocal license agreement and established a new zone for waterfowl hunting in the Connecticut River Valley.

In 2003 public access to the 1200-acre Blueberry Hill Wildlife Management Area was greatly enhanced as a result of efforts by the Vermont Federation of Sportsmen’s Clubs to purchase a strategically located parcel adjoining this property.

Authority for deer herd management was returned to the Vermont Fish and Wildlife Board in 2004 by the Vermont Legislature.

In 2004 the Vermont Department of Fish and Wildlife created a lands management biologist position to oversee habitat management projects on 131,000 acres of wildlife management areas.

A cooperative venture between the Vermont Department of Fish and Wildlife and the University of Vermont’s Cooperative Extension resulted in 4-H Shooting Sports being added to 4-H offerings in Vermont. In 2004 45 Vermont boys and girls aged 8-18 competed at the National Jamboree in rifle, shotgun, muzzleloader, archery, and wildlife hunting.

#### *Issues*

Hunting license sales provide the primary source of revenue and match dollars for the Vermont Department of Fish and Wildlife. The net decline of both resident and non-resident hunting license sales between 1994 and 2003 is projected to continue and, if it does, will negatively impact wildlife management by the state.

Broad demographic and social changes including family structure, an aging population, and urbanization may prove challenging to the long-term survival of the sport of hunting in the U.S. as well as the culture of hunting in Vermont.



Overbrowse by ungulates poses problems in some areas of the state. Deer overbrowse occurs in areas where the number of deer per square mile is rising. Some deer hunters would like to see more than 20 deer per square mile. However, more than 10 deer per square mile can affect regeneration of red oak and ash. Higher numbers than these can affect other species. In some areas of southeastern Vermont, high deer populations have changed the species composition of the forest. Moose are reported to be doing serious damage to thousands of acres of recently regenerated forest stands in the Northeast Kingdom.

Some deer hunters in Vermont have called for a change in the way the deer herd is managed in the state to quality deer management. In 2004 the Vermont Department of Fish and Wildlife held meetings about managing the deer herd, and a nonprofit organization the Quality Deer Management Association was formed.

## b. Fishing and Ice Fishing

*There is considerable overlap between water quality and fisheries issues. However, this section will focus on water quality issues that relate more directly to fishing. Refer to the section on water-based recreation below for a discussion of more general water quality issues.*

Fishing continues to be a popular outdoor recreation activity in Vermont. Through the recreation survey of Vermont residents in 2002, 17.7 percent indicated that fishing was one of the top two outdoor recreation activities they engage in between May and October. Between November and April, the percentage who reported ice fishing as a top activity was 6.9.

Statistics are available from the National Survey on Recreation and the Environment for the numbers of people who fish from the combined states of Vermont, New Hampshire, Massachusetts, and New York. The number of people from those states who engaged in this activity increased more than 22 percent between 1995 and 2003, from 4.71 million to 5.77 million.

The U.S. Fish and Wildlife Service's 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation found that the number of Vermont residents who fished (anywhere in the U.S.) in 2001 (104,000) was

statistically identical to the number in 1991 (110,000). The number of U.S. residents who fished in Vermont was statistically the same in 2001 (171,000) as in 1991 (181,000). Likewise the number of days U.S. residents fished in Vermont was statistically the same in 2001 (2,321,000) as in 1991 (2,258,000).

The 2000 Vermont Angler Survey by the Vermont Department of Fish and Wildlife found that the average number of days Vermont resident anglers fish did not change between 1990 and 1999 (open water was 27, ice was 11). In the same survey, nonresident mean open water fishing days decreased from 12 to 9, while nonresident ice fishing days increased from 7 to 9.

In a 1997 survey of Vermont residents for the Agency of Natural Resources Land Conservation Plan, 89 percent responded that it was important "to provide public access to fishing areas." The 2000 Vermont Angler Survey found that resident satisfaction with fishing in 1991 was 2.35 (on a 1 to 4 scale), and increased to 2.51 in 2000. However, the 2002 recreation survey of residents revealed that Vermonters were concerned with the destruction of fish habitat. More than 84 percent indicated that this was a problem.

Organizations representing angler interests in Vermont include Lake Champlain International, the Vermont B.A.S.S. Federation, and Trout Unlimited.

### **Achievements**

Monitoring of the lake sturgeon in Lake Champlain, a state-listed endangered species in Vermont, between 1998 and 2004 revealed that spawning activity was occurring at all four of their historic spawning sites--tributaries to Lake Champlain--the Lamoille, Winooski, and Missisquoi rivers and Otter Creek.

Lake Champlain International continued to organize America's oldest and largest annual freshwater fishing derby, the LCI Father's Day Derby, which started in 1981. Lake Champlain International (LCI) started a number of new initiatives: in 1994 the All Season Tournament, in 2000 the LCI Lake Champlain Bass Open; in 2001 the LCI Little Anglers; and in 2001 "It's All about the Fish" fundraising raffle.

## Vermont Resident Anglers Opinions on Fishing Issues

	No Problem or Minor Problem	Moderate or Severe Problem
Access	82.6	17.4
Crowding	68	32
Conflict with Other Uses	59.3	40.7
Contaminant Levels	44.7	55.3

Source: Vermont Department of Fish and Wildlife, 2000

The “Trophy Trout” regulation was put into effect in the mid-1990s to provide good fishing on stretches of Otter Creek and the Black (south), Lamoille, and Winooski Rivers.

In 1999 the Vermont Department of Fish and Wildlife hired an aquatic habitat biologist, whose primary responsibilities include providing outreach and technical assistance to landowners, conservation groups, and local communities on the protection and restoration of aquatic habitats and working with other government agencies on policies and programs that affect aquatic habitats.

Native plant nurseries began producing plants to restore riverbanks and floodplain forests. The Vermont Riparian Project of the Intervale Foundation’s Conservation and Restoration Program began in 2001. In 2002 The Nature Conservancy and the Poultney-Mettawee Watershed Partnership started the Champlain Valley Native Plant Restoration Nursery.

Lewis Creek was treated to kill sea lamprey in 2002 as part of the Lake Champlain salmonid restoration program. In 2003 the Winooski River was determined to be a major producer of sea lamprey. The lamprey control program was expanded to include the Winooski River up to the Winooski One Dam in 2004.

New baitfish regulations were enacted in September 2003 to decrease the chances of exotic species, which could negatively impact native species, being introduced to Vermont waters.

A reciprocal license agreement began in 2004 so that anglers who held a fishing license from either New York or Vermont were able to fish in most of Lake Champlain.

A ban on the sale of lead sinkers in the state will go into effect on January 1, 2006. A ban on the use of lead sink-

ers for taking of fish in Vermont waters will go into effect on January 1, 2007.

Walleye restoration was undertaken in Lake Champlain by the Vermont Department of Fish and Wildlife and the Lake Champlain Walleye Association. Over a six year period, 540,000 walleye fingerlings were introduced into the lake.

### Issues

The 2000 Vermont Angler Survey by the Vermont Department of Fish and Wildlife revealed that access to fishing was less problematic to anglers than crowding, user conflicts, and contaminant levels in fish as shown in the table above.

The survey also found that Vermont anglers believed the top five factors affecting fish health and fishing quality were (1) excessive aquatic plant growth; (2) poor water quality; (3) barriers to fish migration; (4) over-fishing; and (5) erosion.

In 1997 the non-native fish alewife was first found in Lake St. Catherine in Rutland County. It may have been released from a bait bucket or deliberately (illegally) introduced. In 2004 alewives were found in northern sections of the Lake Champlain in Vermont and Quebec. Once established, alewives could out-compete native smelts for food and cause problems for lake trout and landlocked Atlantic salmon.

Sea lamprey is a species believed to have found its way into Lake Champlain from the Great Lakes in the mid-1800s. Although lamprey control efforts have been underway in major tributaries to the lake since 1990, the treatment program was interrupted on the Vermont side between 1998 and 2002. The lamprey wounding rate on native fish in Lake Champlain seems to be increasing. If not kept in check, lamprey could threaten the lake trout,

salmon, northern pike, walleye, and bass fisheries. In recent years, Lake Champlain supported 30 full-time charter fishing boats. There are just two now, with three or four operating on a part-time basis.

A 1998 report issued by the Vermont Department of Fish and Wildlife indicated that populations of brown trout in the Batten Kill, one of Vermont's most famous trout streams, declined by as much as 70 percent in a decade.

The only access point to many waterbodies in the state is provided by the Vermont Department of Fish and Wildlife's 151 Access Areas. Creation of these access areas was made possible through fishing license sales and an excise tax on angling equipment that has been in place for decades. Beginning in 1993, the legislature added 50 percent of Vermont motorboat registration fees to be used for access areas. Many more people now wish to access Vermont's lakes and ponds, and some of these users do not fish, hunt, or engage in other wildlife-related activities. Commercial uses of the access areas are not allowed under existing laws, but this issue is currently being reviewed. Fish and Wildlife game wardens have issued a few tickets to outdoor guides in the past year, and the media has reported on this situation as being problematic. Rulemaking (changing the law) is being considered so that there would be more money available to set up and maintain access areas. Sources of funds could come from licenses to businesses, registration fees for canoes and small, non-motorized boats, or other user fees.

Sales of the total of both resident and non-resident fishing licenses declined overall from 1993 to 2003 by nearly 16 percent from 97,399 to 82,116.

Numerous invasive fish species have become established in Lake Champlain via the Hudson River and Champlain Barge Canal, such as white perch, blueback herring, and gizzard shad. Populations of these species have exploded throughout the lake in recent years, and native fish species in the lake may be negatively impacted. Studies are being conducted as to the feasibility of placing a barrier at the southern end of Lake Champlain, in the Champlain Barge Canal, as a method of preventing the introduction of invasive species from the Hudson River system into the lake.

The Connecticut River Atlantic Salmon Restoration Program continues to work toward the restoration of this species to Vermont tributaries. However the number of returning adults has been disappointing.

Ice fishermen report the need for more public access sites during winter and more frequent plowing of existing access sites.

### c. Trapping

Participation in trapping in Vermont remained fairly steady between 1991 and 2003 according to trapping licenses sold during that period. License sales since 1991 averaged around 530 and increased to over 600 licenses sold in 2004.

#### **Achievements**

In 2001 the Vermont Department of Fish and Wildlife instituted the Advanced Trapper Weekend to communicate skills and best management practices to trappers beyond their mandatory basic class. Since 1997, Vermont trappers have participated every fall in a national study to test a variety of trap types and designs for efficiency, animal welfare, safety, and practicality. The resulting Best Management Practices will be implemented into Vermont's trapping programs.

#### **Issues**

Reducing and/or eliminating real and perceived problems associated with trapping.

Continuing to improve traps and trapping methods.

Conserving habitat for furbearers.

Minimizing conflicts between humans and wildlife, such as beavers flooding roads and trails, coyotes taking sheep, and raccoons in homes.

### d. Viewing Nongame Wildlife and Supporting Their Habitats

Vermont continued to support many species of nongame wildlife and their habitats, but the state's ability to increase knowledge about these species and conserve their habitats remained a challenge. The U.S. Fish and Wildlife

Service's 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation found that the number of Vermont residents who watched wildlife away from their homes (109,000) was the same in 2001 as in 1991. The number of U.S. residents who participated in nonresidential wildlife watching in Vermont in 2001 (307,000) is considered statistically the same as the number in 1991 (303,000). Likewise the number of days U.S. residents participated in nonresidential wildlife watching in Vermont was statistically the same in 2001 (3,717,000) as in 1991 (2,364,000).

### **Achievements**

Osprey, common loon, and peregrine falcon are uncommon bird species in Vermont and were listed as endangered in the state during most of the past decade. All three species met their recovery plan benchmarks for delisting by 2004, and a proposal is being submitted to remove them from the State Endangered Species List.

In the early 1990s the Nongame and Natural Heritage Program of the Vermont Fish and Wildlife Department added a temporary position to assist full-time staff in reviewing various activities that could impact significant natural communities and rare, threatened, and endangered species. These included recreation projects being funded by the Land and Water Conservation Fund and permits required for shoreland encroachments, developments through Act 250, and the potential spread of aquatic nuisance species (ANS).

The acquisition of the 625-acre Alburg Dunes State Park on Lake Champlain in 1996 conserved the longest as well as one of the state's few remaining sandy shorelines. This beach provides habitat for shoreline birds, and research may reveal its value as nesting habitat for turtle species and rare tiger beetles.

In 2000 the Vermont Department of Fish and Wildlife created a State Lands Ecologist position to improve knowledge and conservation of natural communities and habitats for a variety of species on Agency of Natural Resources lands.

A pilot study to map vernal pools, which provide breeding habitat for a number of amphibian species, occurred in 2003 and 2004. Infrared photography was used to

identify them and then field observations were conducted. Studies of nesting beaches and basking habitats for turtle species, including map, painted, snapping, and the state threatened spiny softshell turtle, were begun in the early-2000s.

Five-year studies to document the distribution of butterflies and breeding birds throughout the state were underway in the early-2000s.

To jump start bald eagle recovery efforts in Vermont, in 2004 six eaglets were released into the wild from man-made hack boxes through efforts of the U.S. Fish and Wildlife Service, the Vermont Department of Fish and Wildlife, the National Wildlife Federation, Outreach for Earth Stewardship, and others.

### **Issue**

The identification of locations of nongame species and the management and conservation of their habitats is not sufficient to keep pace with pressures for human use of the landscape.

## **e. Wildlife Tracking and Educational Efforts**

The number and quality of non-consumptive wildlife-related recreational opportunities in Vermont increased during the past decade due to many organizations' successes with projects and programs.

### **Achievements**

The *Vermont Wildlife Viewing Guide* was published in 1994 and offered details about many wildlife species which can be seen at 50 locations throughout the state.

Keeping Track, Inc. was founded in 1994 and provided training in tracking wildlife species to thousands of adults and children in its first nine years. The program developed a project and data management protocol in 2000, a guide to photographing animal tracks and sign in 2001, and launched a website in 2003.

The Vermont Institute of Natural Science (VINS) assists communities and individuals throughout the state to better understand ecological principles and the natural world. VINS regional education centers conduct programs and are

located in Woodstock, Quechee, Montpelier, and Manchester. The Manchester office was opened in 1993, with a two year break between 1999-2001. This office manages an 850-acre nature preserve for the Equinox Resort. In 1996 its North Branch Nature Center was opened on 28 acres in Montpelier along the North Branch of the Winooski River.

In 1998 Audubon Vermont opened High Pond Camp, a residential summer camp for 11 to 18 year olds in Brandon. More than 100 campers attend its four 10-day sessions every summer.

The University of Vermont Extension's annual Outdoor Family Weekend was first held in 1998 at Groton State Forest to provide families the opportunity to camp together and build wildlife-related outdoor skills.

Birding trails began in the Champlain Valley and along the Connecticut River. The Lake Champlain Birding Trail, which indicates sites for both land- and water-based viewing, was first publicized through a brochure in 2001. The trail was featured in *Audubon* magazine in the fall of 2002 as a top birding destination in the country. The Connecticut River Birding Trail was first publicized in 2002 with an itinerary spanning both sides of the river. The Connecticut River Joint Commissions are providing funding to help extend the trail to the Canadian border.

### 3. Water-Based Recreational Opportunities

Vermont's 819 lakes and ponds and 5,000 miles of major rivers and tributaries offer many exciting and scenic recreational opportunities. More than 200 of these lakes and ponds are larger than 20 acres. The 1999 Vermont Recreation Resources Inventory revealed 647 sites throughout the state that provided access to water. Of these, 348 were state-operated, 8 were operated by a county, 112 were operated by a city, town, village, or school district, 26 were operated by a federal agency, 37 were quasi-public/non-profit, 89 were commercial operations, and 27 were private.

*Most water-based recreational pursuits are increasing in popularity. This section provides some details about available resources, participation in these activities, some achieve-*

*ments of the past decade, and concerns related to these activities. Before presenting information about individual boating activities and swimming, some significant state achievements and water quality issues will be discussed.*

#### **Achievements**

In 1995 the Vermont River Conservancy (VRC) was formed to conserve lands adjacent to streams and lakes. From then until 2003, they took the lead or supported the purchase and/or conservation of 1,200 acres for water-based activities. These included Lyman Falls State Park on the Connecticut River, Buttermilk Falls in Ludlow, Twenty Foot Hole in Reading, and Lower Clarendon Gorge, all now managed by the Vermont Agency of Natural Resources. The VRC coordinated the Berlin Pond Watershed/Irish Hill Conservation Project with the Montpelier and Berlin Conservation Commissions. VRC is also coordinating the development of a Swimming Area Management Network of volunteers across the state.

Recent acres added to public lands managed by the Vermont Agency of Natural Resources included Alburg Dunes State Park on Lake Champlain in 1996; Green River Reservoir State Park, consisting of more than 5,100 acres of land surrounding the 653-acre reservoir, in 1999; 10 ponds in the 22,000-acre West Mountain Wildlife Management Area in 1999; the 296-acre Round Pond State Park in North Hero in 2001; and Bingham Falls in Stowe in 2003.

Between 1990 and 2004, 24 dams on nine Vermont rivers were re-licensed by the Federal Energy Regulatory Commission. The re-licensing process involves extensive public input and the development of a recreation plan for each facility. Most of these projects involved enhancements for recreation, including upgrades to boat launches, picnic areas, canoe carries and take outs, beaches, toilets, and hiking trails.

*In support of water-based recreational activities, a number of new funding sources for efforts to improve water quality became available in recent years, including the following:*

A new entity for managing Lake Champlain the Lake Champlain Basin Program (LCBP) was created in 1991 as a partnership of government agencies from New York, Vermont, and Quebec,

private organizations, communities, and individuals. Millions of dollars have been administered and issued by the LCBP to support various research and management efforts in the basin.

Between 1992 and 2004, the Connecticut River Joint Commissions' Partnership Program disbursed more than \$1 million in support of 373 local projects throughout that watershed.

In 1993 the Vermont legislature established the Motorboat Registration Fund to ensure that motorboat registration fees and penalties would assist the protection and maintenance of the state's water resources. These funds supported the Department of Environmental Conservation's Aquatic Nuisance Control Grants-in-Aid Program. In 2002 the Vermont legislature instituted a surcharge on motorboat registrations to provide additional funds for this program. The grants program consistently received more requests for funds than were available.

From 1998 and 2004, Vermont's Conservation License Plates program made available to towns and not-for-profit organizations a total amount in excess of \$350,000 for projects to improve the quality of Vermont's waters and water-based recreational activities.

In 2004 \$7.6 million were appropriated by the Vermont Legislature for water pollution improvements as part of the state's new Clean and Clear initiative.

Besides these funds allocated, organizations throughout Vermont put thousands of dollars and enormous staff and volunteer efforts towards monitoring and improving water quality. Many watershed organizations got started during this period. Existing organizations expanded their activities and increased numbers of members. Many towns began monitoring *E. coli* bacteria at local beaches and in rivers, and others cooperated with watershed organizations, which set up monitoring and educational programs in schools in their area.

## a. Water-Based Recreation Issues

Access areas of the Vermont Department of Fish and Wildlife are being used for a variety of activities other than the intended fishing and wildlife-based recreation pursuits.

Conflicts among anglers, floaters, landowners, and swimmers, especially during high use periods (hot summer weekends) exist in many areas. These include littering, trash dumping, and inconsiderate behavior.

Public access is a top concern for water-based recreational uses.

Some existing and improvised access sites have erosion problems.

There is a need for legal portage sites where there are obstacles to floaters who have no legal way to portage past them.

In some places and instances, water-based recreationists access waters from private property without permission.

Adequate boat speed enforcement is needed.

## b. Water Quality Issues

There is a great deal of overlap between water quality and fisheries issues. However, issues that relate more directly to fishing are included in the fishing section of wildlife-based recreation above.

### **Issues**

*Problems still exist with the quality of Vermont waters, including the following:*

Invasive exotic plants and animals, referred to as aquatic nuisance species (ANS), pose a major problem to water and other resources throughout the world. Zebra mussels were first identified in Lake Champlain in 1993 and since that time have spread throughout the lake. Fourteen of Vermont's 17 native species of mussels have been negatively impacted by the zebra mussel. In many waters throughout the state, plants of major concern included Eurasian watermilfoil, purple loosestrife, and water

chestnut. Between 1994 and 2003, the number of lakes infested increased: Eurasian watermilfoil from 37 to 57 lakes; water chestnut from two to six lakes; and the alewife is now found in Lake St. Catherine and sections of Lake Champlain.

Mercury contamination occurs in still waters throughout Vermont. In 1995 the Vermont Health Department advised pregnant women, breast-feeding mothers, and children age six and younger against eating even small quantities of several fish species caught in Vermont waters due to the amount of mercury detected in these species.

As of 2003, there were 37 lakes, representing 4,400 acres, in Vermont that were severely impacted by acid rain, with an additional 6,790 acres in danger of becoming severely impaired if acid rain continues. Fortunately current indicators suggest that levels of acidifying pollutants may be declining.

Even though there were reductions in point source loading of phosphorus into Lake Champlain between 1991 and 2001, overall reductions in tributary loads and decreases in lake phosphorus concentrations were not observed as of 2003. Severe outbreaks of blue green algae occurred during the summers of 2003 and 2004 in Missisquoi Bay and other northern areas of the lake.

Lakeshore residents and riverbank owners tend to clear their shorelines of trees, shrubs, and woody debris, but these provide many benefits for water resources.

### c. Motor Boating and Personal Watercraft

Through the recreation survey of Vermont residents in 2002, 6.4 percent indicated that motor boating was one of the top two outdoor recreation activities they engage in between May and October. The National Survey on Recreation and the Environment showed that the percent change in participation in motor boating by people who live in the region--Vermont along with the adjoining states New York, Massachusetts, and New Hampshire--between 1995 and 2003 exceeded the change in participation nationally during that period. The increase of those living in the region who participated in motor boating exceeded 16 percent and represented 4.13 million participants in 1995 and 4.81 million in 2003.

The National Survey on Recreation and the Environment for 1999-2004 estimated that 19,000 Vermonters, or 3 percent of the population, use personal watercraft (jet skis) per year in the U. S.

Vermont motor boat registrations declined overall between 1993 and 2003 from 39,907 to 33,260. However, these figures include an increase of inboard motors from 7734 to 8517 and a decrease of outboard motors from 32,173 to 24,743. Findings of the 1996 Vermont Lake and Pond Recreation Survey revealed that 47% of primary use boats were powered by internal combustion motors and 81% of power boats had over 90 horsepower.

The 1999 *Vermont Outdoor Recreation Inventory* looked at boat launch sites, docking slips and moorings, and pumpouts across the state. There were 228 paved or gravel ramps, of which 187 were publicly available. The state has 155 cartop boat launches, of which 116 are publicly owned. There are 556 public and 1,634 private boat docking slips, and 1,444 moorings, of which 90 are publicly owned. The state has 5 public and 18 private pumpout areas for waste disposal and three Mooring Management Areas designated by the Vermont Water Resources Board in Newport, Shelburne Bay, and Burton Island.

The findings of the 1996 Vermont Lake and Pond Recreation Survey revealed that boaters preferred restrictions on the speed of boats, rather than reduction in horsepower as well as designation of separate zones for uses, rather than setting certain times for certain uses.

#### **Achievements**

The allocation of motorboat access funds was increased from 12 1/2 to 15 percent in 1998 with the passage of TEA-21 (Transportation Equity Act for the 21st Century). It provides a more equitable allocation of federal excise tax receipts because, over the years since the Wallop-Breaux Amendment in 1984, the contribution from the motorboat fuels excise tax had grown to nearly 50% of the total receipts.

In 1999 the Vermont State Police received an \$800,000 boating safety grant from the U.S. Coast Guard for improved enforcement of boating laws, of which \$35,000 was allocated to the Vermont Department of Fish and Wildlife.

In 2000 Vermont participated in a multi-state survey of registered boaters. Results showed that education and outreach efforts in Vermont have been effective in raising boater awareness of aquatic nuisance species. Signs at boat access areas and newspaper articles topped the list of best sources of information. The majority of boaters surveyed are willing to pay more for boat registration if the extra funds were used for activities which prevent the spread of aquatic nuisance species.

The City of Newport created a mooring management ordinance for Lake Memphremagog in combination with the Water Resources Board's ruling that authorizes the city to manage moorings.

### Issues

The 1996 Vermont Lake and Pond Recreation Survey found that, in terms of lake and pond user conflicts, motorboats and personal watercraft (e.g. jet skis) interfered most often with other people's recreation.

Boating in parts of some lakes negatively impacts wildlife.

Invasive plants can be spread from one waterbody to another when boats are not cleaned after each use.

Recreational use conflicts occur at large mooring fields, particularly in Lake Champlain.

Gasoline marine engines used at the time of this plan emitted smog-forming air pollutants and discharged unburned oil and gasoline directly into lakes and ponds, polluting them with MtBE, benzene, and other toxic chemicals.

### d. Paddle Sports: Canoeing, Kayaking & Rafting

Through the recreation survey of Vermont residents in 2002, more than 10 percent indicated that canoeing/kayaking was one of the top two outdoor recreation activities they engage in between May and October. The highest percentage change of participation in outdoor activities by those living in the region (Vermont along with the adjoining states New York, Massachusetts, and New Hampshire) between 1995 and 2003 occurred for kayaking, which showed an increase of nearly 322 percent from 320,000 to 1.35 million participants. A 2002 study by the Outdoor Industry Foundation found that Vermont has more whitewater boaters per capita

than any other state in the nation. The American Canoe Association, founded in 1880, is the nation's most active nonprofit paddle sports organization. Membership in the organization increased from 5,000 in 1993 to more than 50,000 in 2002. In 1994 it established a website which provides information about these sports throughout the country. Other paddle sports organizations include American Whitewater with 80,000 members, the Appalachian Mountain Club with 96,000 members, New England FLOW with 5,000 members, and the Vermont Paddlers Club with 250 members.

American Whitewater's website posts flow levels on 57 reaches of 45 separate rivers in Vermont. The information is updated multiple times each day throughout the year so that the thousands of whitewater boaters who travel to Vermont are aware of current conditions.

Whitewater releases from dams provide some exciting paddling opportunities. In Vermont paddlers are especially attracted to the rapids in the West River when water is released from the Ball Mountain Dam. In 2003 the U.S. Army Corps of Engineers determined it should abide by the Vermont Agency of Natural Resources 1996 policy on minimum stream flow standards at the dam. It was determined that this structure cannot contain enough water to support a two-day release of whitewater for paddlers in September.

The Green Mountain Power Company's (GMP) hydro-power facility below the Waterbury Dam on the Little River in Waterbury, Vermont is being relicensed. With GMP's cooperation, this reach of the Little River could provide reliable boatable flows for whitewater paddlers throughout the summer months as well as an important economic opportunity outside of the winter skiing season for which this area is most known. There are 10 outfitter and paddling shops within a 25-mile radius of the Little River.

### Achievements

The Lake Champlain Paddlers' Trail began taking shape in the early 1990s. By 2004 there were 30 locations providing campsites or day-use sites for paddlers on the lake.

Research for the route of the Northern Forest Canoe Trail (NFCT), 740 miles along Native American and historic

travel routes from New York to Maine, took place in the mid-1990s. The NFCT was established as a not-for-profit organization in 2000. In Vermont the NFCT is expected to follow Lake Champlain, the Missisquoi River, North Branch of the Missisquoi River, Lake Memphremagog, and the Clyde, Nulhegan, and Connecticut Rivers and involve the 45 towns through which the trail passes by 2005.

### Issues

The 2003 September whitewater release from the Ball Mountain Dam was cut from two days to one without involvement of paddlers and without an explanation. Some paddlers believe that agencies made the decision without adequate studies and public input and feel that dam releases for river recreation should be undertaken with a balanced view of the impacts to both the environment and local economies.

A study of the ecological impacts of the whitewater releases at Ball Mountain Dam is needed to provide more detailed information about affected species and natural communities. A study of the river's pre-dam and post-dam flow regime in relation to the river's species and natural communities would refine our understanding of allowable whitewater releases and limits to those releases.

Campsites or day-use sites for paddlers need to be sited about every eight to ten miles on the Lake Champlain Paddlers' Trail. The Northern Forest Canoe Trail needs to involve all the towns along that route in determining additional access points and day-use sites.

User groups need funds and willing landowners to establish access points as well as campsites and day-use areas for paddlers on these trails.

User groups need to develop a method for determining the maximum usage the trails can supply, in anticipation of the popularity and resulting increased usage of access points.

### e. Sailing

Sailing has taken place in Vermont for hundreds of years. It was first used as a means of transportation, commerce, and for war battles. Sailing has evolved to a sport loved by many who participate in the activity on Lake Champlain and other bodies of water located through the state. The National Survey on Recreation and the Environment

showed that the percent change in participation in sailing by those living in the region (Vermont along with the adjoining states New York, Massachusetts, and New Hampshire) between 1995 and 2003 exceeded the change in participation nationally during that period. The increase in participation by residents in the region was more than 33 percent, from 1.36 million participants in 1995 to 1.82 million in 2003.

Some sailboats need mooring slips, while others do not. Boats can be moored for free in Lake Champlain as long as the site is not a shipping lane.

Currently there are more than seven sailing schools on Lake Champlain. They are a combination of both private and publicly run schools with programs for all ages. For example, the Lake Champlain Community Sailing Center (LCCSC), a not-for-profit public-access sailing and paddling center with more than 5300 user visits per year, has operated from the Moran building in Burlington for 10 years. It is the home for the University of Vermont and Northern Vermont High School sailing teams and hosts several regattas each year.

Numerous regattas are held each year on Lake Champlain, including a collegiate level USSA-sanctioned regatta hosted by the University of Vermont. Top level sailors like Andy Horton have come out of the Vermont sailing community.

### Achievements

Special needs individuals have been able to sail at a public facility since 1998 due to Vermont Adaptive Ski and Sports teaming up with the Lake Champlain Community Sailing Center.

Youths are participating more frequently in this sport due to camp programs and boats becoming more user-friendly.

Various fleets of boats are developing at boat clubs across the state, and when enough boats are available, races can occur. For example the University of Vermont has a fleet of 420s, and Mallets Bay has a growing fleet of Lazers.

Regattas are held at various boat clubs each year. Lake Champlain events include the Mayors' Cup from Burl-

ington to Plattsburgh, the oldest competition the Ladies Cup, and the Regatta for Lake Champlain which started in 2004 as a spin-off of the MS Regatta.

#### Issues

Since non-motorized boats are not registered with the state, it is impossible to get a correct estimate on the number of sailboats used in Vermont.

There are many challenges in Vermont in maintaining races for big boats over 24 feet.

In order for races and regattas to take place, there is a need to continue to build fleets so there are adequate competitors for each boat class.

It is important to find ways of increasing the number of youths exposed to the sport.

#### f. Sail Boarding and Kite Surfing

The sports of sail boarding and kite surfing are both relatively new sports to the state of Vermont. Kite surfing became popular and widely accessible around the mid-1990s. Sail boarding has been around since the 1970s, and has seen a resurgence starting in the mid-1990s.

Kite surfing, also known as kite boarding, uses a kite for a medium to harness the wind. Participants are strapped in to either a snowboard, or kiteboard, depending on if they will be riding on water or snow. By holding a bar which is attached to the kite strings, the rider can maneuver the kite, and thus be pulled by it, enabling the user to surf on the water or snow. Sail boarding, like kite surfing, uses the wind to provide momentum. A sail boarder uses a sail attached to a board. This enables the individual to travel over water.

Currently kite surfing on the water appeals most to couples between the ages of 32-45. On the snow, men between the ages of 29-42 have been the largest user group. Sail boarding is most popular with couples between the ages 28-40 and tends to be more popular with women overall.

#### Issues

The main challenge for both sports is the issue of access.

Public access to waterbodies is needed, along with parking that is close to the water. This is due to the challenges of carrying the equipment to the water when close lakeside access is not available.

Areas suitable for beginners require shallow water with a cross-shore breeze, and there is a need to secure public access points suitable for beginners.

Participants hope to promote awareness of and introduce more people to both sports.

#### g. Swimming

Statistics are available from the National Survey on Recreation and the Environment (NSRE) for the numbers of people from the combined states of Vermont, New Hampshire, Massachusetts, and New York who swim in lakes and streams. The number of people from those states who engaged in this activity increased more than 12 percent between 1995 and 2003, from 9.27 million to 10.41 million. The NSRE indicated that the number of Vermonters who swim in outdoor pools annually between 1999 and 2004 is 215,669 or 45 percent of the population. Through the recreation survey of Vermont residents in 2002, 21 percent indicated that swimming was one of the top two outdoor recreation activities they engage in between May and October. Only hiking was more popular at 43 percent.

The 1999 Vermont Outdoor Recreation Inventory revealed that there are 43 public outdoor swimming pools in the state. The counties of Essex, Grand Isle, and Orleans had no public outdoor pools. Rutland and Windsor counties had the most with nine in each. The state has 61,618 total linear feet of beach areas, of which 43,693 feet are publicly owned. Due to Lake Champlain along Vermont's northwestern border, Chittenden, Grand Isle, and Franklin counties have the most public beach footage, with 12,397; 8,550; and 6,275 feet, respectively.

#### h. SCUBA Diving

SCUBA Diving is a sport which has increased in popularity in recent years. The Vermont bodies of water that are most commonly dived are Lake Champlain and Lake Willoughby. However, dozens of other lakes and ponds such

as Lake Memphremagog, Sunset Lake, Lake Bomoseen, Lake Dunmore, and Caspian Lake are explored each year.

Vermont's most significant dive attraction is the Lake Champlain Underwater Historic Preserve (VDHP). The seven available dive sites are designed to give SCUBA divers access to appropriate state-owned shipwrecks in Lake Champlain. Each shipwreck is equipped with a mooring system, eliminating the need to drop an anchor to secure the dive boat to the site. A descriptive brochure was produced to share each site's history, provide basic diving guidelines, and emergency response information.

The preserves are used by approximately 500 divers each season (June through October). VDHP employees perform on-water monitoring activities including registration and answering divers' questions. Additional support for the program is provided by the Lake Champlain Maritime Museum (LCMM) whose staff members manage the database and web site and store equipment during the off-season.

#### **Issues**

Increased funding to support the addition of more shipwrecks sites in to the Vermont Underwater Historic Preserve.

Dive sites are threatened by infestations of non-native aquatic nuisance species such as zebra mussel and Eurasian watermilfoil.

## **4. Winter Recreational Activities**

See the trails plan, Chapter 4, for snowmobiling, dog sledding, and downhill skiing. See the preceding wildlife-based recreation section for information on ice fishing. Refer to the camping section later in this appendix for information about winter camping.



### **a. Ice Skating: Outdoor Rinks, Nordic Skating, Inline Skating, Speed Skating, and Skate-Skiing**

There is an increasingly wide variety of ice skating techniques, equipment, and opportunities becoming available in Vermont. Nordic or cross-country skating is popular in Europe and becoming more so in Vermont. The sport uses a more flexible kind of skate, which look like cross-country ski boots to which narrow platforms with long blades underneath are clipped on at the toe. Speed skates must be sharpened by hand, not machine, with a skate sharpening jig.

Three big January events are held at Lake Morey in Fairlee: a Winterfest, Marathon, and Skate-athon. To prepare for the Marathon, the track is swept with ice grooming equipment and water is pumped out of the lake to smooth the surface. A skating trail on that lake is the longest in the U.S.--a four-mile round trip. Groups have skated 30 miles on Lake Champlain between South Hero and Shelburne, 10 miles on Lake Memphremagog, and up and down the Connecticut River between Hanover and Norwich as well as between Fairlee and Orford.

### **b. Ice Boating and Ice Sailing**

Traditional ice boating has existed for centuries. These are built with sails and metal runners and can reach speeds of

100 miles per hour, but they have difficulties with bumpy ice conditions. New designs are being tried, including one by a Franklin County Vermont resident. This features a five-foot wide wooden compartment affixed to two pairs of cross-country skis. One pair of skis is attached to the narrow front and the other to the broader back.

#### **Issues**

Ice boaters and sailors report the need for more access sites for the public during winter.

Suitable ice conditions for engaging in these sports are not predictable, so the locations of competitive events cannot be announced in advance.

There are no winter recreation facilities on Lake Champlain that can host the national and international world champion ice boat races, especially with regard to rest rooms and other facilities.

### **c. Backcountry Skiing and Snowboarding**

Backcountry skiing and snowboarding are becoming more popular off-trail activities in open areas, often extending from hiking trails and resort ski trails. Getting to areas where there are fewer people offers participants a more remote experience.

#### **Issues**

Illegal cutting of trails.

Illegal glading results in more accidents and calls for Search and Rescue teams.

As this is a relatively unorganized activity, efforts toward making people aware of legal opportunities to participate would be desirable.

## **5. Private Lands**

Private lands comprise about 85 percent of lands in Vermont. It's been a long-standing Vermont tradition for private landowners to allow the public access to their land for hunting and fishing, as Vermont's constitution gives people the right to hunt and fish on unposted land throughout the state. Many private landowners do not post their land, thereby allowing such access.

The Vermont Woodlands Association (VWA), a statewide organization of forest landowners, informally surveyed their 500 members about private land ownership issues in 2003. Most of the 50 landowners who responded indicated that they hoped to continue to keep their land open to the public or allow access by permission only for certain uses. Some believed that keeping the land open maintains good community relations and is in keeping with Vermont traditions.

The VWA conducted another informal survey of their members regarding all-terrain vehicles earlier in 2003. The majority of VWA survey respondents did not want ATVs on their properties, were not comfortable with their liability insurance protection, and regarded ATV use as the most frequently observed unauthorized use of their properties.

Recreational user groups encourage their members to be respectful to landowners who allow public access. Many groups provide brochures and/or informational workshops to their members when they join to encourage them to thank landowners and treat their lands with respect.

#### **Achievements**

Vermont passed landmark legislation in 1998 that restricts the liability of the landowner with regard to injuries sustained by users of their property to circumstances where the landowner willfully caused injury. A brochure, which explained landowner liability issues for landowners, was revised and updated to reflect the increased protections afforded by revisions to the law. The Vermont Trails and Greenways Council's Summer 2003 newsletter included a supplement entitled "Trails and Landowner Liability in Vermont." Brochures and newsletters with information about the law were produced and distributed by the state and user groups after the law was passed.

Some user groups have raised money for landowners who may need to defend themselves against recreationists who falsely claim a landowner is liable for injury sustained on the owner's property.

Public access for traditional recreational activities is assured on at least 141,000 acres of private working forestlands in Vermont through easements made possible by a variety of funding sources and partnerships. Between 1993 and 2004, the federally funded Forest Legacy

Program provided more than \$6.7 million toward the conservation of over 44,000 acres of forestland in Vermont, including 31,000 acres of privately held Hancock Insurance Company lands. As a result of Champion International's sale of 130,000 acres of its holdings in the Northeast Kingdom of the state in 1999, 84,000 acres in parts of 14 towns continue to be privately held and managed by the Essex Timber Company, subject to public access and working forest easements.

The Vermont Woodlands Association (VWA) was organized in 1996 as a merger of the Vermont Timberland Owners Association, founded in 1915, and the Vermont Woodland Resources Association, founded in 1993. Some of VWA's accomplishments on behalf of owners of woodlands include coordination of the Tree Farm Program in the state, a quarterly newsletter, and cooperation with other forestry organizations. Its membership more than doubled between 2002 and 2004 from 127 to 358.

#### Issues

With two notable exceptions (landowner liability and departure of large lumber companies in areas of the state), the issues that private landowners face have not changed much during the past decade. For a more thorough articulation of most of the issues presented below, readers should refer to the task group report on this subject in the 1993 *Vermont Recreation Plan*.

Since the 1993 plan, discussions by a variety of organizations and agencies have occurred and recommendations have been made for ways of compensating landowners who allow recreational uses. However, no action has been taken regarding this.

Many landowners are not aware of the 1998 legislation that restricts the liability of the landowner with regard to injuries sustained by users of their property. Surveys conducted in 1992 and 2002 revealed that more Vermont residents were concerned about this issue in 2002 than in 1992. In 2002, 66 percent of Vermonters believed landowner liability was a problem. Despite the distribution of brochures and newsletters about the law, more outreach appears needed to make landowners aware of this law.

Organizations that negotiate with landowners for easements granting permission to use land find that landown-

ers are more likely to grant permission for non-motorized and non-mechanized activities. However, inappropriate ATV use and mountain biking negatively impact the willingness of some landowners to allow any public access.

Some landowners who have traditionally allowed free recreational access have seen increased economic hardship and can't afford to hold onto their land. Those in this situation are more likely to subdivide and sell the land, perpetuating the cycle of new landowners who may not be familiar with Vermont traditions.

A few large timber companies have sold their lands. When such transactions occur, property values may rise dramatically and quickly, making it more difficult for average wage-earning households to survive in those towns.

When large timber holdings are purchased by private landowners or for public use, some are concerned that the traditional culture associated with these lands may be lost.

*Any decrease in private lands available for public recreational use in Vermont would result in more pressure for use on other private lands and on public lands. Although there is no clear trend that demonstrates that more landowners are posting their land, there are many reasons why landowners post their land. The reasons include the following list:*

Some people who post their land came to Vermont from other states with different traditions regarding private land.

Many landowners are concerned about the public's lack of respect for their property and the need for more law enforcement to handle complaints.

Landowners may be concerned about the number of users of their property or object to certain types of use. Illegal ATV use was mentioned as a problem by many contributors to this plan.

Some landowners feel that recreational uses they allow could become institutionalized and result in restrictions to their right to do what they wish on their land, such as cut timber, farm the land, or derive income from other uses or from the sale or development of their property.

Landowners may be concerned about the impacts that recreational uses might have on their property and whether user groups will be reliable in taking care of problem areas.

## 6. Commercial Recreation Providers

Vermont has many businesses that provide places and facilities where people can enjoy outdoor recreational activities. These offerings include campgrounds and youth camps, alpine and cross-country skiing facilities, golf courses, and marinas. Many of the achievements and issues associated with these types of businesses are found in other sections of this appendix. There are many other businesses, such as outdoor guides, commercial tour outfitters, retail outfitters, and lodging and inn facilities, which provide services and equipment designed to enhance outdoor recreational experiences. Many of these business members of the outdoor travel industry serve tourists who are not from Vermont.

Some landowners allow recreational use of their land or property for which they charge a fee. Liability issues differ for landowners who charge a fee and those who allow free access.

Commercial businesses provide benefits to the state and local economies through increased employment, revenues, and tax receipts. At the same time, outdoor recreation business owners recognize that their success depends upon the conservation and enhancement of Vermont's natural resources and recreation infrastructure. Initiatives that protect and enhance these resources are essential to the long-term sustainability of the outdoor travel industry.

### Achievements

Since 1993, the Vermont Outdoor Guide Association (VOGA) was created to provide technical support to guides and other business owners and organizations and to provide up-to-date information to the public regarding outdoor education, recreation, and nature-based opportunities and vacation planning in Vermont.

In 1997 the Outdoor Task Force, representing many business, non-profit organizations, and agencies, developed and presented to the Vermont Department of Tourism and Marketing an Action Plan to identify outdoor tour-

ism resources and to unify businesses, organizations, and agencies in the protection, enhancement, and promotion of Vermont's unique outdoor resources. Many of the recommendations have been implemented.

The Vermont Agency of Natural Resources (ANR) adopted "Uses of State Lands" as a policy in 1999. This policy provides criteria and guidelines for commercial use of ANR lands. On an annual basis, the Lands Division issues or oversees over 100 licenses and special use permits for appropriate uses of ANR lands, including compatible commercial uses.

In 2003 the University of Vermont Extension and School of Natural Resources hosted "Managing Woodlands for Recreational Enterprises," a workshop for landowners who would like to charge user fees.

### Issues

Recreation-related businesses would like more support from the state for assistance with advertising and reaching new markets.

New stormwater and septic regulations that may pertain to some of these businesses may make it more difficult for them to continue operating due to increased costs.

The permit system for changes to businesses should be streamlined.

The state should continue to be sensitive to the private sector by avoiding competition with recreation-related businesses.

When occupancy or enrollments are down, there is more pressure to close or sell. This could then cause some open land to be developed.

Other states provide a central contact person who can assist small recreation-related businesses.

## 7. Field Sports

Information about different field sports will be presented first. Since many of the issues for these are similar, they will be summarized at the end of this section.

## a. Baseball/Softball

The traditional sports of baseball (hardball) and softball have been enjoyed for over a century by thousands of Vermonters. The National Survey on Recreation and the Environment (NSRE) for the period 1999-2003 indicated that 37,383 Vermonters (7.8 percent of the population) participated in baseball each year and 41,217 (8.6 percent of the population) participated in softball each year.

Youth programs for boys and girls, high school teams, and adult leagues are part of the sports and recreation landscape across the state. Little League is the world's largest and most respected youth sports program for 5-18 year old players. The organization provides support, including for safety information and insurance coverage, for local clubs that compete in regular season play and offers an international competition for more advanced teams.

## b. Soccer

The sport of soccer (known elsewhere in the world as football) has become a fixture of the outdoor recreation scene for decades. Participation has been steadily increasing since the 1970s in both youth and adult organizations. The National Survey on Recreation and the Environment (NSRE) for the period 1999-2003 indicated that 65,659 Vermonters (13.7 percent of the population) participate in soccer outdoors each year. The Vermont Youth Soccer association (VYSA) reports their current level of registered participants to number between 10,000 and 11,000. This number does not represent those participating in town-run recreation soccer programs, which would increase that number substantially. Meanwhile there has been an increase in organized adult soccer participation, which is the result of youth soccer participants wishing to continue playing soccer as adults. Also, there has been a boom in the number of women soccer participants over the past 10 years. The Vermont State Soccer Association (VSSA) reports that there are over 50 teams participating in adult soccer leagues all around the state.

Soccer has basically two distinct seasons: fall is generally the domain of school and town soccer programs, while the amateur season (both youth and adult) runs in spring and summer.

### *Achievements*

Better organization of the sport in Vermont has helped develop higher levels of play, coaching, and officiating as well as providing uniform standards for participation on a national amateur level.

Expanded involvement by Vermont players with U.S. youth and adult soccer associations has improved insurance coverage and resulted in adoption of new techniques that promote the health and safety of all participants.

## c. Football

Football is ingrained in the fabric of the American sporting culture. The National Survey on Recreation and the Environment (NSRE) for the period 1999-2003 indicated that 20,608 Vermonters (4.3 percent of the population) participate in soccer each year. In Vermont, Only 31 Vermont high schools have football programs while over 80 offer soccer. This is due primarily to the prohibitive costs of running a football program, as witnessed by the decision of the University of Vermont to end its participation in intercollegiate football back in the 1970s.

Other limiting factors for football include the early onset of cold and snow and the rural nature of the state in that its small population centers tend to restrict participation in organized football to the largest high schools and communities in the state.

There are youth and adult Flag Football leagues emerging and developing all around the state. These provide Vermonters with the opportunity to participate in the sport on some level. This is a non-tackle form of the game where players wear a belt which has two "flags" (basically long plastic strips) attached to it by Velcro. A player is down, or tackled, when one of the flags on his belt is pulled off by the opposing team.

## d. Rugby

Like soccer, this internationally popular sport was imported to the U.S. and caught on at colleges around the state beginning in the late 1970s. Rugby clubs, affiliated with many Vermont colleges, attract participants from the school as well as the surrounding community. The sport is

growing rapidly, and rugby players are a demographically diverse group. The sport is enjoyed by men and women of all ages, backgrounds, and professions. It is played during the spring and fall at colleges that sponsor programs.

#### e. Lacrosse

Even though lacrosse is a sport with ancient roots in Native American culture, only in the past 15 years or so has the sport enjoyed widespread participation in Vermont. As recently as the 1980s, only two high schools had organized lacrosse teams. That began to change in the early 1990s, growing to more than 25 high schools currently offering boys and girls teams as well as an equal number of youth and recreation programs located around the state.

This intense period of growth has predominately taken place on the youth and scholastic levels, while adult lacrosse participation remains a loose confederation of informal recreational opportunities held at four to five locations around the state.

#### **Achievement**

The development of strong, well-organized youth lacrosse programs around the state has increased participation, helped feed scholastic and recreational programs, and put the sport on solid footing in Vermont.

#### f. Frisbee

This well-known backyard family game has evolved into a variety of organized sports, both individual and team oriented. *Ultimate frisbee* is a fast-paced team game that combines elements of football, soccer, and basketball. Frisbee has enjoyed growing popularity since the 1970s.

Frisbee golf, or *disc golf* as it is known, has become a popular new sport in the U.S. during the last ten years and is discussed further in the section on golf.

Currently Vermont has a number of leagues and venues where organized and pick-up games take place.

#### **Issues for All Field Sports**

Access to playing fields is a major and ongoing problem because of the limited number of community fields and school district fields available. Creating more partnerships

between youth sports programs and communities could improve the situation.

The fields are overused and become stressed, creating sub-standard conditions for play.

There is a need for more qualified coaches and referees, especially at the community level, where numerous coaches and officials are needed to accommodate teams of various age groups.

Developing more and better coaches with an emphasis on adopting the principles and philosophy of the Positive Coaching Alliance. These principles emphasize Honoring the Sport™ by playing hard while respecting and honoring teammates, opponents, coaches and referees. Full participation by all who wish to play is a cornerstone to this coaching philosophy, which places its highest value on respect for the sport and all its participants over winning and losing.

Collegiate teams need to maintain high standards of conduct, including discouragement of hazing practices and illegal activities when not playing.

Background checks must be required for all coaches, volunteers, and seasonal staff who are given access to children.

## 8. Court Sports

Court sports include outdoor tennis, basketball, and volleyball.

#### a. Tennis

Participation numbers of the U.S. Tennis Association (USTA) from the past 20-years indicate that tennis is growing in Vermont. Current estimates are that about 40,000 residents (8 percent of the total population) currently participate in tennis at some level. The adult USA League Tennis program grew steadily in Vermont in the last decade. By 2003, there were 95 teams, representing about 1,300 adult participants in a variety of age and skill divisions.

In 2002, Vermont reported to the USTA that over 300 children participated in beginning instruction, and 1,197

participated in an on-site or traveling USA team tennis program. More than 200 Vermont juniors are members of the USTA and many play in competitive USTA-sanctioned tournaments throughout New England. Thirty-six (36) of the 70 Vermont high schools offer varsity and/or junior varsity tennis programs. In two areas of the state, recreational USA team tennis youth has taken hold. There is a six-team league in Middlebury and a 24-team Champlain Valley league.

USA Tennis New England lists about 200 courts in the state in its membership database. There are an estimated 33 tennis clubs and resorts with courts available. One-third of these sites offer seasonal programs only on outdoor courts. In addition, nearly 35 sites that offer some kind of outdoor tennis programming in their community, usually through a park and recreation department or a Community Tennis Association (CTA) of which there are seven throughout the state. These are groups of local tennis enthusiasts (volunteers) who promote and grow the game of tennis in their towns. The Upper Valley CTA started in 2001 with 17 women playing informally. Three years later, 23 teams with 233 men and women participated.

Since tennis is a sport that people can play throughout their lives and offers excellent health benefits, it holds a unique place in our country's overall health. It is one of the few sports that offer families the opportunity to bridge the generation gap by practicing, playing, and competing together.

Other advantages of tennis over some other sports include the following facts: tennis players don't need a whole team to participate and tennis is reasonably affordable.

### **Achievements**

In 2004 just over 12 percent of the Vermont population participated at some level in the sport of tennis, the highest percentage per capita of all New England states.

Due to new developments in building technology by the United States Tennis Court (USTC) and Track Builders Association (TBA), tennis courts built in the last 10-15 years generally are in great condition and are good evidence regarding court longevity. New court technology provides a better return on investment. by

allowing courts to last a very long time--often eight to ten years before any maintenance or repair is needed. New courts can be beneficial to communities as they are big and, when visible, can boost the image of a park and attract participation.

The USTA and NRPA offer matching grant money up to \$5,000 a year for tennis programming through an initiative called Tennis in the Parks.

A new initiative called Tennis Welcome Centers (TWCs), offers reasonably priced, multi-session group lessons for beginners at existing facilities.

School districts may have free, three-hour, in-service trainings for physical educators to teach tennis in schools. Included in the workshop is a step-by-step USA school tennis curriculum.

The USTA has also developed a community-based workshop for the inexperienced summer instructor or volunteer parent-coach.

A John Hopkins University study published in 2002 supports the notion that tennis is the sport for a lifetime. Tennis had the highest participation in mid-life, and those playing tennis had a lower incidence of cardiovascular disease and heart attack compared to those not playing tennis.

### **Issues**

Courts are a costly investment and the number of people that can play on a court is limited.

Many public courts are in need of repair. Many city and town courts were built in the late 1970s and early 1980s when there were no published standards for their construction.

Towns need to become aware of new construction technology standards.

### **b. Basketball and Volleyball**

The National Survey on Recreation and the Environment (NSRE) for the period 1999-2003 indicated that 71,890 Vermonters, about 15 percent of the state population,

participate in basketball outdoors every year. The same survey found that 39,779 Vermonters, 8.3 percent of the population participate in volleyball outdoors every year.

The 1999 *Vermont Outdoor Recreation Inventory* indicated that there were 207 public and 32 private outdoor basketball courts in the state. For volleyball, the inventory listed 105 public and 56 private courts.

## 9. Camping

This section contains some information about various camping opportunities in Vermont. The issues associated with these are grouped together at the end of the section.

### a. Campgrounds

The National Survey on Recreation and the Environment (NSRE) for the period 1999-2003 indicated that about 158,157 Vermonters use developed camping sites each year. Regional NSRE data, combined for the states of Vermont, New Hampshire, New York, and Massachusetts regarding developed camping showed an increase of 36 percent in this activity by residents of these states between 1995 and 2003 from 3.61 to 4.91 million. In the 2002 recreation survey of Vermont residents, more than 13 percent indicated that camping was one of the top two activities they engage in between May and October.

Vermont has approximately 77 privately-owned campgrounds, 40 state park campgrounds, 8 federal campgrounds, and more than 6,000 campsites throughout the state. Accommodations and amenities offered at campgrounds vary. Tentsites and recreational vehicle (RV) sites are provided with or without hookups for water, electric, and sewer at privately-owned campgrounds only. Leantos and cabin rentals are available at some state parks. Some privately-owned campgrounds offer room and RV rentals.

In order to retain their rustic and natural setting and minimize competition with the private sector, the state park campgrounds do not offer on-site hookups but do have modern bathrooms with water, hot showers, and flush toilets. There may be a time limit staying at State Parks (three weeks at the writing of this plan), whereas private campgrounds offer campers the opportunity to

stay nightly or seasonally. There are a variety of outdoor recreational activities on site or nearby all State Parks and privately-owned campgrounds.

Sheltered camping has been a tradition in Vermont State Parks since the original Adirondack lean-tos were built by the CCCs. Lean-tos have been added to the system over the years, bringing the current total to 597 of 2,200 total campsites. The occupancy rate and cost per night are higher than standard tent sites, which indicate the campers' preference and provide additional revenue. In recent years, three small pump house buildings at Grand Isle and Lake Carmi State Parks were converted to rental cabins. These are one-room buildings with electricity, but no other utilities, and are of a size and style in keeping with the Vermont State Park's atmosphere and experience. Cabins offer a level of comfort and convenience beyond lean-tos that make them more desirable to people who may not be as well-equipped for camping and make them more desirable in the "shoulder seasons" when weather tends to discourage other forms of camping.

An association of private campground owners was organized around 1964 to cooperatively promote the use and enjoyment of private campgrounds as well as to encourage standards for service to the public.

### **Achievements**

In 1990, the Vermont Campground Association invited Vermont State Parks to participate as a full single member to cooperatively promote Vermont as a place for camping. In 1992 a unique partnership between the two entities was established, resulting in better political and promotional representation and serving as a model.

Many handicapped accessible upgrades were made at state park facilities including lean-tos, ramps, water fountain platforms, restrooms, access roads, and paths. By 2004, 35 of the 40 state parks in 2004 were partially handicapped accessible, while three were fully accessible.

After a 1998 assessment of Vermont State Parks, the legislature appropriated \$4 million to begin remedying their \$31 million infrastructure problems. A Lands and Facilities Trust Fund was created in 2001 to assist the rehabilitation and management of ANR properties. Expenditures from the trust fund were expected to begin in 2005.

To provide more diverse recreational experiences in State Parks, funding was appropriated by the legislature so that cabins could be built in a few parks in various regions throughout the state. In addition, horse camping was encouraged at a few parks.

The experience at some State Parks was further enhanced by naturalists who interpret the resources and evening musical concerts.

## b. Camps for Children

A wide variety of camping experiences in all seasons exists for children in Vermont. In 2004 there were 62 camps licensed by the Vermont Department of Health, and 53 were members of the Vermont Camping Association. These camps range day camps to resident camps; from outdoor adventures to circus training; and from family camps to religious camps. These numbers do not include camps run by municipalities. In addition, the Vermont Department of Fish and Wildlife operates a summer Conservation Camp for children ages 12-16.

### **Achievements**

Many camps saw their best enrollment ever in 2003.

In 1998 Audubon Vermont opened High Pond Camp, a residential summer camp for 11 to 18 year olds in Brandon. More than 100 campers attend its four 10-day sessions.

A new day camp for youths age 12-21, Partners in Adventure Camp, was founded in 2000 and held activities primarily in Chittenden County. This camp stresses a community learning experience and had a waiting list for disabled participants for its summer programs until it expanded to nine weeks in 2004. Non-disabled students attend the camp as co-existing participants in such activities as horseback riding, sailing, and tennis as well as ice fishing during February winter vacation.

Since 1977 the Fresh Air Fund, an independent, not-for-profit organization, has provided free summer vacations to children from low-income New York City communities. Communities from 13 states offer nearly 10,000 inner city children two-week visits with host families. In the summer of 2004, Vermont volunteer families hosted 293 children in the communities of Barre, Bennington,

Brattleboro, Burlington, Colchester, Essex, Manchester, Middlebury, Montpelier, Newport, Randolph, Rutland, Springfield, St. Albans, St. Johnsbury, Swanton, Vergennes, and Woodstock.

## c. Winter Camping

Advancements in equipment make this activity much more accessible to a broader group of people. Off-season camping is allowed at all state parks with the permission of the parks regional manager (state park rules). No reservations are needed but groups require a Special Use Permit.

### **Achievement**

Staff members and volunteers with the Green Mountain Club began offering winter camping workshops to train people with gear and how to stay warm.

## d. Primitive Camping

Primitive camping is camping in a forest with no developed facilities and leaving the site with little or no evidence of human visitation. The National Survey on Recreation and the Environment (NSRE) for the period 1999-2003 indicated that 115,503 Vermonters, about 24 percent of the state population, go primitive camping each year. This is nearly double the rate of participation by residents of the region consisting of Vermont, Massachusetts, New Hampshire, and New York. However participation increased in the region between 1995 and 2003 by 30 percent from 2.10 to 2.73 million participants. The related activity of backpacking also increased regionally during that period by nearly 64 percent from 1.63 to 2.67 million participants.

### **Issues for All Types of Camping**

Changing lifestyles are resulting in more people desiring recreational experiences in a stress-free environment with better, more convenient services. Double wage-earning families are taking shorter vacations than in the past, such as three-day weekends instead of a week or longer. These demands are impacting the camping industry more rapidly than in the past, as evidenced by decline in tent camping and greater popularity of recreational vehicles (RV).

There is a concern that State Parks will compete with private campgrounds especially if State Parks were to create sites with RV hook-ups. However, the number of nights per stay that are reserved for camping at State Parks is declining, and RV hook-ups in some parks might reverse this trend.

Many campgrounds have experienced increases in violations of rules and regulations.

RV manufacturers, dealers, and owners should produce or demand alternative sources of independent energy, including solar power and longer-lasting batteries.

The University of Vermont Extension System closed its operation of 4-H Summer Camps in various locations around the state.

Camps have issues similar to those of many other small businesses. Those that want to expand may face new standards involving water and septic, which can be costly. A more easily navigated permit system would help camp owners when they face this situation.

The youth summer camping industry is subject to population demographics, due to its serving primarily 9-15 year old children, and to the state of the economy, as camps require the ability to have discretionary money to spend.

When occupancy or enrollments are down, there is more pressure to close or sell camps. This could then cause some open land to be developed.

Unlike some other states, Vermont does not have staff to assist small recreation groups and businesses with services like networking and website building.

Many primitive campers are not aware of “No Trace Camping” techniques, including the recommended distance from streams or trails and properly disposing of human waste.

Large groups may not be aware of regulations and realize a permit is required for primitive camping on public land.

Overuse of popular campsites may cause soil erosion and aesthetics problems.

## 10. Outdoor Recreation Opportunities at Historic Sites

*There are many possibilities for linking the exploration of historic resources in Vermont with outdoor recreational activities, as the following examples indicate.*

### a. Lake Champlain Underwater Historic Preserve

See the section on SCUBA diving at the end of the Water-Based Recreational Activities section earlier in this appendix.

### b. Military Roads

*Military Roads were among the first long-distance roads that were constructed in what was to become Vermont. They were significant both as military highways and as subsequent routes of settlement. The three main military roads were as follows:*

#### **Crown Point Military Road**

Built in 1759 and 1760, this road extended from the northernmost fort on the Connecticut River to the garrison at Crown Point on Lake Champlain. This route corresponds to a route through present day Springfield, Weathersfield, Cavendish, Plymouth, Mount Holly, Shrewsbury, Clarendon, Rutland, Proctor, Pittsford, Brandon, Sudbury, Shoreham, and Bridport. The Crown Point Road Association is dedicated to promoting interest in this and the Mount Independence-Hubbardton Military Road (see below). Many sections of these roads pass through private land, and efforts are underway to protect them.

#### **Mount Independence-Hubbardton Military Road**

This 40-mile long road extended from Mount Independence through Orwell, Benson, Hubbardton, Castleton, Ira, and West Rutland and connected with the Crown Point Road at Rutland Falls.

#### **Bayley-Hazen Military Road**

This road extended 54 miles from Wells River to Hazen's Notch through the present day towns of Newbury, Ryegate, Barnet, Peacham, Danville, Cabot, Walden, Hardwick,

and Westfield. Much of this road today is used as part of the state road system, and intersections are marked with special signs. The Northeastern Vermont Development Association has an account of the history of the road and maps to assist those who wish to travel it.

### c. Post Roads, Turnpikes, Stage Roads, and Market Roads

Most of the first roads in the state followed river valleys and known Native American trails. Post roads had a post placed in the ground to mark a certain distance. They were first constructed in the 1780s as a means for riders to deliver mail. Around the turn of the 19<sup>th</sup> century, privately owned and constructed toll roads known as turnpikes improved the quality of travel. The stage coach business, in its prime from 1820 to 1830, capitalized on the turnpikes. By 1850 most turnpikes had been transferred to town ownership, and the railroad eliminated stage coaches as a major means of mail delivery and passenger and freight transportation.

### d. Mount Independence Historic Site

Built in 1776 to protect American troops and to repel British forces from advancing into Vermont, Mount Independence was a strategically located fort complex of the Revolutionary War overlooking Lake Champlain. The remains of its batteries, blockhouses, hospital, and barracks are located in Orwell, Vermont and across the lake from the fort at Ticonderoga in New York. This National Historic Landmark has been called one of the most interesting and important historic sites in Vermont. The well-preserved remains of the complex are jointly owned and managed by the State of Vermont, Division for Historic Preservation and the Fort Ticonderoga Association. Several trails on the site pass through nearly 300 acres of pasture and woodlands, providing great hiking opportunities and beautiful vistas of the Champlain Valley.

#### Issues

Special signage may be needed for the Mt. Independent site to let hunters know they cannot hunt there when the facility is open.

People digging for artifacts without a permit.

People using metal detectors which are prohibited.

## 11. Other Activities

### a. Climbing

Rock and ice climbing have a long history in Vermont, where there is a large inventory of resources and facilities. Technically, climbing cliffs is referred to as rock climbing. Ice climbing and bouldering also fall under the general sport of climbing. The differences come about not so much from the resource type, such as rocks or boulders, but more from the difficulty of the climb. Cliffs (rocks), ice, and boulders all can be rated according to climbing difficulty, and that is the distinction that matters to most climbers. The difficulty determines the technical skill and equipment needed to undertake any type of climb.

The National Survey on Recreation and the Environment for 1999-2003 indicated that 18,691 Vermont residents, representing nearly four percent of the population, participate in rock climbing every year.

Most of the climbing resources in the state are located on private lands, with a small percentage found on state property at Smugglers Notch and the south end of Lake Willoughby. Historically, there has been an adequate supply of places to climb due to the small, slow growing participant base. Traditionally the sport of climbing has been informally organized into a network or close knit community of participants. However, in the last five years or so, there has been a sharp rise in participants, especially younger climbers who are learning to climb at gyms and indoor facilities. This spike in demand for outdoor climbing resources has presented the sport with some unique challenges, especially the issue of access.

#### Achievements

In an effort to deal with access and other issues confronting the sport, a non-profit organization Climbing Resource Access Group (CRAG) was formed in 1999 which has as its mission "to preserve the climbing resource" in the state of Vermont.

CRAG provides outreach and education programs to foster better landowner relations, to advocate for environmental protection and conservation, and to create an awareness of etiquette and ethics for improved safety and enjoyment by all participants. To achieve these aims they

have created a website and outreach programs to educate newcomers in all of the areas mentioned above, e.g. proper communication with landowners, awareness of environmental impacts (carry-in, carry-out policies) and climbing etiquette and safety.

Partnering with state parks and environmental agencies. Many climbers observe and report peregrine falcon nesting and habitat information to assist agencies in closing climbing areas where falcons are found.

Promoting more access to Vermont's climbing resources through purchases of property, obtaining conservation easements, and by negotiating landowners agreements. Two areas in Bolton are included in their purchase plan. The Lower West Cliffs have already been obtained and the Quarry Cliffs are next on the purchase agenda.

Providing education in the areas of stewardship, through trail maintenance and clean-up, and environmental conservation, through species and habitat protection, remain high priorities as well.

#### **Issue**

There is need for more funding for access and to sustain educational programs.

### **b. Skateboarding and Inline Skating**

Skateboarding involves riding a piece of wood with wheels over different mediums. Tricks known as kick flips, grinds, hand grabs, and rail slides are typically performed. Inline skating involves modified rollerblades, enabling an individual to grind rails, go down ramps, and do front flips.

The sports of skateboarding and inline skating continue to be enjoyed by a growing number of people in Vermont. Currently the majority of skateboarders and inline skaters are between the age 12 and 18, with individuals partaking in the sport as young as three and through their 50s. The late 1990s saw increased growth to both sports, in part due to media publicity of world renowned skateboarder Tony Hawk, winner of numerous X Games. The X Games is an international competition for so-called "extreme" sports.

Both of these sports can be performed in the street, or in

areas specifically designed for these sports known as skate parks. The state of Vermont has seen a growth in skateboarding venues since 2000 through the state. Construction of more indoor parks would enable participation in these sports year round.

#### **Achievements**

In 2004 four of 27 youths chosen to compete in the Mountain Dew Free Flow Challenge (skateboarding), held in California, were from Vermont.

By 2004 there were 15 outdoor skate parks located throughout the state.

### **c. Golf**

This section includes both golf and disc golf.

#### **Golf**

Golf as an organized sport in Vermont dates back to 1902, when the Vermont Golf Association (VGA) was formed and included seven member clubs. Today, there are 63 member and 12 non-member golf clubs operating in the state, as well as numerous driving ranges and practice areas which provide access to the game by people of all skill levels and demographic groups.

In the 2002 recreation survey of Vermont residents, 5.3 percent indicated that golfing was one of the top two activities they engage in between May and October. This represented the tenth highest activity engaged in. The National Survey on Recreation and the Environment for 1999 to 2004 indicated that 19.4 percent or 92,977 Vermonters participate in golfing every year. Participation numbers, measured by rounds played, have grown steadily since the 1980s, while membership levels at clubs have remained relatively unchanged during that same period. This indicates an increase in new players.

As demand for golf in Vermont has increased, so have the number and types of courses developed over the past twenty years. The 1999 Vermont Recreation Resources Inventory found that, of the 873 regulations holes in the state, 117 are open to the public and 756 are on private courses. The counties of Rutland, Chittenden, and Bennington had the most holes at 144, 135, and 117, respectively, while Essex County had none. The inventory also showed that statewide there were 56 executive par 3 holes, 39 driving ranges, and 17 miniature golf sites.

The rate of new course development seems to be reasonable and responsive to demand, while adhering to strict environmental standards and oversight by the state. The sport's continuing development and popularity has been accompanied by an acute awareness of the need for responsible growth and respect for state environmental standards and values.

### **Achievements**

Tourists now recognize Vermont as a quality golf resort destination.

Golf has seen steady and responsible growth in the number of golf facilities.

Golf facilities have provided increased access to the sport by demographic groups across the board.

Improvements in golfing opportunities have been accomplished in partnership with state and local environmental regulators.

Golf facilities generate increased tourist revenues for towns, resorts, and the state as a whole.

### **Issues**

It is challenging to stay profitable in this highly regulated and costly business.

Regulations for water and pesticide use are complicated and may be costly.

Excessive or inappropriate use of fertilizer can impair water quality.

There is a need to have participants speed up the pace of play, as many golfers find it more difficult to fit four- to five-hour rounds into their schedules.

Youth participation (junior golf) should be promoted with increased funds and programs.

### **Disc Golf**

Disc golf is one of the world's fastest growing new sports. Every year thousands of players take up the game because it is easy, fun, and affordable for people of all ages and skill levels. The professional Disc Golf Association

(PDGA) has more than 20,000 members, including 7,000 members who compete in big money PDGA-sanctioned events all over the world.

There are now more than 1,300 disc golf courses in the U.S., and there are over 300 courses in several other countries. Not surprisingly, the sport grows fastest in places where disc golf courses already exist. Many large metropolitan areas and small towns have now installed multiple courses because of public demand and the positive experience of disc golf. Disc golf courses are found in several Vermont towns including Calais, Randolph, and Waterbury.

New discs are being invented and manufactured with specific shapes, weights, and grooves designed for this sport.

### **d. Orienteering and Geocaching**

#### **Orienteering**

Orienteering is the sport of navigation with map and compass. The object is to run, walk, ski, or mountain bike to a series of points shown on a map. The points on the course are marked with orange and white flags and punches, so you can prove you've been there. Each "control" marker is located on a distinct feature, such as a stream junction or the top of a knoll. Detailed five-color topographic maps that have been developed especially for this sport can be used. These may show boulders, cliffs, ditches, and fences, in addition to elevation, vegetation, and trails.

Orienteering is a fairly new and growing outdoor activity. It is a sport for anyone who likes maps, exploring, and the great outdoors, regardless of age or experience. More than 600 days of orienteering events took place in the U.S. last year. Most events provide courses for all levels from beginner to advanced. The sport has been adapted for small children and people in wheelchairs. Both non-competitive and competitive events are available. Competitions involve choosing routes, both on and off trail, which enable finding all the points and getting back to the finish in the shortest amount of time.

#### **Geocaching**

Geocaching is a new and growing recreational activity. "Caches" are typically a box with various items in it.

These are placed on the ground in an interesting location to find. Then their geographical location is made available for others to find via the coordinates of the site, often posted on the Internet. Global Positioning System (GPS) users then use the location coordinates to find the caches. The cache visitor may take items from and leave items in the cache, and sign the cache log book. This high-tech version of orienteering gets people outdoors and can offer participants a rewarding outdoor recreation experience.

#### **Achievement**

The Vermont Agency of Natural Resources (ANR) adopted a policy on Geocaches and Geocaching on ANR lands in 2004.

#### **Issues**

Caches can have impacts on sensitive natural or cultural areas. It is important to minimize potential resource damage and conflicts with other uses and to ensure that the activity does not pose any safety or health risks to participants and others who could be in the area.

Encourage use of virtual caches, such as unique natural features or existing signs, instead of placing new containers which may require some searching to find.

#### **e. Remote, Back-Country Recreation**

Many people have identified the appreciation of wild places, exposure to nature in relatively undisturbed settings, an experience of peace and quiet, and exploration of new terrain as the main characteristics of remote, back-country recreational experiences. In Vermont this type of experience is found primarily in forested areas, and people who enjoy the back-country find that roads and motorized recreation are not compatible with their experience.

In Vermont, this remote, back-country experience is associated frequently with the federally-designated “Wilderness Areas” in the Green Mountain National Forest (GMNF). Federally-designated Wilderness Areas are open to recreational uses such as camping, hiking, hunting, fishing, snowshoeing, and skiing. Roads, motorized recreation, logging, and most permanent structures are not allowed in these areas.

#### **Issues**

The creation of more federally-designated Wilderness

Areas in the GMNF could result in loss of traditional recreational access and forest management opportunities found there.

The plan revision process for the GMNF currently underway will evaluate and recommend Wilderness Study Areas.

More studies are needed to determine if other remote, back-country recreational experiences can and should be provided in the state.

#### **f. Dog-Based Recreation**

Please refer to the winter recreation section of the Vermont Trails and Greenways Plan, Chapter 4 of this document, for information about mushing, which refers to a variety of dog-powered sports for all seasons.

#### **Hunt Testing and Field Trials for Dogs**

Many Vermonters and people from out-of-state are members of hunt test and field trial clubs found throughout the state. Clubs are organized for retrievers, hounds, and bird dogs (setters and pointers). These sports train and socialize dogs and prepare them for hunting experiences. However these are also recreational experiences themselves for some dog owners, who do not participate in the hunt.

Some Vermont clubs sponsor competitive events around the state that are judged--some by club rules and other events by the standards of national clubs like the American Kennel Club and the United Kennel Club. Owners from all over the country come to Vermont, especially during summer months, to train their dogs and enter them in the performance events, where the dogs compete for the straightest line to their quarry. Since 1999, the numbers of registrants in Vermont’s May to September field trials have increased dramatically.

Many Vermont clubs also provide dog demonstrations for the public and offer scholarships, such as the Lake Champlain Retriever Club (LCRC) which sends children to the Vermont Conservation Camp of the Fish and Wildlife Department.

#### **Achievements**

Some clubs have drawn up rules and protocols for their

own competitions that are more generic than the rules of the national clubs.

One Vermonter was recently given the Lifetime Achievement Award by the American Kennel Club.

Two Vermont members of the LCRC were chosen to judge national events, which is quite an accomplishment as well as unusual that two were chosen.

#### *Issues*

Clubs find it challenging to manage the increasing participation in field trials, especially as the majority of competitors come from outside the state.

Some organizations and people who are opposed to hunting continue to protest these sports, sometimes providing misleading information about them.

#### **Dog Parks**

Many people like to take their dogs with them when they recreate outdoors. As town and city centers become more populated and the amount of open space diminishes, dog owners are finding it increasingly difficult to find open areas to walk, run, and play with their pets off-leash. Consequently, dog parks are becoming popular and occurring in various ways. While the approaches may vary, the purpose is to create a space for dogs and their owners where they won't disturb other people. Dog parks also offer a place for dogs to socialize with each other, an important aspect of their growth.

#### *Achievements*

In 2001 the City of Burlington created two fenced, off-leash areas for dogs and their owners known as "Dog Parks." Initial funding was established through a surcharge added to the cost of a dog license fee, which generated between \$15,000 and \$20,000. This surcharge continues to fund the parks and allows for metal dispensers of plastic poop pick-up bags, trash cans, dumpster service, and basic maintenance.

Burlington's "Urban Reserve" dog park provides access to Lake Champlain, is a walk-in area only, and is open year-round, 24 hours a day. The "Starr Farm" park in northwest Burlington offers convenient parking and water available at the site. It is open daily in April through Oc-

tober from 8 a.m. to 8 p.m. and from 8 a.m. to 6 p.m. in November through March.

#### *Issues*

The numbers of dog owners appear to be increasing, and recreation managers are reporting more problems with dog waste and conflicts with other users.

There are many concerns that needed to be dealt with before a park can be created such as permits to comply with city ordinances, financing, noise from barking dogs and people shouting at dogs, dogs biting other dogs, droppings not being picked up and waste becoming hazardous, waste receptacles, night access, suitable seating, structures for dogs to play on, adequate water supplies, finding and training volunteers to oversee that rules and regulations are being adhered to, and adequate parking spaces.

#### **g. Paintball**

Paintball consists of competing teams attempting to capture a flag by means of shooting opposing team members with pellets filled with paint. As each person is hit by the pellet he is eliminated from the contest. Occasionally, paintball games involve reenacting historical combats.

Since the late 1980s, paintball has enjoyed increased interest. There are several facilities in Vermont towns, including Colchester, Middlesex, Shoreham, and Whiting, and they operate from April to November.

#### *Issues*

Some who play the game in unofficial places leave empty pellets, which causes unsightly litter.

There is concern about the warring aspects of the game by those who would like to shoot and dodge paint pellets just for the fun of it.

#### **h. Sky Observations**

An increasing number of people are interested in viewing the sky outdoors at night. Membership in the Vermont Astronomical Society (VAS) is growing. Thousands of Vermonters of all ages participate in outdoor astronomy events every year. This outdoor activity is threatened by increasing artificial nighttime light pollution as developed areas add more lights and development expands into more

remote areas throughout the state. The International Dark Sky Association promotes the conservation of land, public use of land, and recreational opportunities, and VAS, as a member of that association, hopes that astronomy is another use of land that Vermonters can support.

### Issues

The ability of people to make night sky observations is threatened by encroaching artificial nighttime light.

The continuing interest in astronomy by Vermonters warrants exploration of some Dark Sky Preserves in Vermont.

## 12. Special Populations

### a. People with Disabilities

According to the U.S. Census 2000, 53 million of the total U.S. population of 281 million people have disabilities. This group represents one of the nation's largest constituencies. The Census 2000 found that, for the population five years of age and older in Vermont, 17.1 percent self-reported a disability using a standard definition. As the population of the state continues to age, this percentage is likely to increase. In addition, approximately 9.7 percent of working-age Vermonters reported a disability that impacts their employment.

The 1990 Americans with Disabilities Act (ADA) and the Federal Rehabilitation Act of 1973 specify that no qualified person with a disability, on the basis of disability, should be excluded from participation in, be denied the benefits of, or be subject to discrimination for any program or activity. Vermont responded by making many improvements to its recreation infrastructure to accommodate people with disabilities. Progress was apparent by comparing the Vermont residents' recreation surveys of 1992 and 2002. Fewer Vermont residents were concerned about a lack of opportunities for special populations in 2002 than in 1992.

Outdoor recreation opportunities for people with disabilities currently focus more on individual recreation needs than on team sports. Efforts are being expanded to improve the quality of life for people with disabilities, including inclusion in the community, equality of experiences, and independence.

### Achievements

The nonprofit organization Vermont Adaptive Ski and Sports (VASS) has served Vermonters of all ages with disabilities for 17 years by providing year-round seasonal activities seven days per week. The organization will try to make any activity happen for anyone who asks. In 1999 the organization began expanding its programs in Southern Vermont and the Rutland area. In 2003 VASS had 1500 clients, with 300 volunteers logging 12,000 volunteer hours. Activities provided include skiing, snowboarding, sailing, canoeing, camping, and water-skiing.

*Governmental initiatives to provide outdoor recreation opportunities for people with disabilities included the following:*

In 1998 access by disabled persons to lands managed by the Vermont Agency of Natural Resources (ANR) was enhanced. Reasonable accommodations included limited use of all-terrain vehicles by qualified people with disabilities for recreational access to certain ANR lands.

Handicapped accessibility was improved at facilities of the Green Mountain National Forest and the Vermont State Parks System. Improvements include lean-tos, ramps, water fountain platforms, restrooms, access roads, and paths. Thirty-five of the 40 state parks in 2004 were partially handicapped accessible, while three were fully accessible.

At Camel's Hump State Park in Duxbury, the handicapped-accessible Camel's Hump View Trail was created in 1990. This .8 mile easy access, low elevation loop offers spectacular views.

Some criteria, which allow more points to be awarded to the score of applications that meet or exceed the needs of physically challenged, elderly, low income, and other special population groups, were added to applications for Vermont Recreation Trails Program grants starting in 2000.

*Other examples of achievements to aid people with disabilities in participating in outdoor recreational activities during the past decade include the following:*

The Sensory Trail for use by visitors who are blind or visually impaired to the Green Mountain Audubon Nature Center was re-developed and signed in large print and Braille in 1997.

The day camp Partners in Adventure Camp was founded in 2000 for youths age 12-21. It offers community learning experiences mostly in Chittenden County. Non-disabled students attend the camp as co-existing participants, not helpers. Outdoor activities include horseback riding, sailing, and tennis, as well as ice fishing during winter vacation.

A 1600-foot long paved roadway for people in wheelchairs, connecting to existing roadways and trails, was created in 2000 at Camp Thorpe in Goshen.

The organization Hunt of a Lifetime provides hunting and fishing experiences in Vermont for terminally ill children.

The Billings Farm and Museum hosts an annual Down's syndrome buddy walk on the property and attracted 350 participants in 2003.

The first highly competitive Level I adaptive ski race was held in Vermont at Sugarbush Ski Resort in 2004. The Diana Golden Adaptive Ski Race was part of a six-race series designed to introduce athletes with disabilities to alpine ski racing in a supportive environment.

In 2004 University of Vermont women's swim team members provided individual instruction to members of the Special Olympics Chittenden Delegation Swim Team.

In 2004 Vermont Adaptive Ski and Sports began serving as the Vermont chapter for Paralympic, a branch of the International Olympics for athletes with disabilities to get them involved and more competitive.

A 12-foot high tree house was built in 2004 at Oakledge Park in Burlington with an ADA compliant ramp with wheelchair bumpers and rails.

The ramp runs through a cedar bog to a 450-square-foot octagonal structure. The nonprofit group Forever Young Treehouses was founded to facilitate building universally accessible tree houses.

#### Issue

Background checks must be required for all staff and volunteers who are given access to people with disabilities.

#### b. Youths

Please refer to the preceding sections on camping for information about youth camps and on individual sports for more details about youth participation in many of those.

Although the number of Vermont residents under the age of 18 is declining overall, providing outdoor recreation opportunities for them remains important, especially for good health. In 2003 11 percent of Vermont students were considered overweight, and 26 percent of Vermont youths in grades eight and twelve were above the recommended weight for their age. About 35 percent of Vermont students in grades eight and twelve reported that they spent three or more hours per school day watching television, playing video games, or using the computer for fun.

Keeping children safe from abuse is a major concern of all outdoor recreation providers. The State of Vermont has provided funding for background checks through the VCIC. The Vermont Department of Social and Rehabilitative Services provides background checks for municipal recreation departments.

*There are many statewide programs and initiatives of the past decade that are designed to assist youths in outdoor activities, including the following:*

#### Playgrounds

From 2000 to 2005, of the 61 outdoor recreation projects funded with Land and Water Conservation Funds, 27 of them included the development of new playgrounds. Most of these playground projects replaced old, outdated and unsafe playground equipment with new playground equipment. Each project included ADA accessibility components. In 2002 the Vermont Recreation and Parks Association (VRPA) hosted a National Playground Safety

Institute, as a result of which 35 people were certified to conduct playground safety audits and inspections. Roy-alton surveyed local children to help determine how to develop a new playground in 2003. The custom design equipment cluster included all eight components voted most desirable by the children.

### **Vermont Youth Conservation Corps (VYCC)**

The Vermont Youth Conservation Corps (VYCC) is a nonprofit, statewide youth service organization, which unites Vermont's human and natural resources. Under experienced adult leadership, teams of youths and young adults between the ages of 16 and 24 work on trail maintenance, watershed restoration, and parks management projects throughout the state. The projects enable the youths to gain valuable work skills while helping the environment and enhancing outdoor recreation opportunities.

### **National Alliance for Youth Sports (NAYS)**

The National Alliance for Youth Sports (NAYS) is America's leading advocate for positive and safe sports and activities for children. The goal of the NAYS is to make sports and activities safe and positive by providing programs and services that add value to youth sports. NAYS believes this can only happen if

Children receive positive instruction and build basic motor skills.

Administrators (both professional and volunteer), volunteer coaches, and officials are well trained in their roles and responsibilities.

Parents understand the important impact sports have on their child's development.

The National Standards for Youth Sports are used as a guide for operating youth sports programs.

Youth sports programs are conducted in accordance with the Recommendations for Communities.

### **Girls on the Run®**

In 1999 some schools around the state began sponsoring the Girls on the Run® program for third to fifth graders. This is an 8- to 12-week experiential physical training program, culminating in a 5-kilometer run or walk event. By 2004, 500 girls participated.

### **Run Girl Run!**

The program Run Girl Run! was started in 1998 and is free to middle-school aged girls. It encourages them to lead healthy, active, and outgoing lives. In 2001 the program created a survey for girls to research entitled "Is Your Town a Heart-Healthy Town?"

### **Governor's Fit & Healthy Kids Initiative**

In order to reverse the burgeoning problem of obesity in children and reduce the burden of chronic disease, the Fit & Healthy Kids Program was begun by the Vermont Department of Health and Governor Jim Douglas in 2004. The initiative promotes physical activity and healthy nutrition for children and their families. Through joint efforts of the Departments of Health, Education, Transportation and the Governor's Council on Physical Fitness and Sports, a comprehensive approach to this complex issue is being taken. Statewide strategies include support for community efforts with funding, training, technical assistance, and other tools for implementing better health programs. Also planned are outdoor games and activities through Fit & Healthy Kids Day and Green Mountain Winter Games for Children. The Governor's Awards program will recognize those schools whose policies and practices reflect a high priority on improving student health. Additionally, through the use of the Vermont Fit WIC Activities Kit, young people will be provided play activities that will encourage their health and development through daily physical play.

### **Vermont Out-Of-School Time Network**

The Vermont Out-of-School Time (VOOST) Network is a partnership of organizations building and supporting accessible, out of school time with high quality opportunities to learn for young Vermonters. VOOST hopes to improve coordination between efforts of the after school community and create forums for sharing ideas and resources through regional meetings and a statewide conference. Strategies include training after school providers in developing a peer support/mentorship system, offering more after school programs, and promoting the concept of positive youth development to VOOST providers throughout the state.

### **Issue**

Background checks must be required for all staff and volunteers who are given access to children.

### c. Older Adults

People over the age of 60 in Vermont increased between 1990 and 2000 by nearly 15 percent to 101,825, representing 13,181 individuals.

Many older adults enjoy socializing at the senior centers located throughout the state. Due partly to the wide range of abilities of seniors at these centers, not many outdoor recreation opportunities are offered at them. Many younger seniors are still in the workforce, prefer a different social atmosphere, and seek out more physically challenging experiences, including outdoor activities.

#### **Achievements**

Vermont's statewide Successful Aging and Independent Living task force began meeting in 2002.

The year 2004 marked the 22<sup>nd</sup> anniversary of the Green Mountain Senior Games. Friendly competition in indoor and outdoor sports occurs for citizens over 50 years of age throughout the year in different areas of the state, and at an annual State Games event.

Senior Play Days programs were offered in Chittenden County in 2004.

Heaton Woods, an assisted living residence in Montpelier held its first annual Walkerthon in 2004 to benefit the residence's activities program and to raise awareness about the difficulties of using walkers for mobility. Eighteen people joined in the event, including staff members and the mayor. Participants used decorated walkers to wend their way through the city to the State House.

#### **Issues**

Improved distribution of information about all recreational programs available to older adults.

Diverse opportunities and ability levels are desired to meet different needs.

As Vermont's population continues to age, more outdoor recreational opportunities will be needed for its older citizens.

Background checks must be required for all staff and volunteers who are given access to the elderly.