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3.0 FOREST USERS AND RECREATIONAL USES

3.1 SCENIC RESOURCES AND ATTRACTIONS (VISITATION SITES)

The Forest contains natural resources whose scenic value attracts visitors to the Four County region. Summits, streams, waterfalls, granite cliffs, forests, and wildlife are but a few examples of resources visitors seek to experience. Other secondary resources have been created as a result of visitation to the Forest. The purpose of these resources is to accommodate and/or attract visitors. Examples of these resources include picnic areas, camp sites, trail heads, scenic overlooks, fishing access locations, golf courses, and ski areas. For the purposes of this section of this document, these resources will be called visitation sites.

Visitation sites are distributed throughout the Four County region. Figure 3-1 shows the locations of visitation sites in New Hampshire.^{1,2} Of the 879 sites shown (in New Hampshire), 22% (190 sites) exist on the Forest and 78% (879 sites) exist off the Forest. It should be noted that while the majority of sites exist off the Forest, a significant quantity exist near the Forest boundary along the I-93, US 302, US 2, and NH 16 corridors.

3.2 OUTDOOR RECREATION ACTIVITIES AND FACILITIES

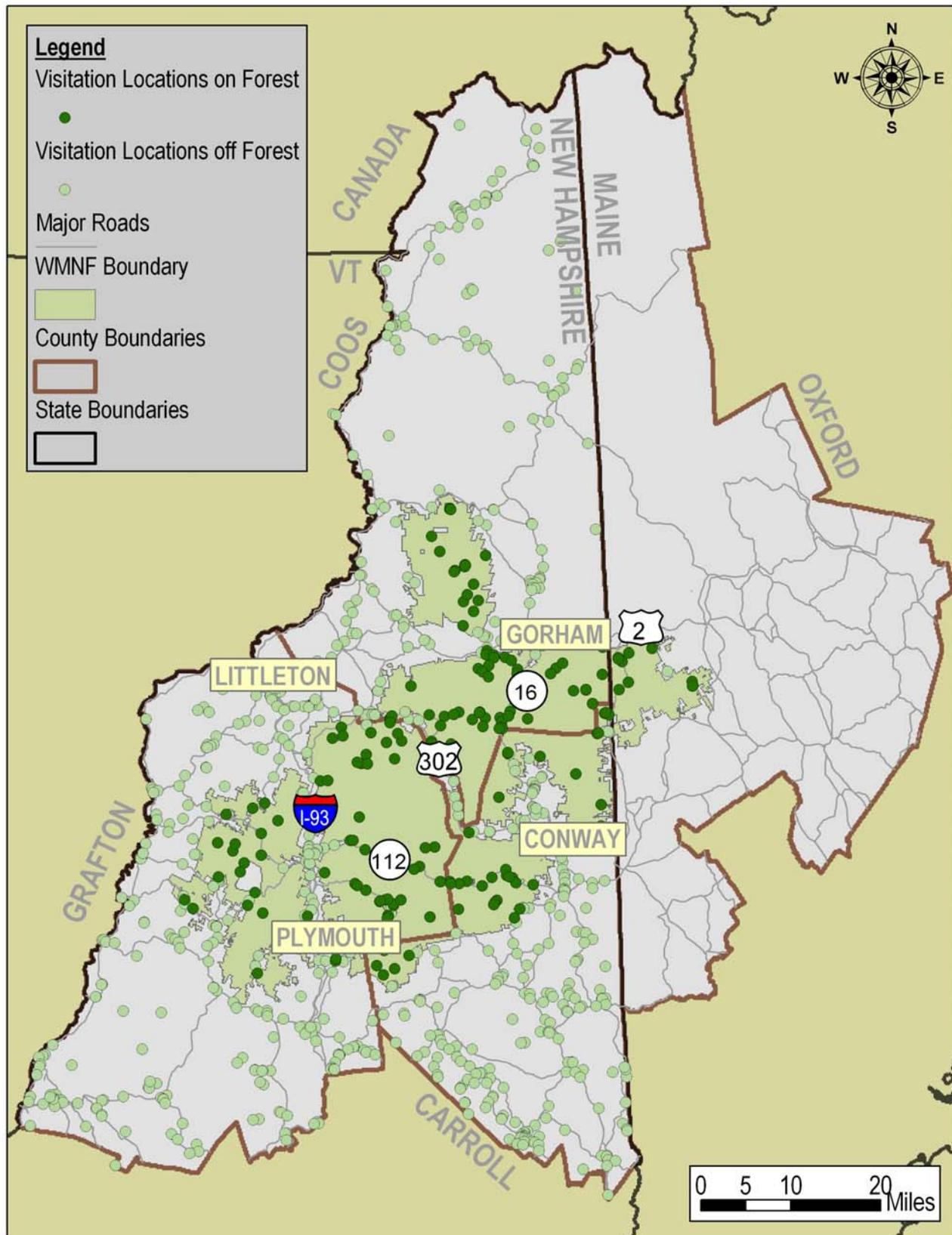
3.2.1 Origin of Visitors

Although visitors to the Forest come from all over the United States and Canada the great majority come from New England. The National Visitor Use Monitoring Survey (NVUMS) polled visitors in the White Mountains to better understand visitor origins. The origins were gathered by collecting their home zip codes. Figure 3-2 shows the results of that survey. The distribution of users shows New Hampshire, Maine and Massachusetts residents comprising roughly 73% of visitors, while 14% are from the other New England states and New York. “Other States” comprise the remaining 13% of visitors. In addition 2% of visitors come from Canada and other countries (US Forest Service, 2001).

¹ Off-Forest information was not readily available for the state of Maine.

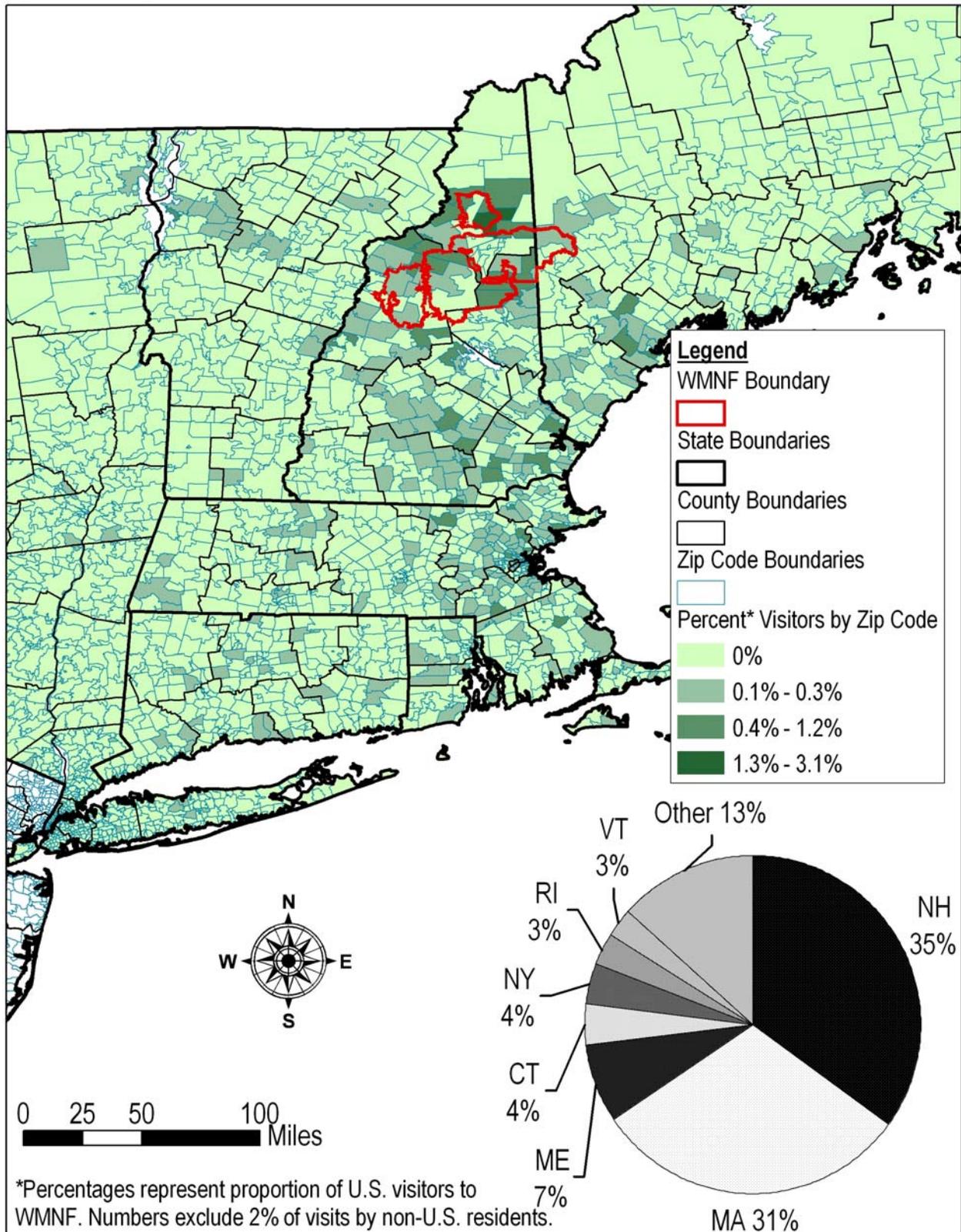
² The data points shown on the map were collected from two public agencies (State of New Hampshire, GRANIT and the Forest Service), which used different categorization schemes. Consequently, this map should be used for general planning purposes only.

Figure 3-1: Locations of Visitation Sites



Data Sources: NH GRANIT GIS System; U.S. Forest Service, White Mountain National Forest

Figure 3-2: Origins of Visitors to WMNF



Data Sources: U.S. Census Bureau; U.S. Forest Service, White Mountain National Forest

3.2.2 Recreational Opportunities On and Off the Forest

The various trails, waterways, campgrounds, ski areas, picnicking places, and parking facilities provide numerous opportunities for recreation within the Forest. Recreation opportunities include, but are not limited to, hiking, rock climbing, bicycling, backcountry skiing, cross country skiing, downhill skiing, camping, horse riding, snowmobiling, wildlife and foliage viewing, fishing, hunting, canoeing, kayaking, and rafting. Many visitors engage in multiple pursuits and activities such as camping and staying in mountain huts are usually an adjunct to other activities such as hiking, cross country skiing, wildlife viewing, swimming or fishing.

The recreational activities are discussed in two categories: dispersed recreation and developed (non-dispersed) recreation. Dispersed recreation includes motorized and non-motorized categories. Motorized recreation is defined as the use of any off-highway recreational vehicle. All other dispersed recreational activities are in the non-motorized category, even though they may involve the use of on highway motor vehicles to reach the recreational destination.

Recreational activities are described under eleven principal recreation categories and a category of special activities listed in Table 3-1. These categories form the basis for the economic impact analysis for recreation in Section 5. Certain activities such as mountain biking, horseback riding and water sports occur within the Forest, but have small numbers of participants. There is insufficient data available to quantify the levels of participation in these and several other recreational categories. The numbers of participants in mountain biking and horseback riding are probably included in part within the 'hiking' category, and water sports within the 'viewing and driving' category.

Participant levels for recreation activities are expressed in terms of both visits and visitor days. A visit may be 24 hours in the case of overnight visitors, or a day or part of day for a day visitor. A visitor day is defined as a period of at least 12 hours. The visitation data are adjusted to visitor days by using US Forest Service National Visitor Use Monitoring Survey data on the average length of stay of visitors in each recreation category. In general, these participant levels do not include visitors who are just driving through the Forest. The total number of visitors of all types to the New Hampshire White Mountain Tourism Region as a whole, including those whose visit is of very short duration, or incidental to some other activity, is estimated to be over 8 million in 2002 (Goss, 2003). This can be compared to 4.7 million recreational visitors who are using Forest land as described in this section. Participant levels are estimated for 2002 even though data or estimates may have been for an earlier year. For activities such as skiing, which is weather dependent, the participation numbers are averaged over several recent years.

3.2.2.1 Dispersed Recreation

Hiking

Hikers are the largest single category of recreational users in the Forest. Hikers have more than 1,500 miles of Forest hiking trails available, as well as trails on adjoining state and private lands. With the large number of access points and close interconnections with these abutting lands, it is difficult to estimate the total number of hikers using the Forest trail network. Based on trail registries and surveys, the Forest Service estimates current usage at 1,693,000 visits per year. This is equivalent to 728,000 visitor days. Of this total, 1,128,000 are day hikers, and 564,000 are overnight hikers using backcountry camping facilities, cabins and serviced huts. There are seven huts operated by the Appalachian Mountain Club and four by the Randolph Mountain Club that provide accommodations for hikers. Some hikers may

Table 3-1: Participation in Recreational Activities on the WMNF for 2002

Dispersed Recreation	Visits	Visitor Days
<i>Non-Motorized Dispersed</i>		
Hiking Total	1,692,000	728,000
Cross Country Skiing	194,000	66,000
Mountain Biking	NA	
Horseback Riding	NA	
Hunting	172,000	112,000
Fishing	225,000	79,000
<i>Motorized Dispersed</i>		
ATV / Trail Bikes (no authorized trails)	NA	
Snow mobiles	108,000	32,000
Total Dispersed Recreation	2,391,000	1,017,000
Developed Recreation		
Driving and Viewing	700,000	91,000
Developed Road Access Day Use	416,000	58,000
Developed Road Access Camping	265,000	265,000
Alpine Skiing Area Use (including summer)	920,000	377,000
Total Developed Recreation	2,301,000	791,000
Special Activities		
Rock and Ice Climbing	Several thousand	
Spring Skiing Tuckerman's Ravine	15,000	6,000
Presidential Traverses (Winter off trail)	A few hundred	
Alpine Zone recreation	NA	
Wilderness Recreation (Off trail use)	NA	
Appalachian Trail	NA	
Total All Recreation	4,707,000	1,814,000

Source: US Forest Service

also take part in other activities, including swimming, wildlife viewing or rock climbing. The National Survey on Recreation and the Environment (NSRE, 2000) shows a 60% increase for day hiking and a 68% increase for backpacking from 1994 to 2001 in New England. This would suggest a current growth rate of about 9% per year. This trend data has been used to project 2002 totals from 1999 survey data for the Forest.

Mountain Biking and Horseback Riding

Mountain biking is a popular and probably growing recreational activity on the Forest. There are no reliable estimates of use on the Forest but mountain biking is often observed and has been the fastest growing outdoor recreation category in the last decade. A recent study by the Sporting Goods Manufacturers of America (2000) indicates that mountain biking has grown nationally by an average of

36% per year in the period from 1987 to 2000, although use has declined slightly in the late 1990s. Horseback riding is not frequently found on Forest trails although it does occur on ski area trails in summer. There are no estimates available for number of visits by horseback riders.

Nordic Skiing or Cross Country Skiing

Nordic skiing, or cross-country skiing, is available on most of the hiking trails. There are also three maintained Nordic skiing areas operated under special permits on the Forest at Bretton Woods, Jackson and Loon Mountain. These areas charge for the use of their facilities. The total estimated Nordic skiing use is 194,000 visits, which is equivalent to 66,000 visitor days. The visitation at the three Nordic ski areas is 83,000 visits based on the operator's records extrapolated to 2002. The Forest Service estimates Nordic skiing and snowshoeing on Forest trails to be 111,000 visits in 2002. This estimate is derived from the Nordic ski area use data, by assuming the skiing use per mile of trail on Forest trails managed for skiing is the same as use at the Nordic ski areas. National trends show cross-country skiing increasing by 30 percent from 1994 to 2001 (NSRE, 2000). This would imply an annual rate of growth of 4.3% per year, which has been used to project data to 2002.

Hunting

Hunting has a long tradition in the Forest Region and continues to be an important recreational use of the Forest. The number of users is difficult to estimate. The Forest Service has estimated current hunter use at 172,000 visits based on 1994 data that they consider to be still valid for 2002 (Kacprzynski, 2003). Based on hunting license records for Maine and New Hampshire, there has been no growth in hunting, thus this estimate appears to be reasonable at the present time. This use is equivalent to 112,000 visitor days in 2002.

Fishing

Fishing estimates recommended by the Forest Service are 225,000 visitor days in 2002 based on data for 1994 and analysis similar to hunting (Kacprzynski, 2003). Fishing license data indicate a small decline in fishing in the last five years in New Hampshire. Regional trends in fishing and hunting are essentially flat and this is confirmed by license data. Fishing visits of 225,000 are the equivalent of 79,000 visitor days.

Motorized Recreation: Snowmobiles and All-Terrain Vehicles

Motorized recreation includes snowmobiles, all-terrain vehicles (ATVs), trail bikes and off-road four wheel driving. There are over 370 miles of snowmobile trails in the Forest, but no established summer trail system for motorized recreation. The Forest snowmobile trails offer connection corridors to the region's broader trail network, which is extensive through Maine, New Hampshire, and Vermont. The White Mountain Region (defined in this case as the White Mountain National Forest and all land to the north in New Hampshire) accounts for close to 50% of snowmobile riding in New Hampshire (Robertson, 1996).

Snowmobile use on the Forest is estimated at 108,000 visits in 2002. This is equivalent to 32,000 visitor days. This estimate is based on a 1996 estimate (Robertson, 1996) for snowmobile use in New Hampshire and calculating the Forest share in proportion to the Forest trail length as a percentage of the state total trail length. The estimate is extrapolated to 2002 based on state use rates. There are no trails available for summertime ATV use. ATVs are sometimes used on snowmobile trails in winter. Use data are not available.

Based on New Hampshire registrations, the use of snowmobiles has doubled in the last ten years. However, registrations have not increased significantly in the last three years.

Although ATVs are not used to any extent in the Forest, their use has grown elsewhere in both Maine and New Hampshire. Based on registrations, ATV use has tripled over the last ten years and grown by 6% per year in the last three years in New Hampshire and by 16% per year in Maine. The more rapid growth in Maine is attributable to the greater availability of trails in Maine and to the increased registration of ATVs in Maine by residents of New Hampshire and Massachusetts. Appendix B contains data tables and charts on trends in ATV and snowmobile registrations.

3.2.2.2 Developed Recreation

Viewing and Driving

This is a varied category, composed of visitors who primarily visit specific sites by road, although they may engage in limited hiking as well as photography, picnicking, and swimming. It includes visitors who come to the Forest for wildlife viewing, especially to see large animals such as moose and deer, as well as those who come to view the spectacular scenery and fall foliage. Some of the most popular routes for visitors in this recreation group are the Kancamagus Highway, the Pinkham Notch area of Route 16, and the Franconia Notch State Parkway section of I-93. The estimate for this category is 700,000 visits per year, which is equivalent to 91,000 visitor days. This is based on the National Visitor Use Monitoring Survey data. There are not specific data available to estimate trends in this category.

However, general tourism trends in New Hampshire, which are probably representative of this category, show an increase of approximately 1.5% per year for the last two years.

Developed Road Access Day Use

Visitors in this category include those who come to the Forest to use the many day use areas such as picnic sites, swimming and boating locations. These sites, which are accessible by road, are popular with families. Sites vary in capacity from 25 to over 600. There are several large visitor centers such as those at the Saco Ranger Station and the Pinkham Notch Visitor Center. Day use areas also include scenic overlooks or observation sites. The total visits to developed day use sites are estimated to be 416,000 in 2002 based on permittee reports and other Forest Service estimates. This is equivalent to approximately 58,000 visitor days.

Developed Road Access Camping

There are 23 developed campgrounds in the Forest that provide relatively low-density outdoor-type amenities but are less developed than most of the off-Forest commercial sites. All but one of these sites are operated by concessionaires, and reservations for most sites are provided by a national reservation system. Based on records from concessionaires and the Forest Service, it is estimated that there are 265,000 visitor days of developed road access camping on the Forest. The use of campgrounds on the Forest has grown at approximately 1% per year.

Alpine Ski Area Use

Downhill skiing is available on the Forest at four ski areas – Loon Mountain, Attitash-Bear Peak, Waterville Valley and Wildcat Mountain. These ski areas are operated by private companies under a special use permit from the Forest Service. Ski areas on Forest land have averaged about 920,000 total annual visits in recent years based on operator records. This is equivalent to 377,000 visitor days. Of the total of 920,000 visits, 823,000 visits are for winter skiing and 97,000 are for summer use. The trend in the use of the Forest ski areas is essentially flat after weather fluctuations are removed.

3.2.2.3 Special Activities

In addition to recreational activities described in this section, there are a number of special activities. These activities, although they attract only a small number of participants, are worthy of note in the context of the Forest Plan Revision.

Rock and ice climbing is a long established sport on the Forest and elsewhere in the White Mountains. Although there are no direct survey data or reliable estimates available, the number of participants appears to be increasing and there are probably several thousand visits a year specifically for climbing.

Skiing at Tuckerman's Ravine on Mount Washington has been a special activity in the spring each year. Reports from the newspapers and other sources indicate that approximately 15,000 spring skiing visits take place each year at Tuckerman's Ravine (Chandler, 1987). This is equivalent to about 6,000 visitor days. The numbers vary each year with weather conditions.

There are some special hiking activities such as winter traverses of the Presidential Range which are undertaken by a few hundred visitors each year. Additionally, off-trail wilderness hiking and alpine zone hiking are also notable, although there are no reliable estimates of the number of participants. The Appalachian Trail passes through the Forest and each year it is estimated that about 600 people pass through to complete the Trail.

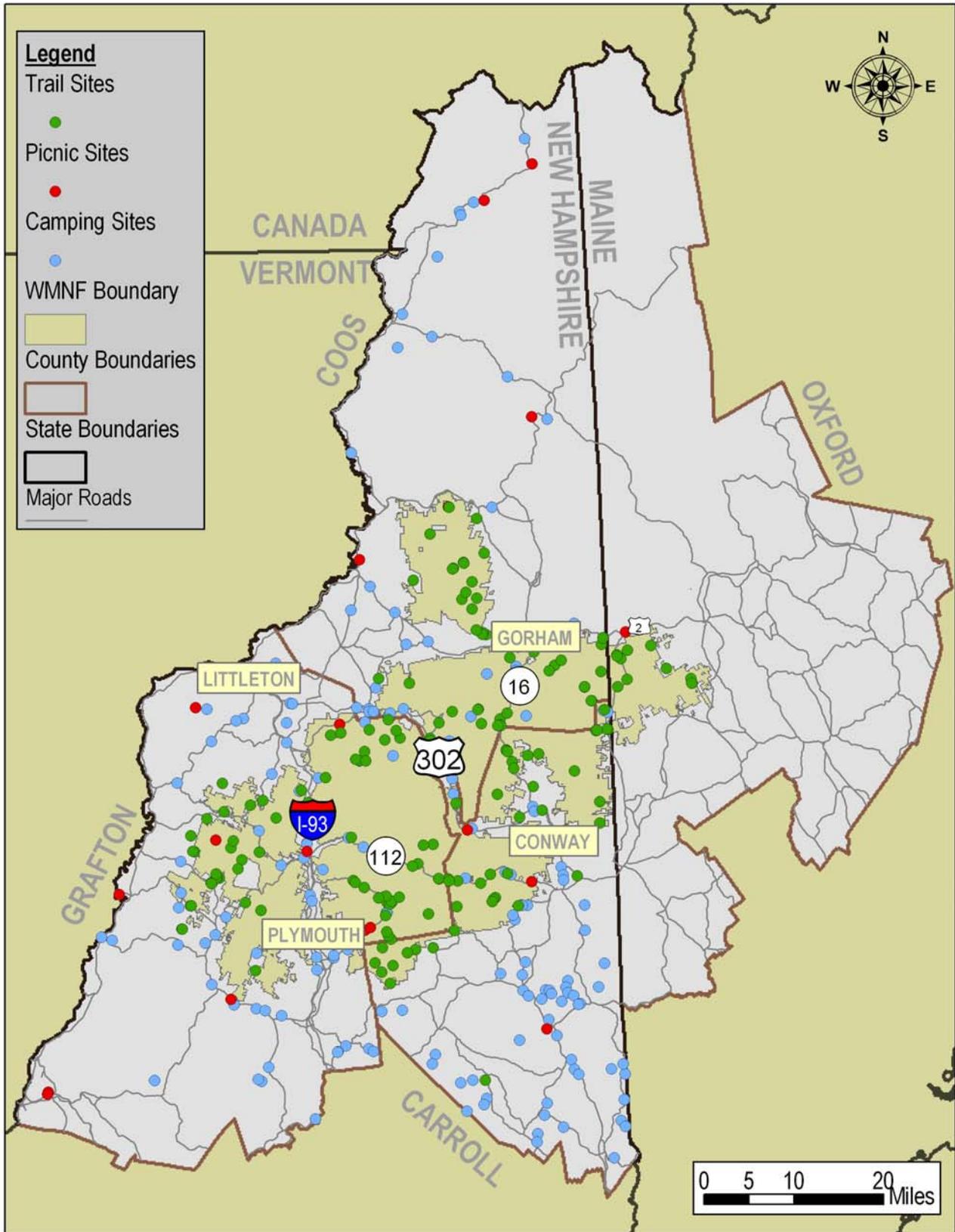
3.2.2.4 Recreational Facilities (Trail Sites, Picnic Sites, Camping Sites)

The Forest Region offers a number of recreational facilities, including trail sites, picnic sites, and camping sites. Figure 3-3 shows approximate locations of a number of these facilities. The majority of trail sites shown are trailheads. Picnic sites range from roadway rest areas to family picnic areas. Most of the camping sites shown are AMC huts and developed campgrounds. As shown, the majority of trail sites are located on the Forest, while the majority of picnic and camping sites are located off the Forest. In Figure 3-3 data on off Forest facility locations were not readily available for Oxford County in Maine.

3.2.2.5 Trails by Type (Snowmobiling, Hiking, and Cross-Country Skiing)

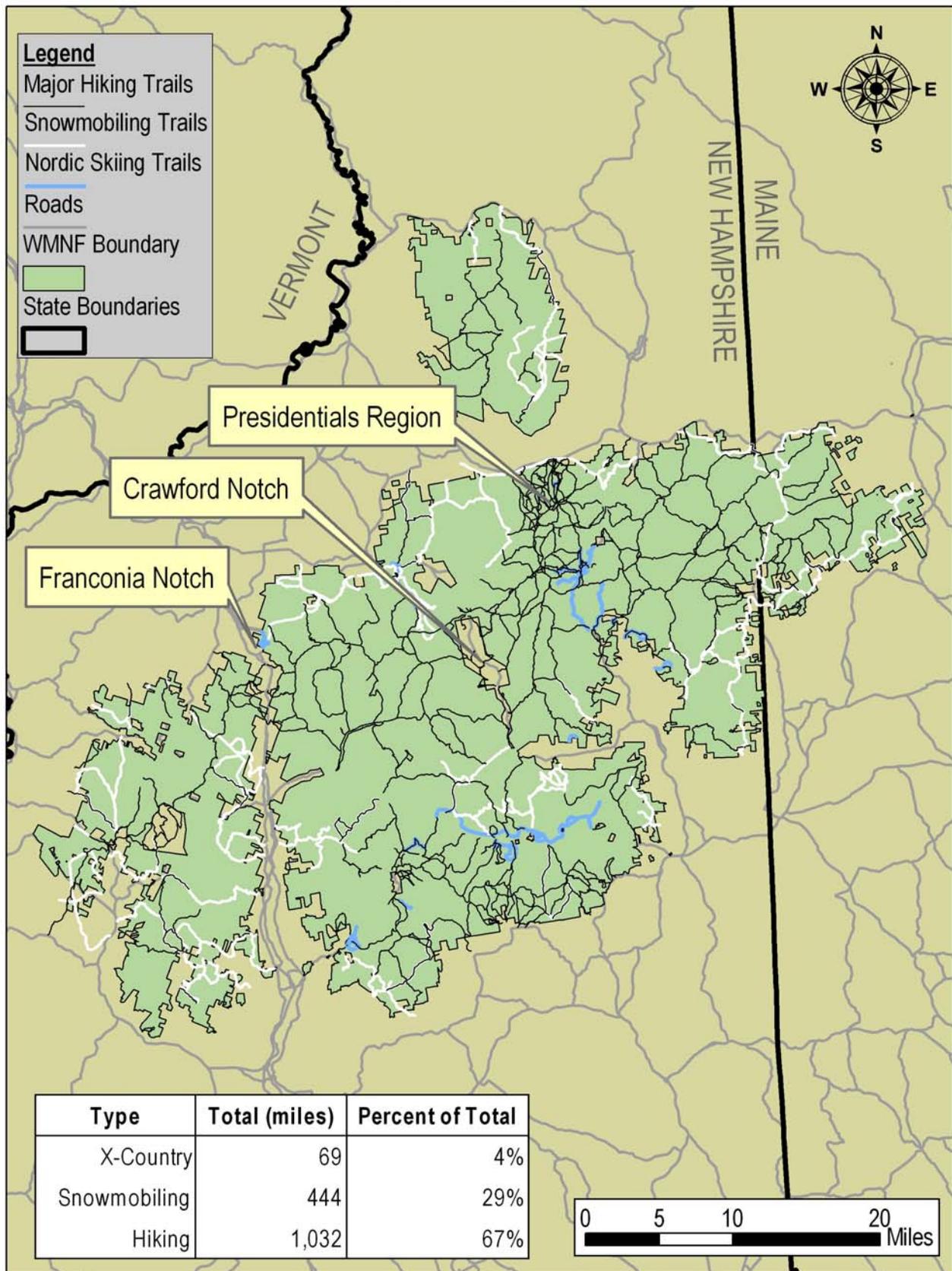
Figure 3-4 shows the distribution of snowmobile, hiking, and cross-country ski trails on the Forest. As shown, hiking trails constitute the majority of the entire trail network, with snowmobile trails constituting the second greatest length of trails, and cross-country ski trails constituting the smallest length of trails. This figure also indicates that hiking trails are evenly distributed throughout the entire Forest area, while snowmobile trails are concentrated nearer the Forest boundary. Cross-country ski trails extend from the boundary to the interior of the Forest.

Figure 3-3: Examples of Recreation Facilities on and off the Forest



Data Sources: NH GRANIT GIS System; U.S. Forest Service, White Mountain National Forest

Figure 3-4: Snowmobile, X-Country Skiing, and Hiking Trails



Data Sources: U.S. Forest Service, White Mountain National Forest

3.2.2.6 Interpretive Programs, Opportunities, and Educational Facilities.

Numerous programs exist in the White Mountain Region which provide educational and exploratory opportunities for tourists, educators and children. Many of these programs operate through the school system and provide materials and programs for educators to use in the classroom. Others are visited through off-site field programs. Organizations such as the US Fish and Wildlife Service, the Audubon Society, and the Environmental Protection Agency provide nationwide services and information. Programs offered through organizations such as the Mount Washington Observatory, Appalachian Mountain Club, and the Tin Mountain Conservation Center are based around the White Mountain Region specifically. Programs also vary in length, from a brief tour of the Mount Washington Observatory to the Chewonki Foundation's full semester program for high school juniors, in which the White Mountain Region is just a partial focus of the entire program.

Most of these programs are offered in locations just outside the boundary of the Forest. The Appalachian Mountain Club has a major presence within the boundaries and is able to offer numerous programs that begin from their Pinkham Notch location. Just recently constructed this year, is AMC's brand new Highland Center located in Crawford Notch. The Highland Center will be a base for many educational programs, including the "mountain classroom" program, which works with school teachers and students focusing on environmental science and natural history.

Table 3-2 is a partial list of programs and activities available. The websites provided give in-depth descriptions of each organization and its programs. It is important to note that this is only a partial list. Additional activities and programs are offered through public and private schools, local towns and chambers of commerce, outfitters, special guides, and through the Forest Service directly.

Table 3-2: Partial List of Programs Offered by Public and Private Groups on the WMNF

<i>Organization</i>	<i>Programs Offered</i>	<i>Website</i>
<i>Project Learning Tree</i>	School-based environmental education programs for preK-12 both in class and outdoor workshops.	http://www.nhplt.org/
<i>Appalachian Mountain Club</i>	Educational programs, workshops, outdoor adventures, huts, etc. Most extensive programs in the White Mountains.	http://www.outdoors.org/
<i>Project Wild</i>	Environmental education program for k-12 educators.	http://www.projectwild.org/
<i>Project Wet</i>	Water education program for educators of students age 5-18. Many 6-hour workshops.	http://www.projectwet.org/
<i>Envirothon</i>	Yearly five-day high school environmental competition in different states involving testing stations and oral presentations.	http://envirothon.org/
<i>Society for the Protection of New Hampshire Forests</i>	Single day field trips and workshops.	http://www.spnhf.org/
<i>Tin Mountain Conservation Center</i>	Environmental education programs for kids K-8, through schools, camps and community projects. Based out of Conway, NH.	http://www.tinmtn.org/aboutprograms.cfm
<i>Maine Conservation School</i>	Camps and programs in Maine that teach kids, adults and teachers outdoor skills.	http://www.meconservationschool.org/index.htm

TABLE 3-2 (CONTINUED)

<i>Organization</i>	<i>Programs Offered</i>	<i>Website</i>
<i>US Fish and Wildlife Service</i>	Education through publications. Conservation of habitat and species.	http://www.fws.gov/
<i>NH Wildlife Federation</i>	A non-profit member organization promoting conservation, environmental education, sportsmanship, and outdoor activities.	http://www.nhwf.org/
<i>NH Department of Environmental Services</i>	Protection and wise management of New Hampshire's environment through monitoring and policy decisions.	http://www.des.state.nh.us/
<i>The Nature Conservancy</i>	Educational activities. Conservation of land.	http://nature.org/
<i>Mount Washington Observatory</i>	Tours, internships, library, school programs, educational website.	http://www.mountwashington.org/index.html
<i>Hostelling International</i>	Grades 4-8, wildlife and natural history programs through the High Mountain institute and Tin Mountain Conservation Center.	http://www.hiayh.org/homenew.shtml
<i>Audubon Society</i>	Camps about the environment and classroom focused educational programs for grades 3-6.	http://www.audubon.org/
<i>Eastman Farm</i>	Homestead demonstrating life in rural NH from a century ago.	http://www.cehfarm.com/index.html
<i>Eastern Mountain Sports</i>	Guided climbing and Mountaineering adventures	http://www.ems.com/
<i>Raven Interpretive Wildlife Center</i>	Customized services providing historical and ecological information through lectures and trips for groups and individuals.	http://www.ravenwildlife.com/
<i>Environmental Protection Agency</i>	Numerous environmental education programs.	http://www.epa.gov/
<i>Chewonki Foundation</i>	Provides wilderness trips, on-site educational programs and educational semester for high school juniors. Located in Maine.	http://www.chewonki.org/Home/
<i>Squam Lakes Natural Science Center</i>	Educational programs for students and teachers about flora, fauna and lake.	http://www.nhnature.org/

Source: US Forest Service

3.3 FOREST USERS

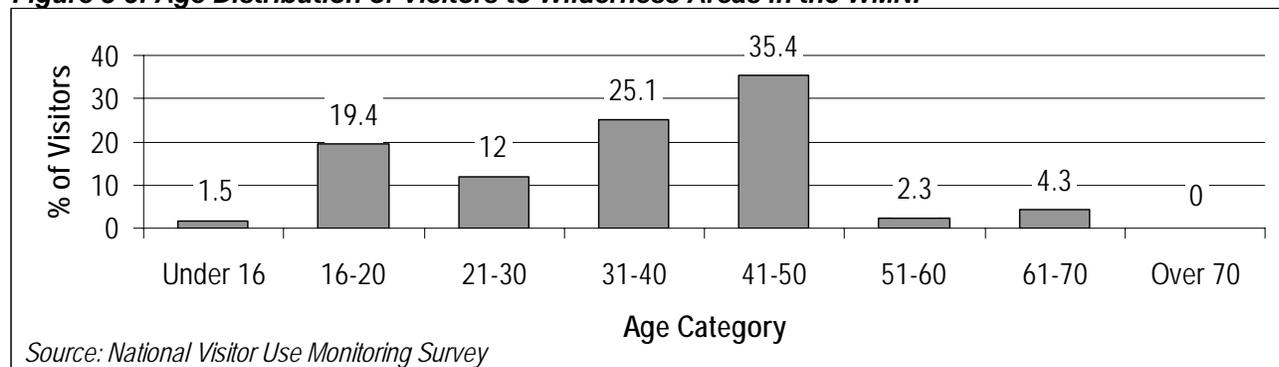
3.3.1 User Demographics and Trends: Outdoor Recreation and Wilderness Areas¹

Detailed patterns for all demographic categories do not exist for the White Mountain National Forest, though historical trends and projections of use at the national level have been examined thoroughly. Cordell and others' (1999) *Outdoor Recreation in American Life: A National Assessment of Demand and Supply Trends* provides much of the foundation for this assessment topic. Trends relating to the White Mountain National Forest may be slightly different than those nationally, but implications for shifting demographic patterns will have similar effects.

National surveys in the 60s and 70s indicated about 25% of Wilderness visitors were female, and these numbers increased to almost one-third in the 90s (Cordell, 1999). Surveys conducted in other Wilderness Areas around the U.S. revealed other shifting demographic patterns. Wilderness visitors indicated higher educational achievement and more prior Wilderness experience in the 90s than in the 60s.

Figure 3-5 shows the vast majority of WMNF Wilderness visitors are in the 31-40 and 41-50 (“baby boomers”) age brackets. This is consistent with national trends, which indicate that average wilderness visitors are in the mid 30s.

Figure 3-5: Age Distribution of Visitors to Wilderness Areas in the WMNF



Very little historical information is available on ethnicity patterns in outdoor recreation. However, population projections indicate that the ethnic profile of outdoor recreation activities will likely change. Table 3-3 highlights the differences in visitors to the Forest as a whole and to Wilderness areas. Wilderness visitors are almost 99% ethnically white, while they comprise just over 93% of all Forest visitors. Reasons for this will be discussed in *Section 4.3.1 Barriers to Users*.

¹ Wilderness Areas are defined as congressionally designated tracts of protected land. The WMNF has five such areas: Dry River/Presidential Wilderness, Pemigewasset Wilderness, Sandwich Range Wilderness, Caribou-Speckled Mountain Wilderness, and the Great Gulf Wilderness.

Table 3-3: Ethnic/Racial Composition of WMNF Wilderness and Forest Visitors

<i>Category</i>	<i>% of Wilderness Visitors</i>	<i>% of All Forest Visitors</i>
White	98.6 %	93.4 %
Asian	0.8 %	2.4 %
Other	0.4 %	0 %
Spanish, Hispanic, or Latino	0.2 %	0 %
Black/African American	0 %	2.1 %
American Indian/Alaska Native	0 %	2.1 %
Native Hawaiian or Other Pacific Islander	0 %	0 %

Source: National Visitor Use Monitoring Survey