

## Relative Index of Need (RIN)

OPRHP maintains a computerized database, the Recreation Facilities Inventory System (RFIS), in principle lists all known outdoor recreation sites in the state. This information can be transformed into a numerical value, which equals the optimal number of people who can participate in each activity at a given site, also known as the recreation capacity. When aggregated, the capacity across sites for a given geographic area is the recreation supply.

Recreation demand is measured in terms of recreation activity days, equal to the number of participants for an activity, multiplied by the number of days per year each participant does the activity. Demand is also aggregated by county for each of the various measured outdoor activities.

Once all the supply and demand calculations for each county are completed, a single number is calculated for each activity, which indicates the ratio of demand to supply. This number, known as the relative index of need (RIN), is calculated by taking the projected ratio of recreation demand to supply, expressing it as a ratio of the statewide average, and translating it to a value on a scale of 1 to 10. Note that:

- The higher the value, the greater the need. A figure of three or less indicates that the county-wide recreation needs for a given activity are generally being met—but even in these cases there may exist pockets of recreation deficiency. This number provides information on where recreationists live and how often they participate.
- A value of four or greater indicates a need for additional recreation sites within a county. Need may reflect the lack of facilities, or that new facilities need to be constructed to take the place of older ones, which deteriorate or close.
- Much recreation involves travel, including travel across county lines. The RIN therefore also considers the fact that people travel for recreation, by using information on the location of parks and other recreation facilities. Using data on the quantity of recreation amenities at various destinations, with an estimate of an individual's resistance to traveling for a particular activity, it is possible to calculate how much activity takes place at various destinations. Comparing the number of future visitors at the destination counties with the availability of present facilities helps to project the present and future needs for both new and rehabilitated facilities.
- While RIN figures are valuable in looking at the big picture, often the number presented for the county represents an average for the county and the actual need is not homogeneous within a county. For example, a county may have a river or other natural resource with limited facilities, that attracts greater numbers of visitors, while having largely undeveloped areas elsewhere in the county (that satisfy the recreational needs in those locations). The county-wide figure would consider both areas. It would over-estimate the needs in certain areas of the county and underestimate it in others. Nonetheless, an index of need is relevant in comparing one county to another.

Due to the limitations of the 2018 PORs, an alternate means is utilized for grant rating purposes to provide a RIN at the county level. In these cases, an estimated RIN can be calculated on an ad hoc basis using information from the available RIN table. For instance, if a RIN figure was needed for ATV activity, its value might be estimated by averaging the values of snowmobiling with hiking. While ATV use is distinct from both activities, there are certain commonalities. ATV use appeals to participants who enjoy using vehicles to explore the outdoors and, at the same time, often requires the availability of trails such as those that are enjoyed when hiking.

This approach, while not optimal, provides an approximation of real-world needs. If this methodology is applied, the inputs will be determined by OPRHP and maintained for future use so that figures are applied consistently through time.

The RIN is a valuable tool to determine need for facilities at geographic areas over the next five to ten years, but other factors can and should be considered for any final decisions.

**Table 3.10 – Relative Index of Needs (RIN)**

County	Park	Swim	Bike	Golf	Court	Field	Walk	Camp	Fish	Boat	LocW	DnSki	SnM	Hunt	Equine
Albany	4	9	6	7	8	5	5	4	7	7	7	10	6	5	4
Allegany	9	5	3	3	4	4	4	10	5	3	6	3	4	4	4
Bronx	10	5	10	4	5	6	8	4	6	10	3	9	10	7	8
Broome	4	4	5	5	6	4	5	4	4	3	4	5	5	5	4
Cattaraugus	3	5	3	7	5	4	2	4	4	2	10	4	4	4	3
Cayuga	5	4	3	4	6	4	4	5	4	4	10	4	4	4	3
Chautauqua	4	5	3	9	8	6	5	5	4	4	8	4	4	4	4
Chemung	5	8	4	4	6	5	6	4	7	2	7	3	4	4	3
Chenango	4	5	3	3	5	3	3	4	4	3	7	5	4	4	3
Clinton	3	3	3	4	6	4	3	4	4	4	6	2	4	4	2
Columbia	3	3	4	2	9	3	3	5	4	3	4	4	5	5	3
Cortland	4	6	3	3	3	6	4	4	4	3	10	6	4	4	3
Delaware	6	4	4	5	3	3	2	7	4	3	4	6	5	4	3
Dutchess	5	6	6	5	9	5	4	5	6	5	8	10	6	5	4
Erie	3	6	7	7	9	5	8	5	6	6	8	6	5	5	4
Essex	3	3	3	4	7	4	2	3	4	3	3	2	4	4	2
Franklin	4	4	3	3	9	6	3	3	3	2	3	2	4	4	4
Fulton	3	5	4	4	5	3	10	4	5	4	9	9	5	4	3
Genesee	4	6	4	4	6	4	3	10	5	4	4	3	4	4	3
Greene	4	7	4	6	4	5	4	6	7	5	10	5	5	5	3
Hamilton	2	3	3	3	2	2	1	2	4	3	2	3	4	4	2
Herkimer	4	4	3	3	7	6	4	5	4	3	10	5	4	4	3
Jefferson	4	3	3	6	4	3	3	4	3	3	5	4	4	4	3
Kings	10	6	10	5	5	7	10	4	6	10	3	10	10	7	9
Lewis	4	2	3	3	3	2	3	5	4	3	9	3	4	4	3
Livingston	4	4	4	4	4	4	3	4	5	3	4	4	4	4	3
Madison	6	3	3	3	4	7	2	3	5	4	7	5	4	4	3
Monroe	4	6	7	5	10	5	8	3	5	5	3	5	5	5	5
Montgomery	6	3	4	3	4	3	4	6	4	3	4	3	5	4	3
Nassau	6	6	9	6	5	4	8	4	7	8	3	8	10	7	5
New York	10	6	10	5	5	7	9	4	6	5	3	8	10	7	9
Niagara	3	4	5	5	6	3	5	3	4	5	6	5	4	4	4
Oneida	4	5	4	6	7	5	6	6	5	4	10	6	4	4	3
Onondaga	4	5	5	7	6	4	4	3	5	5	8	8	5	5	3
Ontario	6	5	4	4	10	6	6	6	5	3	10	5	4	4	3
Orange	6	8	6	6	8	7	4	6	6	4	9	8	7	5	5
Orleans	4	7	3	4	5	6	4	4	4	4	5	3	4	4	3
Oswego	5	4	4	5	9	6	4	7	4	5	8	4	4	4	3
Otsego	3	3	3	3	3	2	3	5	4	3	4	5	5	4	3
Putnam	6	6	6	3	5	6	3	4	6	5	6	5	7	5	4
Queens	10	6	10	5	5	6	9	5	6	8	2	9	10	7	9

(cont.)

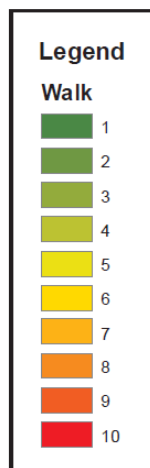
**Table 3.10 – Relative Index of Needs (RIN) (cont.)**

County	Park	Swim	Bike	Golf	Court	Field	Walk	Camp	Fish	Boat	LocW	DnSki	SnM	Hunt	Equine
Rensselaer	5	5	5	9	6	7	4	9	5	4	8	3	5	5	3
Richmond	9	5	10	4	4	5	8	4	5	6	3	8	10	7	8
Rockland	5	5	8	5	7	5	4	3	5	8	3	5	8	6	4
St. Lawrence	4	4	3	5	4	5	3	3	4	3	6	9	4	4	4
Saratoga	4	5	5	5	7	4	5	7	5	4	7	2	5	4	4
Schenectady	10	4	5	5	6	4	6	4	5	4	9	4	5	5	4
Schoharie	4	3	3	2	3	3	5	7	4	4	9	3	5	4	3
Schuyler	3	4	3	2	3	3	3	4	4	5	7	3	4	4	3
Seneca	2	3	3	3	4	2	3	3	4	3	3	2	4	4	3
Steuben	4	6	3	4	7	3	4	4	5	4	10	4	4	4	4
Suffolk	5	6	8	6	7	5	5	4	6	8	5	9	10	6	4
Sullivan	4	6	4	6	6	5	2	7	6	4	10	8	5	4	2
Tioga	9	3	3	3	3	3	3	3	6	3	9	4	4	4	4
Tompkins	4	5	4	4	8	3	3	4	4	3	7	5	4	4	4
Ulster	7	5	5	4	10	6	3	6	6	6	10	5	6	5	5
Warren	3	4	4	5	5	3	5	4	5	4	4	3	4	4	3
Washington	4	3	3	4	5	3	3	2	4	4	6	2	4	4	3
Wayne	5	3	4	4	5	4	8	3	4	4	6	4	4	4	4
Westchester	6	5	8	7	6	5	3	4	5	7	2	7	8	6	4
Wyoming	3	8	3	4	7	7	5	4	6	4	10	3	4	4	4
Yates	4	6	3	2	8	4	6	4	5	3	10	4	4	4	5

**ABBREVIATIONS USED IN THE RELATIVE INDEX OF NEED (RIN) TABLE**

<b>Park</b>	Relaxing in the park, picnicking, playground use, visiting nature areas and gardens, croquet, dog parks, etc.
<b>Swim</b>	Outdoor swimming, either in a pool (public or private), lake, ocean or river
<b>Bike</b>	Bicycling/mountain bikes whether on trails, established paths, off-road or on highways
<b>Golf</b>	Golfing on either regulation 18 or 9-hole including miniature golf, driving ranges, pitch and putt
<b>Court</b>	Court games, includes basketball, handball, tennis, racquetball, pickleball
<b>Field</b>	Field sports, includes baseball, football, soccer and disc golf
<b>Walk</b>	Walking for enjoyment/jogging/running on paths and trails, and day hiking
<b>Camp</b>	Camping includes tenting, primitive, RV, cabins, backpacking/long distance hiking
<b>Fish</b>	Fishing from land, by boat, or ice fishing
<b>Boat</b>	Boating includes canoeing, kayaking, sailing, motorboating, row boating, paddle boarding, jet skiing, etc.
<b>LocW</b>	Local winter activities include ice skating, cross country skiing and snowshoeing
<b>DnSki</b>	Downhill winter sports includes skiing, snowboarding, ski boarding, telemark, etc.
<b>SnM</b>	Snowmobiling
<b>Hunt</b>	Hunting big and small game
<b>Equine</b>	Equestrian activities, dressage, show jumping, polo, trail riding

## Activity Analyses



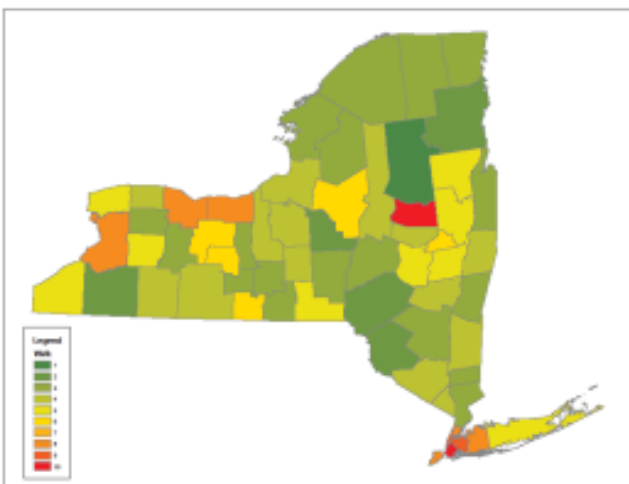
### Overview

The RIN table uses a scale of 1 to 10 to represent the county-wide ratio of recreation demand to recreation supply. A RIN of 1 indicates areas where recreation needs for a given activity are generally being met, and 10 indicates areas with the greatest need for an activity relative to recreation supply.

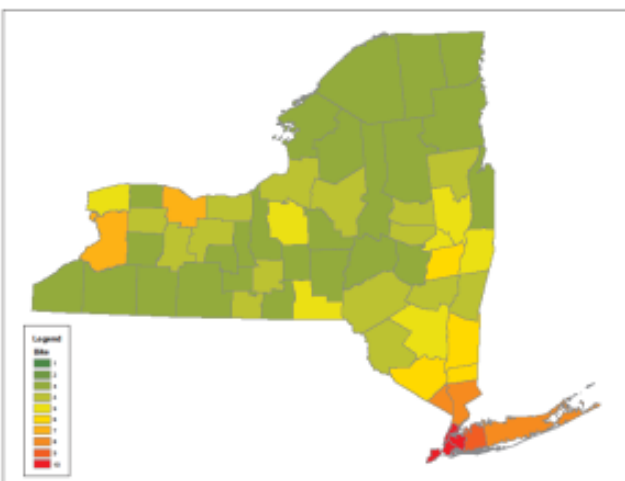
The choropleth maps in this section show the same data for recreation activities shown in the RIN table, with need represented by a scale of color: green = 1, or counties with lowest need (i.e., supply is adequate), and red = 10, indicating areas with the greatest need for facilities offering that activity. This format makes it easy to see where there is a need for the targeted activities in the State, and where demand for specific recreation activities are being adequately met.

*Legend (left) shows color equivalents of items shown on RIN Table for choropleth maps below.*

### Trail Activities



**Figure 3.1 – Need for Walking, Jogging, and Hiking Facilities**



**Figure 3.2 – Need for Bicycle Facilities**

#### **Walking for Enjoyment (86.6%—represents the total survey sample)**

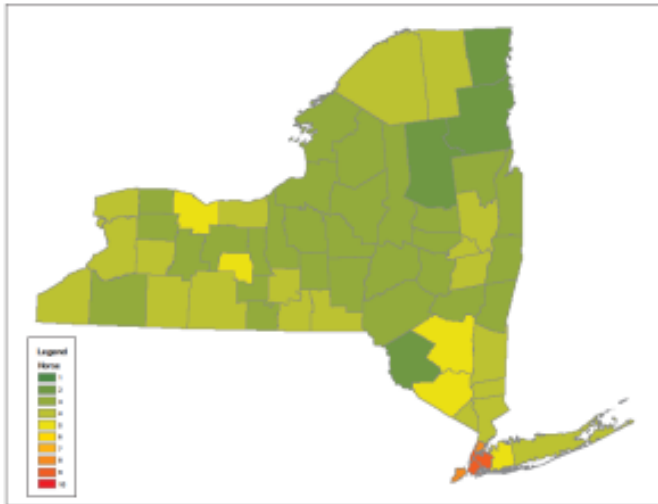
Walking, jogging and day hiking was the most popular activity category from the 2018 Public Outdoor Recreation Survey (PORS) among all respondents, and those ages 65-85 (86.2%). (See Table 3.8 for outdoor recreation participation of those ages 65-85.) This activity encompasses well over half of the total activity days of all recreation activities measured. (See Table 3.9.) Trails are an important component of active transportation such as biking and walking. According to the **American Public Health Association** using active transportation can lead to a decreased incidence of cancer, cardiovascular risk and obesity with better mental health.

#### **Bicycling (49.3%)**

For recreation purposes, on and off-road biking, including mountain biking, was the fourth most popular activity in the 2018 PORS with 49.3% of total respondents participating at least once. Statewide there were over 107 million activity days in 2017. Bicycling is a growing mode of transportation. Much of the recreational bicycling takes place on public roads. An important component of improving this activity is increased safety. There are several ways to accomplish this including: promoting the use of helmets, traffic law education and the construction or designation of separate lanes for bicyclists. The installation of separate bike lanes has been gaining popularity and acceptance across the country. It has been shown to increase cycling and reduce risk.

Bicycling is one of America's major outdoor recreation and transportation activities. While this document focuses on the recreational aspect of bicycling, it should be noted that the transportation component will likely grow in importance as the cost of gasoline and concerns over environmental issues increase in the future.

Bicycle-sharing services provide public-use bicycles on a short-term basis for a price or for free. In Albany, NY, Capital District Physicians' Health Plan (CDPHP), a health care provider, partnered with Capital District Transportation Authority (CDTA) to provide a bike-sharing service, called **CDPHP Cycle!** It launched in 2017. The service was so successful, it exceeded expectations its first year, and again in 2018. In its first two years the program garnered more than 6,500 members, who burned a collective 2.25 million calories, reduced 71,000+ pounds of carbon, rode 80,500+ miles, and took nearly 35,000 trips.



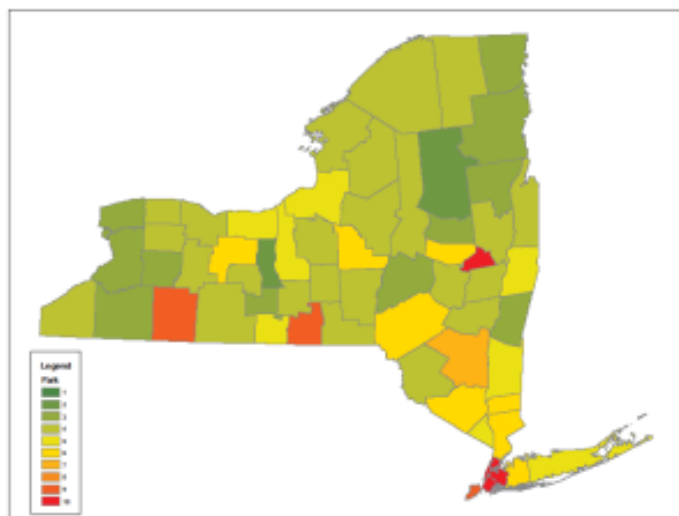
**Figure 3.3 – Need for Equestrian Facilities**

#### **Equestrian (20.7%)**

Horse ownership and ridership is a popular recreation activity throughout NYS and is important to many regional economies. In 2017, the American Horse Council Foundation's **National Economic Impact Study** estimated that in NYS, equine recreation's economic impact of \$765 million worth of goods and services provided the equivalent of nearly 8,000 jobs. The NYS **Horse Council** estimates there are 200,000 horses in the State. Approximately 140,000 are used recreationally. Horseback riding is not limited to the suburban and rural areas of the state. The RFIS lists equestrian trails in every county, including New York City. Statewide, some OPRHP facilities offer equestrian camping, and many of the DEC trail networks provide support infrastructure such as hitching rails, horse shelters, lean-tos for riders and parking amenities.



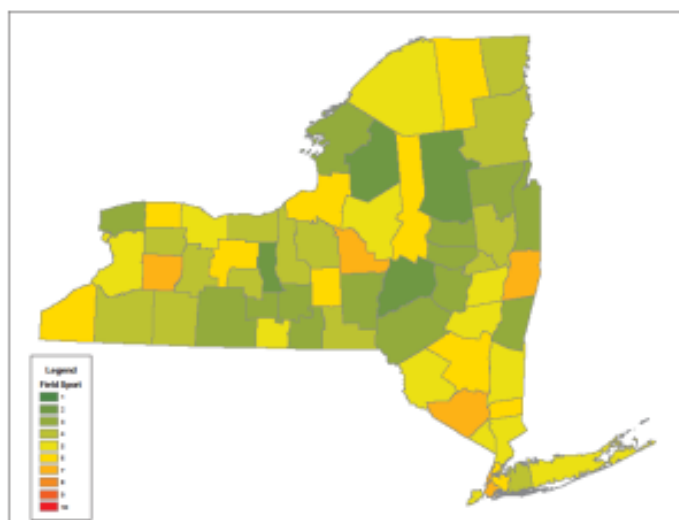
## Day Use Activities



**Figure 3.4 – Need for Relaxing in the Park Activities**

### Relaxing in the Park (86.0%)

This category includes picnicking, relaxing and playground use. Requiring minimal physical exertion and almost no equipment costs, these activities can be enjoyed by all ages regardless of income. It is no surprise that the number of participants for picnicking/day use/relaxing in the park is the 2nd most popular activity (86%) for total respondents. It has the same rank among those ages 65-85 (85.1%) according to the 2018 PORS. Additional facilities for relaxing in the park was the second greatest outdoor recreation need, according to the 2018 Park Professionals Survey.



**Figure 3.5 – Need for Field Game Facilities**

### Field Games (43%)

Field sports include the following: baseball, football, soccer and disc golf. They are the 7th most popular activity category in the 2018 PORS based on total survey respondents with 43% having participated in at least one day of field games. For those between ages 65-85, field sports are ranked 8th based on 33.2% participating. There are nearly 2,200 public facilities that have sport fields. There are many more fields for baseball than any other type of field for recreational use with Long Island having the most baseball fields.



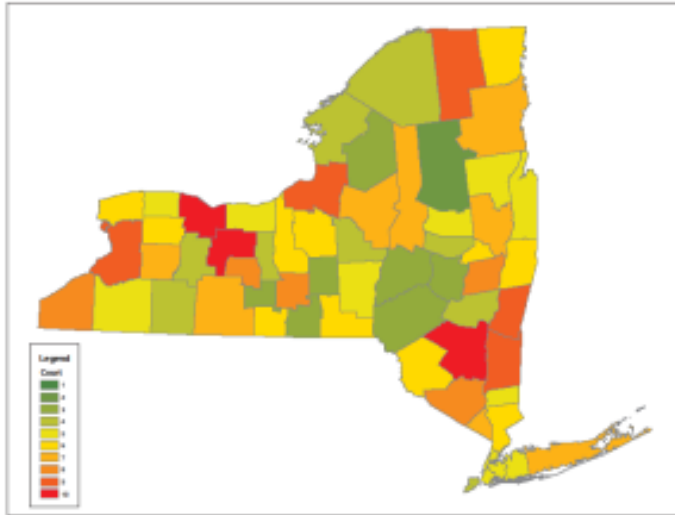


Figure 3.6 – Need for Court Games Facilities

### Court Games (42.1%)

Court games had a participation rate of 32.2% among those ages 65-85 per the 2018 PORS. There are over 60 million court game activity days in 2017 taking place in NYS operated by cities, counties, state, town and federal operators. The largest operator of court games are cities and villages. The New York City region has the greatest number of basketball courts, per the RFIS. **Pickleball** is an activity that encompasses elements of tennis, ping pong and badminton. It appeals to seniors because it's a low-impact game, low stress, played on a court smaller than a tennis court, and easy to learn. A larger racquet is used that's lighter than a tennis racquet using a whiffle type ball. It can be played inside or outside and by people of all abilities.

### Water Activities

#### Swimming (68.9%)

Of the activities surveyed in the 2018 PORS, swimming (68.9%) was the 3rd most popular outdoor recreation category when measured by activity days and number of participants for the total sample and those ages 65-85 (64.8%). When asked what type of recreation facility was most needed within 30 minutes of their homes, swimming facilities were the most requested.

Conversely, park professionals did not indicate a need for swimming facilities. This may be due to the staffing and maintenance costs associated with pool facilities. Swimming is very popular in Long Island. Based on information from the RFIS, Long Island is home to approximately 40% of New York's developed beaches and 20% of the State's managed pools.

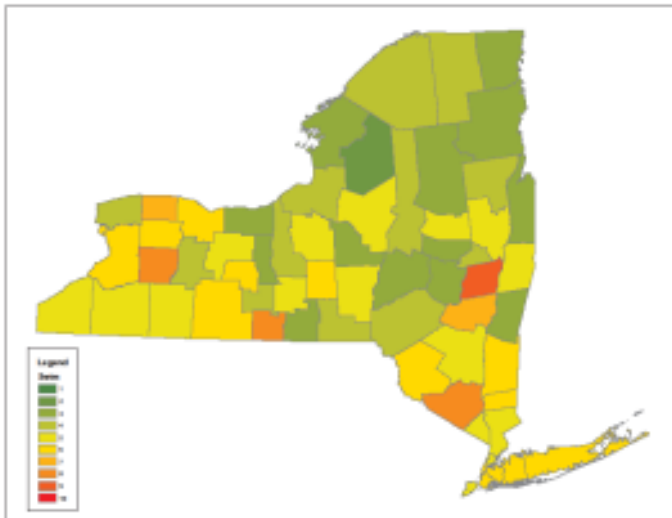


Figure 3.7 – Need for Swimming Facilities



Jones Beach State Park

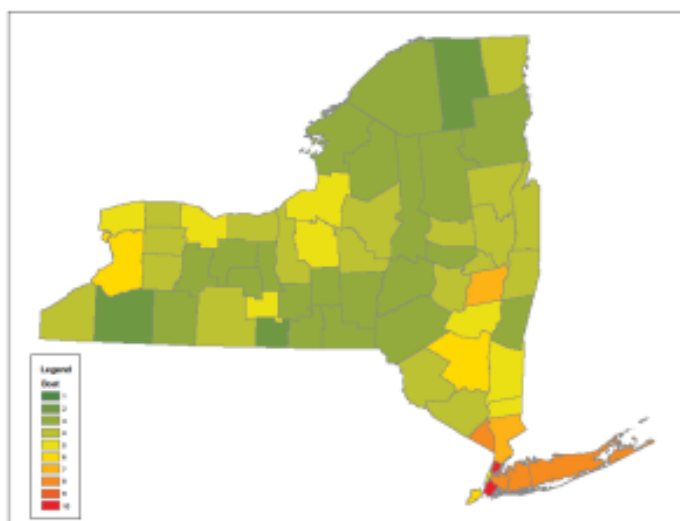


Figure 3.8 – Need for Boating Facilities

### Boating (43.2%)

NYS has abundant water resources and most areas of the State provide numerous facilities for this activity. The Long Island Region has the greatest percentage of boating facilities, yet also appears to have the greatest need for such facilities. OPRHP is responsible for providing the public with a safe, enjoyable environment for recreational boating. Ultimately, the goal is to help boaters develop and employ safe boating habits: wearing personal floatation devices (PFDs), attach a whistle to the PFD, use a map and GPS device, and boat with a group. See OPRHP's [Boating Education](#) site for more information.

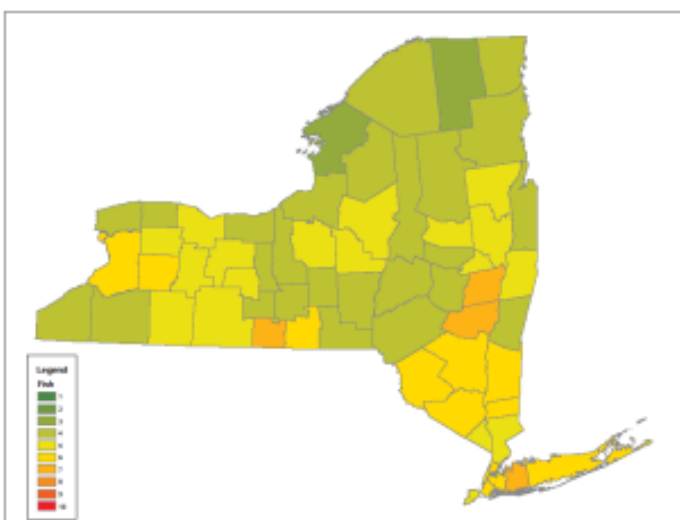


Figure 3.9 – Need for Fishing Facilities

### Fishing (40.2%)

A **2017 report** by the U.S. Fish and Wildlife Service shows that 101.6 million Americans participated in wildlife-related outdoor recreation (hunting, fishing and wildlife activities) last year. An increasing number of people are participating in fishing. New Yorkers can choose from a variety of fishing experiences. Salt water fishing, surf casting and deep-water fishing are popular throughout Long Island and New York City. Because of the many sources of fresh water throughout the state, freshwater fishing is also popular. In winter, ice fishing is prevalent, mainly in upstate areas.

According to the 2018 PORS, fishing is most popular in Western NY. DEC requires fishing licenses and publishes an annual guidebook to help people make healthier choices about which fish to consume. NYS Department of Health (DOH) issues **recommendations** and advisory notices about eating sportfish (i.e., the fish you catch). These recommendations educate residents and visitors about the health benefits and hazards of consuming certain fish species. An interactive map with more information on fish consumption can be **found at the NYSDOH website**.



Ice Fishing, Allegany State Park

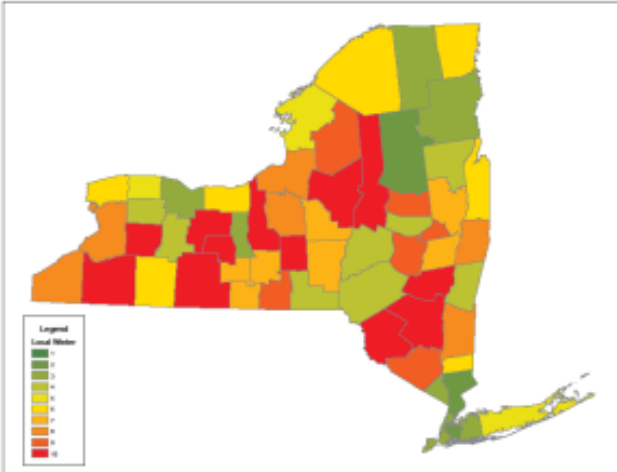


Figure 3.10 – Need for Local Winter Facilities

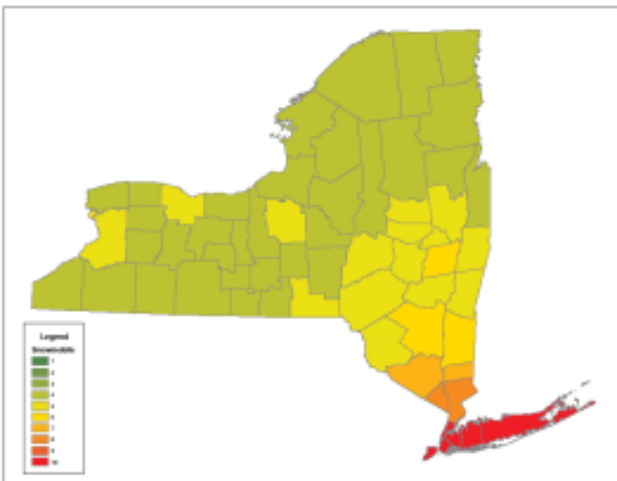


Figure 3.11 – Need for Snowmobiling Facilities

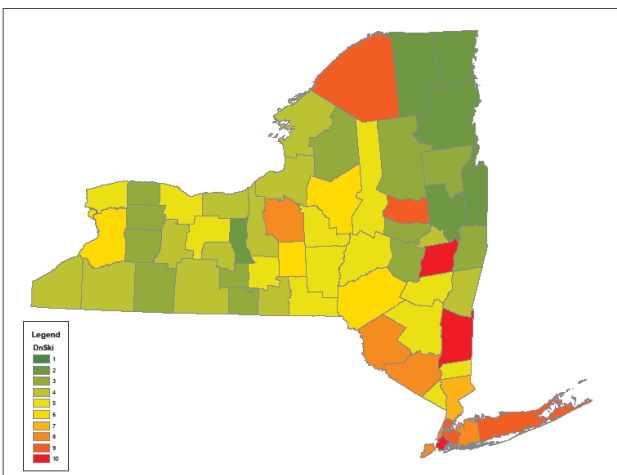


Figure 3.12 – Need for Downhill Skiing Facilities

## Winter Activities

### Local Winter Activities (37.8%)

Total participation in winter sports is generally lower than in summer activities. A shorter season and school attendance are factors. There are numerous trails in NYS for winter activities. Basically 31% of those ages 65-85 have participated in at least one day of local winter sport activities in 2017. For this report, outdoor winter activities include ice skating, cross-country skiing and snowshoeing. Snowmobiling and downhill skiing are considered separately, as these two activities require more of an investment by their participants in both equipment expenses and travel time.

### Snowmobiling (24.4%)

In many remote New York communities snowmobiling is an important part of the economy. The 2013 Snowmobile Owners Survey Executive Summary: Economic Impact of the Snowmobile Industry in New York State indicated that spending in the State exceeds \$860 million. This includes expenditures on equipment, insurance, maintenance, gasoline and travel. In recent years, however, the number of snowmobiles registered in the State has decreased, from approximately 172,000 registrants in 2002-03, to 117,000 in 2012-13, and continued to decline to 112,000 in 2017-18. A 2017 **Research and Markets** report indicates the high cost of snowmobiles and susceptibility to weather conditions create market challenges for the snowmobile industry and are primary factors contributing to industry decline. See OPRHP's **Snowmobile web page** for more information.

### Downhill Skiing (25.3%)

As with snowmobiling, for some areas in NYS this activity is an important component of the local economy. Skiing is a commercially viable operation and the private sector provides more niche facilities. The State maintains 3 downhill ski facilities: Whiteface Mountain, Gore Mountain and Belleayre Mountain. According to the **Ski Areas of NY (SANY) Economic Value Analysis Report**, during the 2016-2017 season over \$140 million was spent on winter sports equipment in NYS. Visitors to these venues in 2017-18 generated more than \$26 million in total revenue.

## Other Activities

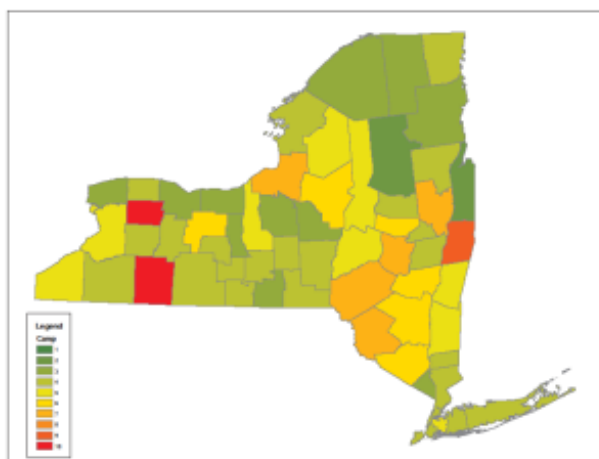


Figure 3.13 – Need for Camping Facilities

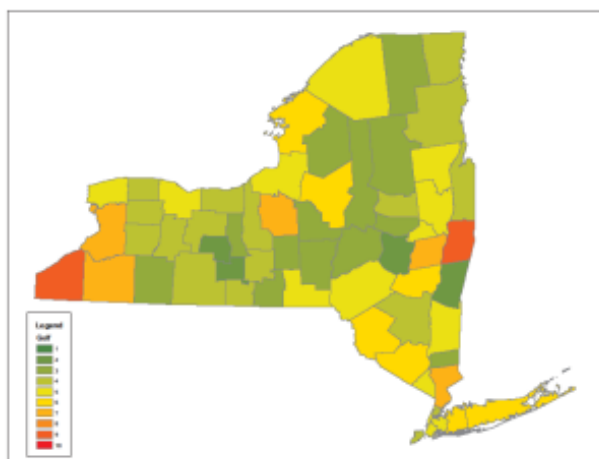


Figure 3.14 – Need for Golfing Facilities

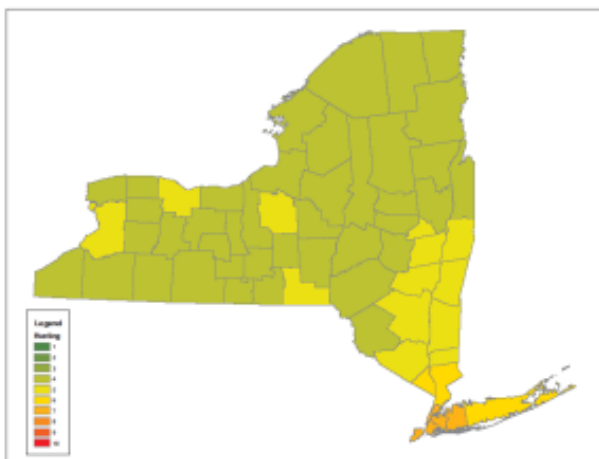


Figure 3.15 – Need for Hunting Facilities

**Camping (44%)**

Camping differs from most other outdoor recreational activities in that it is a multi-day activity, often involving other activities such as hiking, fishing, swimming, and boating. The style of camping (e.g. tent, RV, camper) changes over the course of an individual's lifetime. Younger campers tend to participate in backpacking and tent camping. The 2018 Outdoor Recreation Outlook by the **American Recreation Coalition** notes camping is on the rise with millennials. Key reasons given include: spending more time with friends and family, being physically active, improving their overall emotional well-being and health. Camping facilities are available throughout NYS, although more limited within New York City and Long Island. Because travel is an important component of these activities, campers in New York City and Long Island are willing to travel to more remote areas. The Catskill and Adirondack Parks contain the most camping sites of any other region and offer a variety of other recreation opportunities year-round. Check out NYS OPRHP's [camping website](#).

**Golfing (32.3%)**

Golfing is one of the few activities for which participation rates appear to increase with age, although an increase in income over the same years of the lifetime may also be a contributing factor. With the aging of the baby boomers, this has been a rapidly growing activity for many years. Now, however, with the youngest baby boomers turning 54, the number of golfers is not increasing as rapidly as before. The 2018 PORS indicated that golf is now the 11th most popular activity among all surveyed and those ages 65-85 (26.4%) with over 21 million total activity days in 2017. Visit [OPRHP's golf web page](#) for more information.

**Hunting (21.9%)**

This outdoor recreation activity remains a select outdoor sport with only 21.9% participation rate per the 2018 PORS. It includes big and small game. A 2017 **report** by the U.S. Fish and Wildlife Service shows that 101.6 million Americans participated in wildlife-related outdoor recreation last year. Participation in hunting dropped by nearly 2 million people to a total of 11.5 million hunters nationally. Total expenditures by hunters also declined 29% from 2011 to 2016, from \$36.3 billion to \$25.6 billion during the same timeframe.