

BACK TO THE FUTURE: TRENDS IN NORTHEAST RECREATION, TOURISM AND FUTURE RESEARCH A FOUNDERS' FORUM PRESENTATION

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Abstract

The purpose of this Founders' Forum presentation was to examine recreation and tourism trends in the Northeast over the period of 1993 through 2003 and to review some future research trends that will affect the region. Activities examined were assigned into four major groups and included community based; resource-based; water-based and winter-based activities. The data sets analyzed were the National Sporting Goods Association and the Standard Rate and Data Service's Lifestyle Market Analyst. Trend patterns were presented and activities were examined to determine if patterns in the selected activities occurred. Fourteen of 40 recreational activities increased by overall market size in the Northeast. Resource-based activities and, in particular, trail-based activities revealed strong growth trend patterns. Tourism trend reviews in the Northeast revealed that only foreign travel increased in the Northeast markets among the six travel variables examined. Most forms of travel in the Northeast declined and pleasure and business travel declined the most after 9/11 in 2001.

1.0 Introduction

What are the trends in recreation and tourism in the Northeast? With more activity choices, trends likely to change in a variety of ways. Some trends are likely to be gradual in nature while others more dramatic. The examination of trends over time is a fundamental necessity to determine our status as a region. In this presentation, a review of trend patterns will be reviewed for four clusters of recreation activities in the Northeast from 1993 through 2003, a brief review of travel and tourism trends will also be examined and then this presentation will be closed with a discussion of future recreation research issues that will confront the region in the coming decade.

In recent years, the compilation of the National Sporting Goods Association (NSGA) data (2004) and the United States Forest Service's (USFS) National Survey on Recreation and the Environment (2004) data have provided new insights into the changes of a variety of activities. However, it is critical in these studies to both continue the monitoring of specific activities and to examine if these national trends are reflected in regional and local areas. Over the years there have been a number of problems monitoring activity trends. One is finding data sets that have consistently and routinely collected activity participation year in and year out. The consistent and routine data collection has been a challenge. Data sources such as Simmons Market Research Bureau's Study of Media and Markets and Mediamark's Topline Reports have provided long-term data collection, but they both suffer from not being current (1997-1998 in the most recent available as of this writing) for access by university researchers. Recreation and tourism activity data can be analyzed when available by using such techniques as lines of best fit; however, this technique only reveals the direction of the trend and does not account for a broader review of the actual changes within the data. Time series analysis likewise offers some promise in monitoring trend data over time; however, it requires 30 data points until reliable analysis can occur. So, in this case, activities have been monitored and guidelines developed for tracking trends (Warnick 2004).

Shifts and interests in recreational and tourism activities are indeed likely to occur. Some of the shifts in activity patterns will also be reflected in how our populations in various regional areas change and evolve in the coming decades. Other changes may also be the result of activity promotion, marketing and improvements in technology or even dramatic social/political events (i.e., 9/11) or economic impacts (i.e., cost of fuel and transportation). Many will react to these shifts by devising marketing strategies by concentrating on selected profitable markets. However, these differences and changes, both gradual and dramatic, will clearly provide some

evidence of future demand for the agencies supplying the management of resources for these recreation and tourism/travel pursuits.

Recent studies (Warnick 2004, 2000, 1998, 1997a, 1997b; Warnick and Kelly 2000) indicated recreation activity trends in the Northeast and New England had become both mature and evolving as new activities replaced older common placed pursuits. Other studies (Warnick 2002) have examined how New England's travel markets were also highly linked to active recreational pursuits. For many of the Northeast and New England attractions, the careful monitoring of trends in activities and markets is critical to these tourism-based economies.

2.0 Purpose of Study

The purpose of this study is to: 1) to first examine, suggest and assign typical trend patterns; 2) to examine the recreation trends of selected recreational activities in the Northeast over the time period of 1993 through 2003; 3) to briefly examine travel and tourism trends in the Northeast; and 4) to discussion a number of research trends that the Northeast will experience in the coming decade.

3.0 Methods

In this presentation, two data sets were explored which contained ten years of trend data from 1993 through 2003. The recreation activity data came from the NGSAs sport business research network (www.sgrnet.com, 2004) and it was supplied to NGSAs through the National Family Opinion (NFO) Research Group via this consumer research panel. The NFO's Consumer Panel Research Study is an annual survey of 20,000 households and is balanced and weighted to actual household regional distribution. The response rates exceed 70 percent and confidence intervals exceed 95 percent. The National Sporting Goods Association contracts from NFO to complete their annual study of sports and recreational activities. The data are compiled and made available to contracting universities for teaching and research purposes. The data are presented in tabular form, but there is no trend analysis. There is only a compilation of year participation totals of the market size

and corresponding information the demographics and regional distribution of the markets.

The travel and tourism data came from Standard Rate and Data Service's (SRDS) Lifestyle Market Analyst (1993 to 2003). The SRDS Lifestyle Market Analyst data is collected through a joint venture between SRDS and Polk, Inc. The profiles of households and lifestyle participation data are collected and updated annually and all data are summarized and weighted according to the 1990/2000 U.S. Census data profiles of communities and DMAs (designated market areas). The household counts and demographic estimates are obtained by Polk from Claritas. Polk collects the data from U.S. households by inserting consumer information questionnaires into the packaging of a variety of consumer goods, including electronic equipment, appliances, apparel, sporting and camping goods and numerous other products. This database annually generates over 38 million questionnaires that serve as the basis for the lifestyle information. From these, SRDS and Polk sample over 8 million each year to represent the target lifestyle activities and the geographic markets nationwide. The actual lifestyle behaviors included in this study come from their grouping called the "Good Life" and include six travel-related variables of interest to this study and the data are collected by households (SRDS 2003, p. A-22).

The types of travel variables included six different household participation kinds of travel: 1) USA domestic travel; 2) travel for pleasure; 3) travel for business; 4) foreign travel; 5) cruise ship travel; and, 6) second home ownership. Data for all 11 years (1993 through 2003) were available for the travel variables for trend analyses; however, the data for pleasure travel, business travel and second home ownership were limited to fewer years (1995 through 2002) and cruise ship travel from only the period 1999 through 2002. All participation rate data were collected on the basis of households.. The data collected represent a period of November to November; so, 2002 data represent data collected between November 2001 and November 2002.

The descriptive statistics used included an average annual adjusted percent change rate in the NSGA and SRDS

data. The average annual adjusted percent change rate examines the change from each year to the next (1994 to 1993, 1995 to 1994 and so on through 2002 to 2003) and averages the year-to-year changes over the entire period. Participation is measured by the number of participants (in millions) who participated in the activity in the previous 12-month period for the recreation data and by the number of households who participated in the travel activities in the previous 12-month period. The focus was the change in the activity markets and assignment of trend patterns of the Northeast markets. The Northeast is defined as states north of Maryland including the six New England states (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut) plus New York, Pennsylvania and New Jersey for both data sets. The 40 selected recreational activities were grouped into sets of activities based on the classification and configuration of activities by Kelly and Warnick (1999) and NSRE (2004). These included 12 community-based activities, nine resource-based activities, 12 water-based activities, and seven winter-based activities. All of the travel activities were examined individually.

To compare both national and regional trends, 10 patterns were reviewed, explored and assigned to each activity. For a full discussion of these trend patterns, see Warnick (2004). These trend patterns were further refined with an analysis of four rules that quantify: 1) the quantity of the market; 2) the actual trend pattern direction; 3) the statistical measure of the average annual change percentage; and 4) the direction of trend of the volume segment.

4.0 Selected Findings

4.1 National Trends in Activity Participation

When individual activities were examined the five most popular activities in 2003 for the general population that covers all adults from age 7 years through adulthood were: 1) exercise walking – 79.5 million participants, up from 71.2 million in 2001; 2) overnight camping – 51.4 million, up from 45.5 million in 2001; 3) exercising with equipment – 48.6 million participants; 4) swimming – 47 million that has held steady since the early 2000, but declined since 1993; 5) bowling – 39.4 million participants – down from 43 million in 2002.

4.2 Northeast Community-Based Activities

Eleven different activities were examined in the group of community-based activities. Four of the 11 activities declined in the Northeast – bowling, bicycling, tennis and, racquetball. One combination activity experienced a mature/stable stage -- running and jogging and one activity experienced a classic peaking phase (inline skating). All of the other five activities either grew or rebounded during the period. Fitness club participation/use, inline skating, golf and participation in paint ball games each experienced a substantial growth in the 10-year period. Exercise walking was found to be the region's most popular activity and had actually rebounded after a decline in 2001. The community-based activity trend patterns and data are presented in Table 1.

4.3 Northeast Resource-Based Activities

Nine different activities were examined in the group of resource-based activities. Four (backpacking, off- and on-road mountain biking and target shooting) of the activities experienced growth in market size in the Northeast. Two activities declined – hunting and target archery. Other activities – hiking, camping and archery hunting were either stable, stable/rebound or no growth.

Off-road mountain biking, although largely a niche market activity, experienced rather dramatic growth (8.7% average annual growth rate). This rate of growth was higher than the national average annual growth rate of 7.2 percent per year. This activity nearly doubled in market size from 1993 through 2003 – increasing from 1 million participants to 1.9 million participants in the Northeast. Although figures are not available by frequent off-road mountain bikers in the Northeast, the growth nationally in this segment is substantial and the trend is likely to be also pronounced in the Northeast had the trend data been made available through NSGA and NFO.

One activity experienced a decline – hunting; however, its decline was not steady but one following a spike pattern. In 1993, there were 3.4 million hunters in the Northeast and by 2003, the number had declined to 3.1 million. This constitutes a decline of about 2 percent per year although there were spike patterns in this activity in

Table 1.—Community-based recreation activity trends in the Northeast, 1993-2003.

Activity	1993	1998	2003	Change rate	Trend type
Bicycling	10.3	8.7	7.4	-2.65	Decline
Bowling	9.3	8.4	7.4	-1.65	Decline
Ex. Walking	13.2	14.7	14.9	1.8%	Growth/Mass Appeal
Golf	4.3	4.6	4.6	1.2%	Growth
Inline Skating	2.4	45.6	3.7	6.7%	–Peaking
Paint Games	n/a	n/a	3.7	10.9%	Growth (Fad)
Racquetball	1.0	0.7	0.4	-4.8%	Decline (Niche)
Running/Jog	3.5	3.6	3.9	1.7%	Mature -Stable
Skateboarding	1.1	1.1	1.9	7.7%	Growth (Niche)
Tennis	3.4	2.1	1.4	-5.6%	–Decline
Fitness Club	4.0	5.1	5.7%	4.4%	Growth

Participation is listed in millions of participants in 1993, 1998 and 2003.

Note: Due to space limitations, only 1993 - 1998 - 2003 years shown in trend sequence.

Change rate is an average annual change rate based on number of participants. Northeast includes Mid-Atlantic Region and New England Region.

Table 2.—Resource-Based Recreation Activity Trends in the Northeast, 1993-2003.

Activity	1993	1998	2003	Change Rate	Trend Type
Archery – Hunting	n/a	1.0	1.0	-0.7%	No Growth/Stable
Archery – Targeting	n/a	1.1	0.8	-1.2%	Decline
Backpacking	1.6	2.4	2.4	6.6%	Growth
Hiking	3.6	4.7	4.7	0.0%	Stable
Camping	7.0	7.6	9.2	3.7%	Stable/Rebound
Hunting	3.4	2.5	3.1	0.2%	Decline/Spiking
Off-Road Biking	1.0	1.8	1.9	8.7%	Growth Niche
On-Road Biking	1.8	2.8	2.6	7.6%	Growth/Peaking
Target Shooting	2.2	1.7	2.8	5.4%	Growth (Rebound)

Participation is listed in millions for 1993, 1998 and 2003.

Note: Due to space limitations, only 1993 - 1998 - 2003 years shown in trend sequence.

Change rate is an average annual change rate based on number of participants. Northeast includes Mid-Atlantic Region and New England Region.

the Northeast. However, hunting appears to be affected largely by spike years and patterns. The spike years in the Northeast were 1993, 1996 and 2001 with declines in the number of hunters in the years following each of these spike years.

4.3 Northeast Water-Based Activities

Twelve different activities were examined in the group of water-based activities. Four of the niche activities (those activities that have relatively small markets of less than 2 million participants) experienced decline in the overall

Table 3.—Water-Based Recreation Activity Trends in the Northeast, 1993-2003.

Activity	1993	1998	2001 or 2003	Change Rate	Trend Type
Canoeing	2.3	1.7	1.9	-0.8%	Fluctuating/Decline
Kayak-Rafting	0.4	0.7	1.6*	16.0%	Growth (Niche)
Freshwater Fishing	6.8	5.2	4.6	-3.3%	Decline
Saltwater Fishing	2.5	2.7	2.7	1.2%	Growth
Sailing	1.1	1.0	0.4*	-9.7%	Decline (Niche)
Power Boating	3.6	4.4	4.2	2.3%	Growth
Scuba Diving	0.4	0.4	0.3	-0.9%	Decline (Niche)
Snorkeling	1.1	1.6	1.1*	1.9%	Peaking/Growth (Niche)
Swimming	14.6	12.5	9.8	-3.6%	Decline (Mass)
Wakeboarding	N/A	N/A	0.4	-22.1%	Decline (Niche)
Water Skiing	1.3	0.8	0.7	-3.8%	Decline (Niche)
Wind Surfing	0.1	0.1	0.0*	-7.1%	Decline (Niche)

Participation is listed in millions for 1993, 1998 and 2001/2003.

Note: Due to space limitations, only 1993 - 1998 – 2001/2003 years shown in trend sequence.

Change rate is an average annual change rate based on number of participants. Northeast includes Mid-Atlantic Region and New England Region.

* For kayak-rafting, sailing, power boating, snorkeling and wind surfing; trend data were available only through 2001.

size of the markets – sailing, scuba diving, wakeboarding and wind surfing in the Northeast Region. Two large market size activities, swimming and freshwater fishing, also declined in market size overall in the Northeast. Two niche market activities, kayak-rafting and snorkeling (peaking), also grew in overall market size. The only other activities to grow during the period were power boating and saltwater fishing. Demand for canoeing fluctuated substantially over the period and declined overall in average annual change rate. Swimming remains the most popular of all water-based activities with 9.8 million regular participants in the Northeast in 2003, but this number has declined from a peak of 14.6 million swimmers in 1993. The water-based activity trend patterns and data are presented in Table 3.

4.4 Northeast Winter-Based Activities

Seven different activities were examined in the group of winter-based activities. Two of the activities experienced strong growth during the 1993-2001/2003 period – snowboarding and snowmobiling. Snowboarding grew by 15.4 percent per year and increased from .4 million participants in 1993 to 1.7 million participants in 2003.

The time period for snowmobiling was shorter, 1995 through 2001; but the number of riders has increase in the Northeast from 1.5 million to 2 million. Three of the remaining activities experienced decline in the overall numbers of participants, including cross-country skiing (decline of 4.7% per year), ice skating (decline of 3.3% per year), and downhill skiing (decline of 4.8% per year). While the ice skating market has declined in size in the Northeast, still nearly a third of all ice skaters are from the Northeast. While the market of people who play ice hockey has also declined in the Northeast, it is still a substantial market. The market for ice hockey has actually grown nationally at an average annual rate of 3.8 percent per year. In fact, all regions outside of the Northeast have grown at a rate faster than the Northeast.

Evidence also suggests that a portion of those people who were once downhill skiers may have convert to snowboarding. However, more likely it is the pattern that youth who learned to snowboard in the late 80s and 90s and who are now in the 18- to 34-year-old demographic is where the largest increase in snowboarders occurs. In

Table 4.—Winter-based recreation activity trends in the northeast, 1993-2003.

Activity	1993	1997	2001/2002	Change Rate	Trend Type
Cross Country Skiing	1.3	0.8	0.7	-4.7	Decline
Ice Skating	2.6	2.5	1.9	-3.3%*	Decline
Ice Hockey	0.8	0.9	0.9	3.8%	Fluctuating (Niche)
Downhill Skiing	3.3	1.9	1.7	-4.8%	Decline
Snowboarding	0.4	1.0	1.7	15.4%	Growth
Snowmobiling	n/a	1.5	2.0	9.2%*	Growth
Snow shoeing	n/a	0.2	0.5	14.2%	Growth (Niche)

Participation is listed in millions for 1993, 1998 and 2001/2003.

Note: Due to space limitations, only 1993 - 1998 – 2001/2003 years shown in trend sequence.

Change rate is an average annual change rate based on number of participants. Northeast includes Mid-Atlantic Region and New England Region.

* Snowmobiling includes data only from 1997 through 2001.

* Ice skating includes data only from 1993 through 2001.

contrast, the only age segments where downhill skiing decreased were from the same demographic – the 18- to 34-year-olds.

There was not enough data to document sustained trend changes for snow shoeing. Although the evidence suggests some increase in the activity in the Northeast, there was only four years of data collected and the most recent information was collected in 2000. The winter-based activity trend patterns and data are presented in Table 4.

4.5 Travel Trends in the Northeast

Six travel variables were examined from data taken from the SRDS Lifestyle Market Analyst. Those travel variables included USA domestic travel, pleasure or vacation travel, business travel, foreign travel, second home ownership, and cruise ship travel. Four of the travel activities experienced declines over the period from 1993 through 2003, including pleasure travel, business travel, second home ownership and cruise ship travel. Only one activity actually grew during this period – foreign travel. This activity market grew by 1.8 percent per year and foreign travel reached its highest household participation rate in 2002 at 17.9 percent up from 14.5 percent in 1993. USA domestic travel experienced no overall change with growth only up by 0.6 percent over the period. In

1993, 36.4 percent of all Northeast households engaged in domestic travel and by 2003 the rate was 38 percent. It was clear that 9/11 did have an impact on pleasure and business travel. The impact was most dramatic for business travel where participation decline from 19.6 percent in 2001 to 13.7 percent in 2002. Table 5 contains all of the trend data for each of the travel variables from 1993 through 2003.

5.0 Conclusions and Implications

In general, recreation activity markets in the Northeast have rebounded from previous study findings of stability or limited numbers of growing activities. Of 40 activities examined, 14 activities were found to have exhibited real growth patterns in overall market sizes during the period of 1993 through 2003, while 17 activities are declining in real numbers. Especially strong growth was revealed in resource-based activities, such as backpacking, hiking, mountain biking, and winter-based activity of snowboarding. One other new activity, playing paint ball games, also demonstrated the strongest sustained growth trend patterns even though data were only available for the period 1999 to 2003.

These findings also continued to support the changes in activity segmentation. For example, biking as an activity has continued to become more specialized with

Table 5.—Travel trends in the Northeast U.S.

Year	Households	USA Domestic	Pleasure Travel	Business Travel	Foreign Travel	Sec. Home Ownership	Cruise Ship Travel
1993	94,254,662	36.4%	N/A	N/A	14.5%	N/A	N/A
1994	95,883,242	36.1%	N/A	N/A	14.6%	N/A	N/A
1995	96,594,092	34.9%	37.5%	19.4%	14.2%	11.0%	N/A
1996	97,466,492	34.5%	37.6%	19.8%	14.0%	10.7%	N/A
1997	98,935,243	36.5%	37.9%	20.5%	14.3%	10.5%	N/A
1998	98,741,235	37.4%	42.6%	18.9%	14.3%	10.2%	N/A
1999	100,657,594	37.9%	45.0%	17.7%	15.2%	10.1%	13.6%
2000	102,048,273	42.5%	37.9%	22.0%	17.4%	10.5%	14.3%
2001	103,192,355	41.4%	34.2%	19.6%	17.2%	10.2%	14.3%
2002	107,023,996	41.2%	35.1%	13.7%	17.9%	10.0%	15.5%
2003	107,745,450	38.0%	30.5%	13.4%	16.8%	10.1%	15.3%
Chge Rate	1.4%	0.6%	-2.1%	-3.9%	1.8%	-1.2%	-0.2%
Chge Type	Base Rate	No Change	Decline	Decline	Growth	Decline	Decline

N/A = data not available. Source. Standard Rate and Data Service. 1993-2003. Lifestyle Market Analyst

the continued growth of off- and on-road mountain biking and the decline in the general biking category. As a group, the resource-based activities grew overall the most with more people participating in outdoor-based recreational pursuits. This supports trends similar to the trends found in the NSRE (2004).

In one particular case, snowboarding may have displaced downhill skiing as some participants have converted from downhill skiing to snowboarding. Other winter-based activities found general declines in the overall market size – including cross country skiing, ice skating and even ice hockey. The fitness movement does appear to be gaining strength both nationally and in the Northeast. Two strong indicators, working out at a club and exercise/fitness walking, each increased substantially during the 1993 to 2002 period.

Resource management issues for the management of wildlife in such activities as hunting and fishing may continue appear to be problematic in the Northeast. Hunting and freshwater fishing markets continued to decline in the Northeast based on these research findings. With some wildlife herds—deer, turkey and even bears

in the Northeast—the ability to manage these animals through increasing number of hunters will likely not occur and herd or wildlife management will become increasingly a challenge. On a positive note for those freshwater fishing areas that have been over-fished in the past, the decrease in the size of the freshwater fishing market may actually help the fish stock to rebound. However, it is also likely that the unwanted interaction and nuisance encounters between humans and wildlife in fringe suburban and rural areas that has been found to occur in the Northeast will likely continue to increase with a declining overall market of hunting participants and increasingly larger wildlife herd sizes. For those who do hunt, increased bag limits and increased length of seasons will likely continue to occur in order to offset the declining hunting market and to assist in the management of various types of wildlife. Managed hunts are also likely options to be observed in areas with the continued pressure of the rapid growth in wildlife herds.

An emerging trend that is beginning to appear is the presence of more individualized or personal recreational pursuits. Snowboarding, skateboarding and even paint ball games are examples of new evolving, but

individualized markets. Participation in paint ball games is an especially noteworthy example. Just in the past few years has these data become available and been monitored. During the brief four years of data analysis for paint ball games, the market growth was sustained and the largest of any activity monitored here. It is likely that games and activities created in virtual reality frameworks, such as in computer games, may actually evolve into simulated active reality games like participation in paint ball games. The “reality activity programming trends” need particularly close monitoring in the future.

5.1 Future of Research in Northeast

In conclusion of this presentation, it was felt appropriate to offer some insights of what the future for research holds in the Northeast in the coming decade. Here are some thoughts on the future of recreation and travel activity research.

One of the biggest changes in the coming decade will likely be in “real time research.” Currently, most of our research is transaction or cross sectional that means data is collect at one point in time. However, the biggest change in recreation activity and tourism research in the near future will be a switch from transactional (one time) data collection to interaction research. This means that participation data will be collected in real time and will be on-going. This is likely to first appear in the health care area where recreation and lifestyle activity patterns and data will be collected on an on-going basis as part of a health-care monitoring system. Part of this will be possible with new integrated hand held devices. These devices will both collect, monitor and transmit data to a central collection agency. Here the use of wireless technology will play an important role. The new devices that will collect these data will be new and may be similar to current devices that just now coming online. The devices may be a cross between the PSP (Portable Playstation™), i-Pod™, and TiVo™. Each of these devices have the technology to collect and transmit data, including digital video, preferences, and behavior/choice information. Recently, the Conference on Information and Technology (2005) indicated that the five biggest technology improvements were the i-Pod™, TiVo™ (DVRs), instant messaging (IM) and global positioning

technology (GPS). These technology devices will be important in collecting real time data and will allow researchers to develop new ways to collect and involve participants in activity monitoring. Some of these may include data collected through health monitoring and perhaps even more research case studies and experiments that collect data in an interaction format. Other technologies will see data made available through global identity and travel cards and loyalty type of programs. Yet, more unknowns remain. These may include such more natural disasters, continued and unknown increases in energy prices and terrorism in the U.S. and in the Northeast. Other unknowns include whether youth will increase outdoor recreation participation and change their habits regarding the use of indoor technology.

Finally, the careful monitoring of trends over time and in a consistent format does reveal changes in consumer preferences and activity selection and involvement. New trend patterns are emerging and implications for management can be identified. Furthermore, activity changes in today’s market will impact future trends in the coming decades.

6.0 Citations

Conference on Information and Technology. 2005. CSPAN. April 2005.

Kelly, John P. and Rodney B. Warnick. 1999. **Recreation Trends and Markets: The 21st Century**. Champaign, Illinois: Sagamore Publishing Company. 198 pp.

Web Site: <www.sgrnet.com> The Sporting Business Research Network. 2004.

Web Site: <www.sportlink.com> Sporting Goods Manufacturing Association site. 2004.

United States Forest Service. 2004. **National Survey on Recreation and Environment**. Athens, GA. Website: <<http://www.srs.fs.usda.gov/trends/NSre>>.

Warnick, Rodney B. 2004. **Northeast’s Recreation Trends and Markets – A New Data Source In: Proceedings of the 2004 Northeastern Recreation Research Symposium**. (Kelly Bricker, comp. ed.).

- April 2004. Gen. Tech. Rep. NE-326. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station.
- Warnick, Rodney B. 2002. **Travel and Outdoor Recreation Activities in New England: Trends and Tendencies.** In: Proceedings of the 2002 Northeastern Recreation Research Symposium. (Rudy Schuster, comp. ed.). April 2002. Gen. Tech. Rep. NE-302. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station.
- Warnick, Rodney B. 2000. **Recreation Participation Trends: Generational Patterns and Change.** In: Trends 2000 – Fifth Outdoor Recreation and Tourism Trends Symposium – Shaping the Future. Michigan State University: Department of Recreation, Parks and Tourism. East Lansing, Michigan. Website Publication – www.prr.msu.edu.
- Warnick, Rodney B and John R. Kelly. 2000. **Recreation Activity Trends and Markets: The 21 st Century.** In: Trends 2000 – Fifth Outdoor Recreation and Tourism Trends Symposium – Shaping the Future. Michigan State University: Department of Recreation, Parks and Tourism. East Lansing, Michigan. Conference Plenary Session Paper and Abstract.
- Warnick, Rodney B. 1998. **Volume Segmentation of Selected Recreation Activities in the Northeastern United States: 1982-1996.** In: Proceedings of the 1998 Northeastern Recreation Research Symposium. (Hans Vogel, comp. ed.). April 1998. Gen. Tech. Rep. NE-255. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. pp. 177-183.
- Warnick, Rodney B. 1997a. **New England's Northeast Recreation Activity Markets: Trends in the 90s.** In: Proceedings of the 1997 Northeastern Recreation Research Symposium. (Hans Vogel, comp. ed.). April 6-8, 1997. Bolton Landing, New York. Gen. Tech. Rep. NE-241. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. pp. 246-251.
- Warnick, Rodney B. 1997b. **Outdoor Recreation Trends in the Northeast: Markets and Issues — Future Demand for Recreation.** Proceedings of the 1997 New England Society of American Foresters. (Lloyd Irland, ed.). March 13-15, 1997. Radisson Eastland Hotel, Portland, Maine. 15 pp. (Peer reviewed conference proceeding).

Citation:

In: Peden, John G.; Schuster, Rudy M., comps., eds. Proceedings of the 2005 northeastern recreation research symposium; 2005 April 10-12; Bolton Landing, NY. Gen. Tech. Rep. NE-341. Newtown Square, PA: U.S. Forest Service, Northeastern Research Station