

**The Northeastern United States in the  
Next Two Decades—**

**Implications for the Northeast Region  
of the National Park Service**

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## Summary

**Study Purpose--** The purpose of this study was to identify trends within numerous areas of life, which are expected to affect the Northeast Region (NER) of the National Park Service (NPS). More specifically, the paper will seek to identify changes in the states within the NER of NPS which have direct implication for the NPS in terms of: a. number and characteristics of future visitors, b. their expectations, onsite behaviors and desired benefits, c. constraints to visitation, d. logistics of visitation, and e. demand for services.

The states within the service area of the NER of the NPS include: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia and West Virginia. The District of Columbia is not included in this region.

The research was *not* undertaken to develop specific recommendations concerning NPS policy or site specific operations within the Northeast Region. Rather, it serves to provide key concepts, ideas and trends extrapolated from both statistical and non-statistical projections concerning the near future which have direct implication for the management and operation of the Northeast Region of NPS. Most of such projections will deal with the time period from 2000-2020, although a few concern longer time periods.

This report is written for management- level employees of the NPS in the NER and those who love their national parks.

**Number and characteristics of future visitors--** There will be more visitors to NPS sites in the NER during the next few decades. Overall, such increase may roughly reflect the increase of the population by 0.7% of 1.86 million people per year in the NER. The amount of increase in visitation per site will vary dramatically and tourism will be a tangible contributor to that variation. That is, there will be an increase in visitation by tourists from both the US and from other countries who have traveled from one hundred to several thousand miles, stayed overnight, undertaken sightseeing, and have visited NPS sites as either part of a sightseeing agenda or as the primary purpose for the visit. Visitors to NPS sites in the NER will be markedly more diverse, older, more likely to be women and ethnic minorities, less likely to be a family, and are likely to vary more by size of group. Most users will be better educated and more inquisitive about numerous issues. A minority of visitors will be less educated and will have different needs and expectations--sometimes they will have no expectations.

The percent change in the resident population for the NER states (except Delaware) between 1990 and 2000 was lower than the percentage change for the entire U.S., and this trend is likely to continue (See Demography, pages 20-58). In terms of the NPS in the NER, these slower growth rates may mean that overall attendance within the NPS sites in the region grow at a slower rate than other regions, putting the NPS in the NER at a disadvantage in competing for resources. Tourism visitation to sites in the NER over the next twenty years may not reflect this slower growth rate, and indeed may be

significantly above average for certain sites. This may further stimulate partnering with other agencies, fund raising, and entrepreneurial effort in the operation of sites. The NPS in the NER has an opportunity to provide a national and international leadership role by showing that partnerships can be a viable mechanism for balancing promotion and preservation. Realistic appraisal and acceptance of common strengths and weaknesses should frame the partnerships.

During the next 50 years, there will be slower rates of growth in outdoor recreation activities than in population growth, due to the generally lower income levels of ethnic minorities, who will make up an increasing portion of the population. Activities whose growth is dependent upon Anglo involvement and the involvement of young people, such as backpacking, tennis, and golf will grow more slowly. Increased participation in outdoor recreation activities will be most pronounced among ethnic minorities and the largest percentage increases in number of participants will be among those age 50 and over.

As the American society continues to become increasingly "de-familied", --an increasingly smaller portion of all households containing a family-- visitors to NPS sites will increasingly visit in non-family groupings and new assumptions will have to be made about the social relations of visitors to continue to attract them. The number of households is increasing substantially in all NER states. Since the household remains the primary social group from which NPS visitation takes place, this increase in number and change in composition of households may mean that they will need to be socialized into the process of visiting NPs sites in the NER. This will be true of both domestic and international visitors.

In summary, the most important demographic trends affecting the NPS in the NER are (De Jong, January 22, 2001):

1. NER population increases but below (about half) the national average
2. Increasing urbanization and population density
3. Low fertility--smaller portion of children in the population
4. Increasing life expectancy and earlier retirement
5. Increased diversity in family and household composition (the de-familied society trend)
6. Increasing family income inequality
7. Continued sex ratio imbalance (more women than men)
8. Increasing number of immigrants
9. Increasing local community race and ethnic composition diversity
10. Out-migration from NER slows but in-migration to NER remains low
11. Increasing educational attainment levels
12. Marked local-area variation in population growth/decline.

Increasing demographic differences at a local or sub-state level of the U.S. population may mean that aggregate demographic trends in the NER region or the U.S. may not serve as a useful basis for predicting visitation or the characteristics of visitors at a given



site. Instead, site specific information concerning user characteristics and preferences must be obtained on a continuous basis. Sites with a high percentage of international tourists will increasingly obtain relevant user profiles from global rather than local information sources.

### **Visitor Expectations, onsite behaviors and desired benefits**

Visitors will have more diverse expectations, onsite behaviors and desired benefits. The emerging "have" culture--high-income, education and access to technology-- will have heightened expectations about all aspects of their visit: from interpretation to cleanliness. They will, on average, desire to undertake more activities during a given visit. Such visitors will want the visit to be both more information-rich and yet more convenient and simplified, and many will be more impatient. The "have not" visitors-- low income, low education and little access to technology-- will increasingly show genuine concern for the environment and will expect the NPS to take leadership in environmental issues, even when the visitor is inconvenienced. Interpretation will become more important. It will need more diverse, yet specifically targeted, interpretive formats for both domestic and international have and have not visitors.

The programmatic and experiential aspects of NPS visitation will become increasingly important in visitor satisfaction and the creation of memorable experiences will become the most important variable in determining level of visitor satisfaction. Increasing diversity in most areas of life in the NER states will produce more variation in behavior, sequence of behavior, pace, meaning and satisfaction with what is undertaken. For the NPS in the NER, this will mean an increasing preference among visitors to visit during all hours of the day and night and at all times of the year. It will also mean that such visits will vary more in terms of length of stay. NPS sites in the NER may more closely resemble a supermarket in terms of hours of operation. Flexibility of the site and staff will be essential components in determining visitor satisfaction. This will produce problems of staff scheduling, visitor safety, and decisions as to when interpretive and other onsite events should be scheduled.

"Have not" visitors will have fewer expectations and want the visit to provide entertainment and all visitors will need and expect more onsite accommodation of visitor health and safety concerns. Older users will need convenient restrooms, more shelter from heat and cold and more staff assistance in travel onsite. Accommodating the needs of those with disabilities will become a more continuous issue as desired level of accommodation and cost increase while budgets may not.

The notion of weekdays being primarily about work and weekends being about leisure is not true for most households (See Time Use and Leisure Behavior, pages 59-66). This distribution pattern will contribute to an increasing tendency among time-conscious visitors toward short NPS visits. Visitors, including tourists, to NPS sites will be likely to be more rushed now than in the past and to spend less time onsite. Onsite behavior of rushed people may be managed by attempting to accommodate the feeling of being rushed by shortening the length of programs, events and waiting time, or by

slowing down the visitor by purposefully seeking to provide a more tranquil, less rushed environment. For example, covering less of the trail or territory can shorten length of an activity such as an interpretive nature walk. Thus, the level of interpretation might be the same although the activity takes a shorter period of time.

Within the NER states, the population that is 65 or over is projected to increase at rates comparable to national figures (See Demography, pages 20-58). This increase in the "elderly" population can have significant consequences for the operation of NPS sites in the NER. While "elderly" people are becoming more diverse, there are central tendencies associated with old age, which will require increased attention. Older people, on average, have higher levels of fear of crime, are less tolerant of weather extremes or loud noise, are generally more deliberate in their behavior, commit far fewer crimes, drive more slowly, stay longer onsite in parks, exhibit great interest in plant and animal life and in American history, are less tolerant of litter, pay more attention to diet, etc. As a higher portion of elderly who are "active" make greater use of NPS sites in the NER, these tendencies will need to be catered to.

Numerous aspects of health will assume a more important role in the management of NPS sites in the NER (See Health and Wellness, pages 131-136). Not only will an aging visitor base, which is better informed about personal health issues, make more demands on the system related to their own health issues, health maintenance and improvement of health will become increasingly important motivations for use of some NPS sites. In particular, stress reduction and physical exercise will become more critical and highly valued aspects of park visitation. Additionally, NPS sites in the NER will be increasingly vulnerable to airborne and waterborne epidemics.

In the emerging knowledge economy, it is likely that the comparative power of women with high levels of education will increase, the wage gap will close or favor women, more joint career decisions will be made which consider women's job prospects first, and the centrality of women as decision-makers will increase in regard to use of free time within families and couples. Globalization coupled with expanding economic and marketing forces means that this trend for women is true internationally as well as nationally. Such changes may mean that women will visit NPS sites more frequently, will place increasing demands for differentiation of sites and services to meet their interests and cultural background, and will exert more power in shaping NPS operations. This may affect numerous areas of NPS operations, from restrooms to the ways in which historical and natural sites are interpreted. In terms of history, for example, NPS may have to interpret family history and cultural history more than they currently do, while not excluding military, political and natural history.

The NPS in the NER will experience a growing trend reflecting more days being spent on a given outdoor activity with fewer trips for any specific activity, indicating that participation in outdoor recreation activities (See Outdoor Recreation, pages 67-71) increasingly will be planned with the intent of participation in multiple outdoor recreation activities. In other words, outdoor recreational activities increasingly will be parts of multipurpose recreation trips. Outdoor recreation trips will more likely be undertaken

with the objective of participating in a multitude of recreational activities during a single trip, as opposed to engaging in a single activity during a single trip. Concomitantly, the NER will experience increasing pressure from outdoor recreationists demanding sites that provide a diverse resource base for multipurpose recreational trips, involving water- and land-based outdoor recreation activities. This may also somewhat minimize friction among various participant groups onsite, since they are more likely to be doing activities which “compete” with each other. It appears that annual days of participation in a wide range of outdoor recreation activities will increase faster than the number of trips undertaken for the primary purpose of participating in such activities. These projections, however, are made less certain by the multiple influences of global warming (See Environment, pages 143-150).

Participation in specific outdoor recreation and tourism activities in the NER states will be increasingly influenced both positively and negatively, by changing climatic conditions. Climate will become more important to outdoor recreation activity, lessening predictability of outdoor events, reshaping outdoor dress, behavior, and duration of activity, and ultimately altering attitudes toward being outdoors.

**Constraints to visitation.** Lack of awareness of sites will become a bigger issue among the emerging “have not” component of society and among immigrant groups. Such groups will have to be taught how to use NPS sites in satisfying ways and this effort will involve outreach on the part of NPS in the NER. The NPS in the NER may need to use specific ethnic media and provide written materials in ethnic languages, based on the increasing numbers of Hispanics and Asians in concentrated geographic areas within the United States. Pressure from increasing numbers of international tourists will contribute to this trend.

Visitation will be constrained more noticeably by increased traffic congestion (See Transportation, pages 123-130). Some sites may reach predetermined carrying capacities and be temporarily closed. Extreme weather and increasing heat will prevent visitation to a greater degree and may cause more harm to sites, particularly those which are low lying and close to water, such as Ellis Island, again leading to temporary closure.

Higher population densities in most NER states will pose challenges to NPS sites as issues of crowding, traffic congestion, and waiting may increase (See Demography, pages 20-58). The need for NPS staff to conceive of and plan for the visitation process in ways which consider all five steps in the visitation process (anticipation, travel, participation, travel and recall) will increase. Levels of constraints for people who want to visit but can’t or don’t will increase and must be better understood by staff. The effect of increased density, in combination with an aging population, may mean that the negative effects of increased density are magnified, preventing older people who wish to visit from doing so or making visitation more difficult.

**Logistics of visitation.** Visitation to NPS sites in the NER will become more planned and the logistics of visitation will become more information rich (See Transportation, pages 123-130). Visitation will vary more dramatically by time of day, day of week,

week of year and season of visitation. Climate change will affect the season of visitation, extending peak visitation season for most sites. Extreme weather will make planned visitation less predictable (See Environment, pages 143-150).

**Demand for services.** A central issue in calculating demand for services is the extent to which both immigrant populations and resident youth are made aware of and socialized into NPS visitation (See Demography, pages 20-58). In a de-familied society, demand for services will increasingly hinge on the extent to which non-family groups are aware of and value the opportunities to visit NPS sites in the NER. Creating such demand will involve new ways of reaching potential domestic and international visitors, involving experimentation and different strategies for individual sites.

There will be more demands for the mass customization of services (See Organizational Response to Change, pages 158-169). That is, individuals will increasingly want to be accommodated at the individual level concerning: what the visit means, what benefits are sought, what onsite behaviors are desired, what information is provided, the creation of memorable experiences, and accommodation of the ethnic, health, and lifestyle preferences of visitors. This customization will take different forms at different sites. For example, recognizing the impossibility of meeting all tourist needs, some sites will become more focused by providing specific types of experience. Sites providing similar experiences may network and cooperate locally and regionally, and market nationally and internationally.

While individual NPS sites may become more differentiated in terms of how they operate, there will be an increased interest in the NPS Ranger as a unifying symbol of what these diverse sites are all about. The ranger icon will be more widely utilized in both NPS marketing and in synergetic efforts with other organizations.

Given increased visitation levels, the visitation process will often become more formalized, with many potential visitors wanting more information supplied to them prior to the visit concerning travel routes, parking, crowding, special events, onsite activities, and other types of information. Individuals will increasingly desire that specific, orchestrated experiences be available within given time frameworks and will be willing to pay for what they see as a valuable experience (See Economic Conditions and Employment, pages 151-157). Valuable experiences may be redefined partly from environmental necessity and partly from changing social norms.

Specific ethnic, immigrant, lifestyle, disability and other groups will increasingly want customized opportunities to visit and participate. Immigrants from diverse countries and from diverse ethnic backgrounds will visit NPS sites in the NER in ways which are mostly in common with present visitors. Particularly at urban NPS sites in the NER, visitors will pursue a common pattern of onsite behavior regardless of ethnicity. They will also not vary greatly in terms of what satisfies them. Safety, cleanliness, attentive staff who know about them and care about them, convenient access, contact with nature, and memorable experiences are all features which these diverse groups will value in common.

There is reason to believe that the growth of the 65-75 year old contingent will make more visits to NPS sites. There is evidence that the 65 to 75 age group is slightly more likely than other age groups to visit local parks on a frequent basis. As retirement increasingly comes later in life with a higher portion of "retired" people continuing to work part- or full-time, their visits to NPS sites may be for shorter durations of time than those who are completely retired. Non-retired elderly will otherwise more closely conform to the behavior and attitudinal patterns of those in the labor force in terms of NPS park visitation. There will also be increasing demand for sites to be "programmed," with a variety of special events and activities for diverse visitor segments. Many NPS sites will need staff skilled in recreation programming and special event management, particularly if the NPS in the NER promotes sites as backdrops for mega-tourism events.

An increasing part of the demand for services may be conceived of as tourism demand (See Tourism, pages 72-111). That is, NPS sites in the NERR will increasingly be defined, recognized and marketed as tourist sites. To the extent the individual sites conform to the evolutions of tourism sites, which recognizes continuous change in both form and function, it will be increasingly evident that attaining a balance point at any one tourism site is elusive and volatile. For example, because tourism is a fundamental driver of economic significance, tourism research and analysis has lopsidedly emphasized its financial and marketing strengths. By narrowly designating it as an industry, tourism dons a mantle of legitimacy. Although this designation further elevates tourism's importance as an economic tool, conversely, by being seen as only a business, tourism becomes increasingly isolated from its social, cultural and environmental roots. To reduce volatility, the business side of tourism will increasingly need to share center stage with the social, cultural, and environmental aspects of tourism. New strategies, mechanisms, and policy instruments will be required to achieve individual and regional site objectives. Although most NER sites will be maintained, regardless of financial, social, ethical or political costs, other sites will be subject to critical evaluation.

Part of the demand for NPS services in the NER will come from the those in various parts of the tourism industry, both entrepreneurs and state and government agencies involved in tourism at the local, state, national and international level (See Governance, pages 137-142). Partnership benefits are often socially, culturally, and environmentally uneven, frequently compromising the integrity of the environment, the tourist experience, and the tourism attraction in order to meet increasing demands of an economically driven user base. To balance sustainability, development and demand for services, not only does the NPS in the NER have a responsibility for raising consumer (tourist) awareness, but also is equally responsible for addressing producer (business partner) awareness of the tensions involved in site management.

The demand for services in the NER is likely to be systematically different from any other region of the NPS. The areas in which these sites reside are the most urban. The sites themselves are less likely to be large tracts of land with unique ecological value, and the amount of demand which is for "programs" may be higher than any other region.

While the rate at which people move is declining slowly in the U.S., due in large part to the aging of the Baby Boom Generation, those in the NER are less likely to move than those in any region of the U.S. (See Demography, pages 20-58). In terms of the NPS in the NER, this lack of mobility may have several implications. First, those who visit NER sites from the region may be more likely to be making a repeat visitation, thus knowing more about the site. It may also deter some visitation since more potential visitors will have “been there, done that.” Third, it could mean a greater portion of visitation will come from “non-locals,” since longtime residents may lose interest. Locals who continue to use such sites may become more highly specialized in their onsite behaviors and there may also be more potential for education about the site to longtime visitors.

As the 21<sup>st</sup> century unfolds, it appears that the NPS in the NER will be used by the public more for purposes which are recreational or for the pleasurable use of leisure rather than visitation based on the reasons for the establishment of such sites. Accommodating such demand will make the NER increasingly distinct from other regions.



# The Northeastern United States in the Next Two Decades—Implications for the Northeast Region Of the National Park Service

## Introduction

The purpose of this study was to identify trends within numerous areas of life, which are expected to affect the Northeast Region (NER) of the National Park Service (NPS). More specifically, the paper will seek to identify changes in the states within the NER of NPS which have direct implication for the NPS in terms of:

- a. number and characteristics of future visitors,
- b. their expectations, onsite behaviors and desired benefits,
- c. constraints to visitation,
- d. logistics of visitation, and
- e. demand for services.

The states within the service area of the NER of the NPS include: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia and West Virginia.

The research was *not* undertaken to develop specific recommendations concerning NPS policy or site specific operations within the Northeast Region. Rather, it serves to provide key concepts, ideas and trends extrapolated from both statistical and non-statistical projections concerning the near future which have direct implication for the management and operation of the Northeast Region of NPS. Most of such projections will deal with the time period from 2000-2020, although a few concern longer time periods.

Seeking to predict the future is, of course, prone to error. Change is both continuous and incremental—e.g., the aging of the population, as well as sudden and discontinuous, e.g., a cure for AIDS. The interplay of both kinds of change has historically made folly of many predictions. Even in terms of continuous change, there are severe limits in prediction. Most analysts agree that population projections are unlikely to be accurate for periods that exceed the data base for which projections are made for more than ten or twenty years (Pant and Starbuck, 1990). Such limitations, however, do not eliminate the value of prediction.

“Prediction machinery need not see like a prophet to be of use. It needs only to detect limited patterns—almost any pattern—out of a background camouflage of randomness and complexity.” (Kelly, 1994, p. 427).

The important issue is not to recognize underlying causes, but rather order.

According to Modis (1992), one can find three types of order in the greater web of human interactions:

#### INVARIANTS

The natural tendency for humans to optimize their behavior produces little variation. Over the decades, for example, people vary remarkably little in how much time they devote to various activities. Marketplace pressures for efficiency push human systems in a single predictable direction toward optimization (Kelly, 1994, p. 436).

#### GROWTH CURVES

The larger and more decentralized a system is, the more it takes on the aspects of organic growth. This life span can be plotted in an S shaped curve—slow birth, steep growth, slow decline “. . .the shape of the ending is symmetrical to the shape of the beginning” (Modis, 1992, p. 437). One can find such curves in the participation rates of many recreation and leisure activities.

#### CYCLIC WAVES

The seemingly complex nature of a system is, in part, a reflection of the complex structure of the system's environment. Cyclic phenomena in nature can give a cyclic flavor to the systems operating within it. Thus, weather patterns help shape the profitability of agriculture or the extent to which airlines achieve on time departures.

In what follows, the authors have sought to deal with all three types of order. In doing so, subjective judgment and interpretation were necessary. While the paper concentrates on the Northeast Region (NER) of the United States, it should be noted that many trends affecting this region are essentially international, some national, regional, state specific, system specific, or unique to a region, community or micro area.

The paper attempts to inform, raise consciousness, and, on occasion, proselyze. It is subjective in its interpretation, although hopefully informed and unbiased in its presentation of trend data. The subject areas of the paper have been divided into Demography, Time Use and Leisure Behavior, Outdoor Recreation, Tourism, Lifestyle and Values, Transportation, Health and Wellness, Governance, Environment, Economic Conditions and Employment, and Organizational Response to Change.

It is natural that these areas are overlapping and interrelated in highly complex ways. In some cases, therefore, issues are identified under one subject area somewhat arbitrarily. Within each subject area, *Propositions* are presented when, in the judgment of the authors, the prediction made is highly likely to occur. *Salient Issues* are identified when in the judgment of the authors, the direction or outcome of an issue cannot be predicted but the importance of the outcome of the issue can be predicted. Both Propositions and Salient Issues are sometimes divided into sub-sections, depending upon



the complexity or scope of the proposition or issue.

It should be noted that one of the problems of prediction is that it may impose a certain “tyranny,” in effect stating—here is what will inevitably happen, e.g., the world population will inevitably grow (Dublin, 1989). Such a tyranny must be resisted by those who receive predictions by working toward their preferred futures.

## **Demography**

What changes will take place within the population of the NER as a whole, within individual states and within portions of states in regard to population size, migration, the social and economic characteristics of the population at both the individual and household level?

**Proposition:** The biggest demographic factor affecting visitation to the NPS in the NER will be the increases in population density during the next twenty years.

**Sub-Proposition:** Some NPS sites in the NER will increasingly serve as "local green space" as the process of urbanization intensifies in the NER.

**Proposition:** The population of the NER will continue to grow, providing a larger potential visitor base for NPS sites in the NER.

**Sub-proposition:** The slower growth rate of the NER will put it at a disadvantage politically.

**Sub-proposition:** State level variation in population growth within the NER will be dramatic, from practically no growth to rapid growth.

**Proposition:** The aging of the population will reshape many aspects of life, including access to and use of free time, outdoor recreation and tourism behavior, and NPS visitation.

**Sub-proposition:** A smaller portion of elderly people will retire in the traditional sense and those who do will retire later.

**Proposition:** The economic distance between haves and have-nots is increasing rapidly, particularly in the NER. This makes it increasingly unlikely that one set of organizational strategies will work for dealing with both groups.

**Proposition:** U.S. society may currently be characterized as "de-familied" and this situation is unlikely to change dramatically in the next twenty years.

**Proposition:** Males will begin to emerge in the next decade as the educationally disadvantaged group, compared to females. In a knowledge economy, this will change numerous forms of relationships.

**Salient Issue:** Women will play an increasing role in shaping visitation to NPS in the NER.

**Proposition:** The changing ethnicity of the NER population, which will occur at a slower rate than other regions of the U.S., will produce complex changes, which will vary by state and sub-region of states.

**Sub-Proposition:** Changing ethnicity will produce a need for the NPS in the NER to inform and re-inform ethnic groups about use of NPS sites. Such informing will need to be done through numerous outreach efforts.

**Sub-proposition:** The interpretation of history, nature and culture will need to recognize numerous ethnic perspectives.

**Sub-Proposition:** Immigrant populations, which are sometimes considered as a single group, i.e., “Asians” or “Hispanics” are actually quite diverse among different nationalities in terms of outdoor recreation and tourist behavior.

**Sub-Proposition:** While onsite adaptation to ethnic groups will need to be made, such change will be incremental. The basics of the visitation process will remain fairly constant.

**Proposition:** Changes in the aggregate demographic characteristics of the NER and of individual states within the NER, while of significant importance, may be less important to the operation of a specific site of the NPS in the NER than the fact that the demographic characteristics of small geographic areas within a state or urban area are becoming more distinct and diverse.

**Proposition:** Residents of the NER are becoming less transient and are the least likely to move of any region. This may mean a greater likelihood of visiting the same outdoor recreation sites over a greater number of years, more familiarity with such sites and a more critical attitude toward them.

The Northeast is the most densely populated part of the country, with an extensive megalopolis extending from Portland, Maine to central Virginia. The Northeast contains almost half of the people in the U.S. The total area of urban land in the Northeast increased 53% from 1960 to 1990 (Daugherty, 1991). The pace of the shift in environment from rural to urban development in the Northeast was, however, much slower than predicted from 1980 to 2000 (<http://biology.usgs.gov/stt/SNT/noframe/ne119.htm>). Regardless, urban land makes up a significant portion of the Northeast and is increasing. In spite of this, there is also a significant movement of people out of cities and into rural areas and small towns. There is also every indication that the population of the Northeast, while growing significantly and unevenly, will grow at a slower rate than any other region of the country.

In 1700, 90 per cent of the Northeast was forested. (Porter and Hill, <http://biology.usgs.gov/stt/SNT/noframe/ne119.htm>). So much forest was cleared for farmland and industry that, by 1900, only 30 percent of the NER remained forested. Today, however, the NER is more than 60% forested. In the past thirty years, movement into rural areas has had three significant effects: the loss of agricultural land to low-intensity human development, which creates a new type of patchwork of forest and open land; continued introduction and expansion of non-indigenous species, which change the character of natural environments; and increased conflict between humans and wildlife that may significantly shift society's values of wildlife and ecological processes (McCorkle and Halver, 1982).

The Northeast shares many of the demographic changes of other regions of the U.S. These changing demographic characteristics of the U.S. population were described as follows:

“ . . . the population and other factors that reflect its change will grow more slowly than in the past, that immigration will be increasingly important to such growth, that the population will age, and that it will become substantially more ethnically diverse. (This) . . . may lead to a labor force that is less well educated and perhaps less competitive, to reduced worker compensation and to substantially increased retirement costs for the society. They may lead as well to an increase in the number of households but to a reduction in the average income available per household and to an increase in the overall rate of poverty. Population growth will result in substantial increases in consumer and discretionary income but not as much as if the characteristics of the population remained stable. Markets for goods and services will likely become more complex and will be sharply divided into upper- and lower-income segments. Public and private-sector services will be differentially affected depending upon the population segments they serve. Thus, educational services are likely to grow more slowly than in the past while health care services will grow rapidly. Public-sector costs and revenues will increase as well, but deficit spending may lead to increased public-sector debt. Overall, the results suggest that inequality may increase and American society may develop increased bases for diversity and division.” (Murdock, 1997, p. xxi).

More specifically, the following predictions and salient issues have been identified in regard to demography:

**Proposition: The biggest demographic factor affecting visitation to the NPS in the NER will be the increases in population density during the next twenty years.**

Increasing population density will be perhaps the most significant demographic factor affecting the operation of the NPS in the NER. The NER states have dense populations and this density (the number of people residing within a given geographic area) has increased dramatically. The New York—Northeastern New Jersey area is the third most densely populated area in the U.S. with a density of 5409 people per square mile and this extremely dense region is larger geographically than any other urbanized area in the U.S., covering 2,967 square miles (Larsen, 1993). From 1980 to 1990, eight of the top eleven states in terms of increased population density were NER states. In order of magnitude of increase in population density, these states are: Rhode Island, Maryland, Florida, New Jersey, Connecticut, California, Massachusetts, Delaware, Hawaii, Virginia, and New Hampshire. “The Northeastern megalopolis states of New Jersey, Rhode Island, Connecticut, Massachusetts, Maryland and New York, already the six most densely populated states, are most of the ones experiencing the most densification” (Fonseca and Wong, 2000, p. 509). These states are not, however, experiencing the greatest relative population growth but they are among the smallest states in territory, an important consideration in the measurement of population density. Virginia, New Hampshire and Delaware, while not among the most dense states, are also experiencing greater than average increases in population density.

Figure One shows that several of these states, many of which are comparatively small geographically, had comparatively low rates of population increase but high rates of increase in population density. West Virginia and Pennsylvania, as may be seen, are exceptions to this

pattern. High population densities are important since, “Despite much publicity about congestion and over development, by and large the pattern of population density in the U.S. that has resulted from people ‘voting with their feet’ is one in which already dense areas further increase density” (Fonseca and Wong, 2000, p. 507).

At the county level, NER counties with very high increases in population density are generally ones which reflect metropolitan expansion and revitalization. “Included in this group are three counties in metropolitan Boston, ten in New York, six in Philadelphia, thirteen in Washington-Baltimore, and one county each in Providence, Hartford and New Haven” (Fonseca and Wong, 2000, p. 513). Another cluster of such counties in Virginia, primarily around Richmond and Hampton Road, suggest that the Megalopolis is spreading towards Hampton Road. It should additionally be noted that some NER states with low growth rates nevertheless have a large number of counties with the greatest increases in rates of density, including New York, Pennsylvania, Rhode Island and Connecticut. Thus, while the rate of population growth in the NER is not as fast as other regions, “. . .there is much evidence that states of the northeastern megalopolis are genuinely increasing in density as rapidly as western and southern states with high profile population growth patterns” (Fonseca and Wong, p. 515).

Increases in population density are of critical importance in many ways. Indeed, one researcher has argued that “Density is destiny” (Larsen, 1993, p. 38). Higher population densities are associated with increased incidence of a variety of diseases, greater participation in welfare, higher rates of suicide, and numerous environmental impacts, from air pollution to airborne toxic chemical releases, are also related to increased industry and transportation infrastructures.

Higher population densities in most NER states will make the character and operation of many NPS sites more frankly urban. Issues of crowding, traffic congestion, and waiting may increase. The need for NPS staff to conceive of and plan for the visitation process in ways which consider all five steps in the visitation process (anticipation, travel, participation, travel and recall) will increase. Levels of constraints for people who want to visit but can’t or don’t will increase and must be better understood by staff. The effect of increased density, in combination with an aging population, may mean that the negative effects of increased density are magnified, preventing older people who wish to visit from doing so or making visitation more difficult due to the complexity of travel.

**Sub-Proposition: Some NPS sites in the NER will increasingly serve as "local green space" as the process of urbanization intensifies in the NER.**

While many NPS sites will increasingly be visited by tourists, other sites will increasingly serve as local green space that people who live within less than one hours drive use to escape the urban environment, walk the dog, hike, and undertake other forms of day- use outdoor recreation. In effect, such sites will function as local parks for an increasing percentage of visitors. While this situation has always existed, it will intensify.

This change is one more example of the bigger issue of NPS sites in the NER evolving in terms of function in ways in which the legislation, which created them, did not envision.

**Proposition: The population of the NER will continue to grow, providing a larger potential visitor base for NPS sites in the NER.**

The U.S. population as a whole is continuing to grow. Long-range projections of the U.S. Census Bureau (2000) predict a U.S. population of 571 million in the year 2100. (Although such projections are highly suspect). The growth rate this reflects is a lower one—0.7% a year. The U.S. will add more people during the first decade of the 21<sup>st</sup> century than it did during the last decade of the 20<sup>th</sup>. The total U.S. population count is projected to reflect a 22% growth over a 25 year period, projected to be approximately 335.8 million in the year 2025 and 403.7 million in 2050 (Population Reference Bureau, 2000).

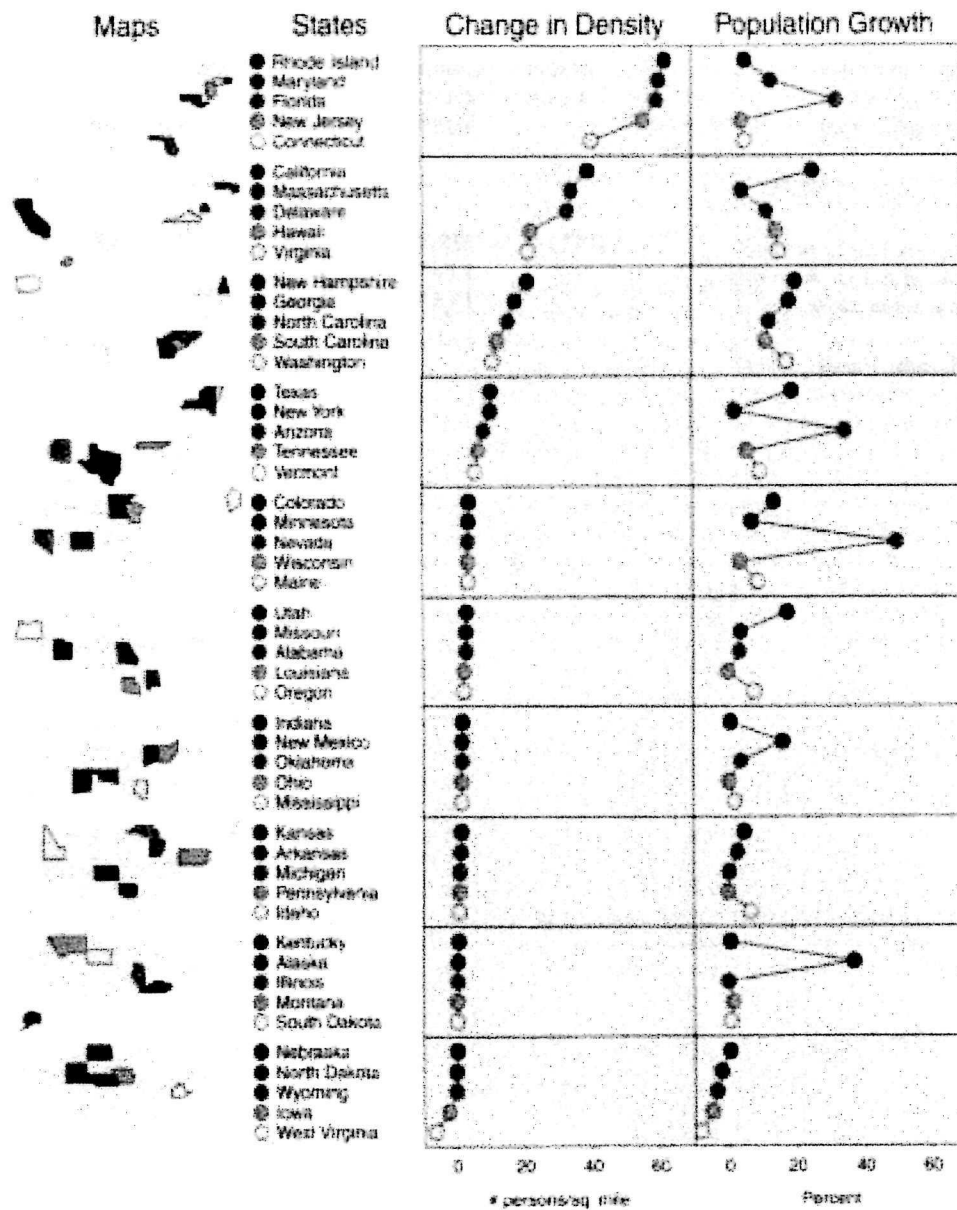
The prospect of such robust growth intensifies concerns about pollution and other environmental threats, as the increasing number of Americans can be expected to heighten the demands on shared resources like land, air, and water. At the same time, many seem to think this growth barely sufficient, as they echo longstanding beliefs that population growth is inextricability linked to the nation's prosperity (Riche, 2000, p. 7).

Birthrate, mortality and migration are the critical variables in such projections. Currently, the U.S. total fertility rate is slightly under 2.1, about replacement level. Women are waiting longer to have children, with the average age of a woman having a first birth now 24.3.

While migration is clearly a significant variable in population growth, with 20 percent of all babies from foreign-born women, it should be noted that the percentage of the current U.S. population which is foreign born, nine percent, is considerably less than it was at the beginning of the Twentieth century—fourteen percent.

Currently, there are approximately 281 million people living in the U.S., with 67 million people residing in the NER states. Total population in the NER states is expected to reach a total of 73 million by 2025. From 2000 to 2025, the total U.S. population is projected to grow at about twice the rate of the Northeastern states (see Table 1a, Woods and Poole, 2000). Thus, while the U.S. population will increase by approximately 39,335,000 people during the next 25 years, only 6,437,000 will come from the NER states. This substantially slower growth rate has many implications. Tables 1a and 1b show the projected population of the U.S. compared to the NER and to individual states within the NER.

Figure 1. U.S. State Population Growth and Changes in Population Density



Source: Fonseca and Wong, 2000.

Table 1a. Projections of US Population and Northeastern United States (Thousands)

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	<b>275206</b>	<b>286609</b>	<b>298406</b>	<b>310863</b>	<b>323501</b>	<b>335871</b>
<i>Increase in 5 Year Intervals</i>	<b>4.14%</b>	<b>4.12%</b>	<b>4.17%</b>	<b>4.07%</b>	<b>3.82%</b>	
<i>Increase since 2000</i>		<b>4.14%</b>	<b>8.43%</b>	<b>12.96%</b>	<b>17.55%</b>	<b>22.04%</b>
<b>NORTHEAST UNITED STATES</b>						
<i>NER States Total Increase</i>	<b>66722.71</b>	<b>67828.82</b>	<b>69037.63</b>	<b>70403.59</b>	<b>71811.62</b>	<b>73160.11</b>
<i>Increase in 5 Year Intervals</i>		<b>1.66%</b>	<b>1.78%</b>	<b>1.98%</b>	<b>2.00%</b>	<b>1.88%</b>
<i>Increase since 2000</i>		<b>1.66%</b>	<b>3.47%</b>	<b>5.52%</b>	<b>7.63%</b>	<b>9.65%</b>

Source: Woods and Poole, 2000



Table 1b. Projections of US Population and Individual Northeastern States (Thousands)

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	<b>275206</b>	<b>286609</b>	<b>298406</b>	<b>310863</b>	<b>323501</b>	<b>335871</b>
<i>Increase in 5 Year Intervals</i>		4.14%	4.12%	4.17%	4.07%	3.82%
<i>Increase since 2000</i>		4.14%	8.43%	12.96%	17.55%	22.04%
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	<b>3284.26</b>	<b>3300.26</b>	<b>3321.51</b>	<b>3350.36</b>	<b>3381.41</b>	<b>3409.46</b>
<i>Increase in 5 Year Intervals</i>		0.49%	0.64%	0.87%	0.93%	0.83%
<i>Increase since 2000</i>		0.49%	1.13%	2.01%	2.96%	3.81%
<b>Delaware</b>	<b>757.98</b>	<b>791.63</b>	<b>826.51</b>	<b>863.28</b>	<b>900.73</b>	<b>937.54</b>
<i>Increase in 5 Year Intervals</i>		4.44%	4.41%	4.45%	4.34%	4.09%
<i>Increase since 2000</i>		4.44%	9.04%	13.89%	18.83%	23.69%
<b>Maine</b>	<b>1259.2</b>	<b>1292.5</b>	<b>1327.69</b>	<b>1365.91</b>	<b>1404.8</b>	<b>1442.64</b>
<i>Increase in 5 Year Intervals</i>		2.64%	2.72%	2.88%	2.85%	2.69%
<i>Increase since 2000</i>		2.64%	5.44%	8.47%	11.56%	14.57%
<b>Maryland</b>	<b>5227.04</b>	<b>5441.99</b>	<b>5664.23</b>	<b>5899.2</b>	<b>6137.66</b>	<b>6371.13</b>
<i>Increase in 5 Year Intervals</i>		4.11%	4.08%	4.15%	4.04%	3.80%
<i>Increase since 2000</i>		4.11%	8.36%	12.86%	17.42%	21.89%
<b>Massachusetts</b>	<b>6182.96</b>	<b>6254.7</b>	<b>6336.15</b>	<b>6432.03</b>	<b>6531.6</b>	<b>6625.71</b>
<i>Increase in 5 Year Intervals</i>		1.16%	1.30%	1.51%	1.55%	1.44%
<i>Increase since 2000</i>		1.16%	2.48%	4.03%	5.64%	7.16%
<b>New Hampshire</b>	<b>1204.12</b>	<b>1248.49</b>	<b>1294.7</b>	<b>1343.82</b>	<b>1393.85</b>	<b>1442.83</b>
<i>Increase in 5 Year Intervals</i>		3.68%	3.70%	3.79%	3.72%	3.51%
<i>Increase since 2000</i>		3.68%	7.52%	11.60%	15.76%	19.82%
<b>New Jersey</b>	<b>8184.43</b>	<b>8335.27</b>	<b>8498.79</b>	<b>8682.13</b>	<b>8871.14</b>	<b>9053.16</b>
<i>Increase in 5 Year Intervals</i>		1.84%	1.96%	2.16%	2.18%	2.05%
<i>Increase since 2000</i>		1.84%	3.84%	6.08%	8.39%	10.61%
<b>New York</b>	<b>18223.5</b>	<b>18291.9</b>	<b>18389.2</b>	<b>18528.9</b>	<b>18679.3</b>	<b>18813.9</b>
<i>Increase in 5 Year Intervals</i>		0.38%	0.53%	0.76%	0.81%	0.72%
<i>Increase since 2000</i>		0.38%	0.91%	1.68%	2.50%	3.24%
<b>Pennsylvania</b>	<b>12061.8</b>	<b>12177.7</b>	<b>12312.4</b>	<b>12475</b>	<b>12644.7</b>	<b>12803.8</b>
<i>Increase in 5 Year Intervals</i>		0.96%	1.11%	1.32%	1.36%	1.26%
<i>Increase since 2000</i>		0.96%	2.08%	3.43%	4.83%	6.15%
<b>Rhode Island</b>	<b>993.61</b>	<b>1003.51</b>	<b>1014.92</b>	<b>1028.61</b>	<b>1042.94</b>	<b>1056.34</b>
<i>Increase in 5 Year Intervals</i>		1.00%	1.14%	1.35%	1.39%	1.28%
<i>Increase since 2000</i>		1.00%	2.14%	3.52%	4.96%	6.31%
<b>Vermont</b>	<b>599.54</b>	<b>619.23</b>	<b>639.85</b>	<b>661.88</b>	<b>684.28</b>	<b>706.11</b>
<i>Increase in 5 Year Intervals</i>		3.28%	3.33%	3.44%	3.38%	3.19%
<i>Increase since 2000</i>		3.28%	6.72%	10.40%	14.13%	17.78%
<b>Virginia</b>	<b>6924.9</b>	<b>7237.23</b>	<b>7559.55</b>	<b>7898.47</b>	<b>8242.07</b>	<b>8578.8</b>
<i>Increase in 5 Year Intervals</i>		4.51%	4.45%	4.48%	4.35%	4.09%
<i>Increase since 2000</i>		4.51%	9.16%	14.06%	19.02%	23.88%
<b>West Virginia</b>	<b>1819.43</b>	<b>1834.38</b>	<b>1852.11</b>	<b>1874.06</b>	<b>1897.21</b>	<b>1918.65</b>
<i>Increase in 5 Year Intervals</i>		0.82%	0.97%	1.19%	1.24%	1.13%
<i>Increase since 2000</i>		0.82%	1.80%	3.00%	4.27%	5.45%

Source: Woods and Poole, 2000

**Sub-proposition: The slower growth rate of the NER will put it at a disadvantage politically.**

While there is great variation in the growth rates of NER states, the Northeast has become the least populated region of the U.S. In 1900, more than three out of five Americans lived in the NER or the Midwest. In the 1970s, however, population growth came to a near standstill in the NER as its population headed for the South and the Southwest. The population of the NER, which had been 28 percent of the U.S. population in 1900, became 19 percent of it in 2000. According to the U.S. Census Bureau, the resident population counts for the NER states have either slightly increased or stayed the same between 1990 and 2000 (see Table 2). While the resident population ranks for most NER states including Connecticut, Maine, New Hampshire, New York, Pennsylvania, Vermont, and West Virginia fell during the 1990s, with the exception of Delaware which climbed a rank, other states such as Maryland, Massachusetts, New Jersey, Rhode Island, and Virginia showed no change in their ranks during the 1990s. It should be noted that, overall, the states in the NER have lost ranks with rank gains going to states outside the NER. Currently, western states, Georgia, and Florida show the fastest resident population growth and rank gains. The percent change in the resident population for the states (except Delaware) in the NER between 1990 and 2000 was lower than the percentage change for the entire U.S. (see Figure 2).

**Table 2. Resident Population of the 50 States, the District of Columbia, and Puerto Rico: April 1, 2000 (Census 2000) and April 1, 1990 (1990 Census)**

Area	April 1, 2000	April 1, 1990	State Rank as of April 1, 2000	State Rank as of April 1, 1990
Alabama	4,447,100	4,040,587	23	22
Alaska	626,932	550,043	48	49
Arizona	5,130,632	3,665,228	20	24
Arkansas	2,673,400	2,350,725	33	33
California	33,871,648	29,760,021	1	1
Colorado	4,301,261	3,294,394	24	26
Connecticut	3,405,565	3,287,116	29	27
Delaware	783,600	666,168	45	46
District of Columbia	572,059	606,900	(NA)	(NA)
Florida	15,982,378	12,937,926	4	4
Georgia	8,186,453	6,478,216	10	11
Hawaii	1,211,537	1,108,229	42	41
Idaho	1,293,953	1,006,749	39	42
Illinois	12,419,293	11,430,602	5	6
Indiana	6,080,485	5,544,159	14	14
Iowa	2,926,324	2,776,755	30	30
Kansas	2,688,418	2,477,574	32	32
Kentucky	4,041,769	3,685,296	25	23
Louisiana	4,468,976	4,219,973	22	21
Maine	1,274,923	1,227,928	40	38
Maryland	5,296,486	4,781,468	19	19
Massachusetts	6,349,097	6,016,425	13	13
Michigan	9,938,444	9,295,297	8	8
Minnesota	4,919,479	4,375,099	21	20
Mississippi	2,844,658	2,573,216	31	31
Missouri	5,595,211	5,117,073	17	15
Montana	902,195	799,065	44	44
Nebraska	1,711,263	1,578,385	38	36
Nevada	1,998,257	1,201,833	35	39
New Hampshire	1,235,786	1,109,252	41	40
New Jersey	8,414,350	7,730,188	9	9
New Mexico	1,819,046	1,515,069	36	37
New York	18,976,457	17,990,455	3	2
North Carolina	8,049,313	6,628,637	11	10
North Dakota	642,200	638,800	47	47
Ohio	11,353,140	10,847,115	7	7
Oklahoma	3,450,654	3,145,585	27	28
Oregon	3,421,399	2,842,321	28	29
Pennsylvania	12,281,054	11,881,643	6	5
Rhode Island	1,048,319	1,003,464	43	43
South Carolina	4,012,012	3,486,703	26	25
South Dakota	754,844	696,004	46	45
Tennessee	5,689,283	4,877,185	16	17
Texas	20,851,820	16,986,510	2	3
Utah	2,233,169	1,722,850	34	35
Vermont	608,827	562,758	49	48
Virginia	7,078,515	6,187,358	12	12
Washington	5,894,121	4,866,692	15	18

West Virginia	1,808,344	1,793,477	37	34
Wisconsin	5,363,675	4,891,769	18	16
Wyoming	493,782	453,588	50	50
<b>Total Resident Population<sup>1</sup></b>	281,421,906	248,709,873	(NA)	(NA)
Northeast	53,594,378	50,809,229	(NA)	(NA)
Midwest	64,392,776	59,668,632	(NA)	(NA)
South	100,236,820	85,445,930	(NA)	(NA)
West	63,197,932	52,786,082	(NA)	(NA)
Puerto Rico	3,808,610	3,522,037	(NA)	(NA)
Total Resident Population, including Puerto Rico	285,230,516	252,231,910	(NA)	(NA)

<sup>1</sup>includes the population of the 50 states and the District of Columbia.

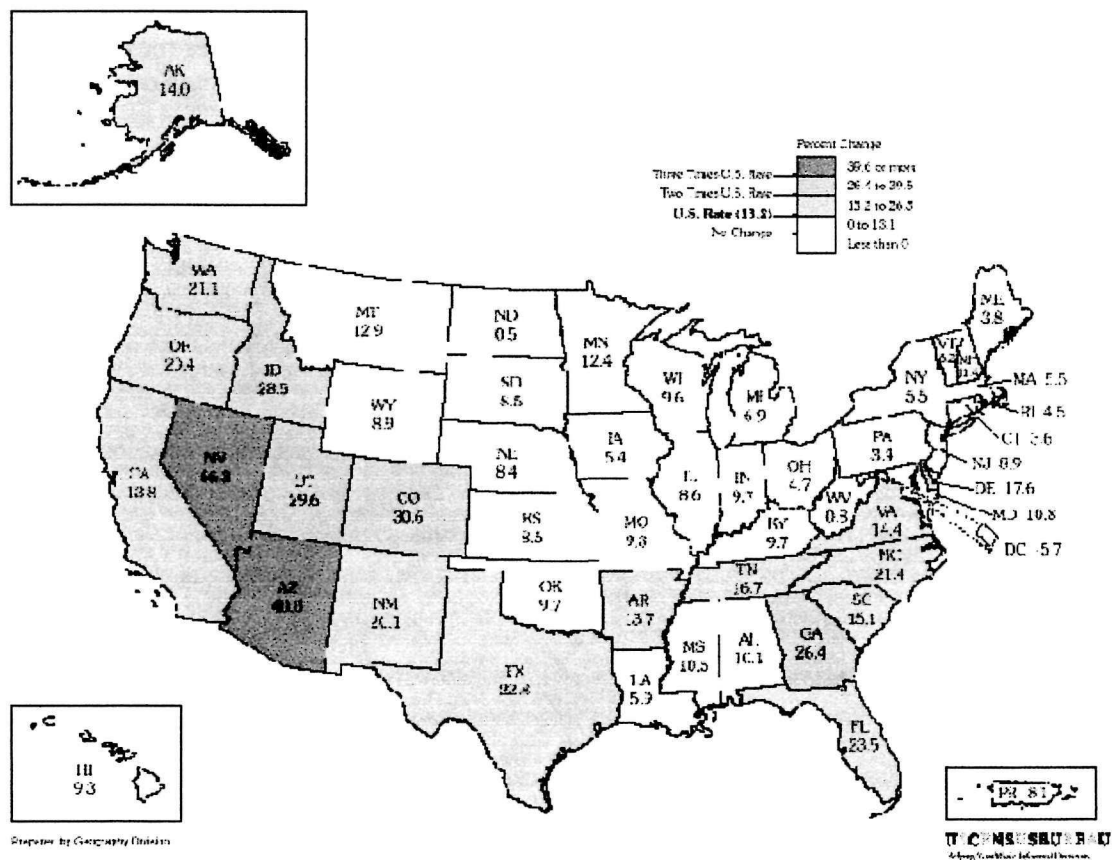
NA Not applicable.

NOTE: Consistent with the January 1999 U.S. Supreme Court ruling (Department of Commerce v. House of Representatives, 525 U.S. 316, 119 S. Ct. 765 (1999)), these resident population counts do not reflect the use of statistical sampling to correct for overcounting or undercounting.

Source: U.S. Department of Commerce, U.S. Census Bureau.

Internet Release date: December 28, 2000

**Figure 2. Percent Change in Residential Population for the 50 States, the District of Columbia, and Puerto Rico: 1990 to 2000**



Source: U.S. Department of Commerce, U.S. Census Bureau.  
 Internet Release date: December 28, 2000

The substantially slower growth rate of the NER will put it at a disadvantage in terms of political power. A few states may lose congressional seats and the NER states may play a somewhat less important role in national elections. Specifically, both Pennsylvania and New York will lose two seats each in the U.S. House of Representatives and Connecticut may lose one (see Table 3). In terms of the NPS in the NER, these slower growth rates may mean that overall attendance within the NPS sites in the region grow at a slower rate than other regions, putting the NPS in the NER at a disadvantage in competing for resources. This may further stimulate partnering with other agencies, fund raising, and entrepreneurial effort in the operation of sites.

**Table 3. Apportionment Population and Number of Representatives, by State: Census 2000**

<b>State</b>	<b>State Rank as of April 1, 2000</b>	<b>State Rank as of April 1, 1990</b>	<b>Number of Apportioned Representatives Based on Census 2000</b>	<b>Change From 1990 Census Apportionment</b>
Connecticut	29	27	5	-1
Maryland	19	19	8	0
Massachusetts	13	13	10	0
New Hampshire	41	40	2	0
New Jersey	9	9	13	0
New York	3	2	29	-2
Pennsylvania	6	5	19	-2
Rhode Island	43	43	1	0
Vermont	49	48	1	0
Virginia	12	12	11	0
West Virginia	37	34	3	0

Source: U.S. Department of Commerce, U.S. Census Bureau.  
Internet Release date: December 28, 2000

**Sub-proposition: State level variation in population growth within the NER will be dramatic, from practically no growth to rapid growth.**

As may be seen in Table 1b, individual NER states vary greatly in their growth rates, from growth rates of about five per cent during the next 25 years in West Virginia, Connecticut, New York and Pennsylvania to explosive growth rates of 20 per cent or more for Delaware, Maryland, New Hampshire, and Virginia. This pronounced disparity in growth rates might affect both visitation rates at sites within the NER as well as the average age of visitors, becoming older for those states with slow growth rates and younger for those with high growth rates.

NER states' rates of growth from 2000 to 2025 are: Connecticut -- 3.81%, Delaware -- 23.69%, Maine -- 14.57%, Maryland -- 21.89%, Massachusetts -- 7.16%, New Hampshire -- 19.82%, New Jersey -- 10.61%, New York -- 3.24%, Pennsylvania -- 6.15%, Rhode Island -- 6.31%, Vermont -- 17.78%, Virginia -- 23.88%, and West Virginia - 5.45%.

**Proposition: The aging of the population will reshape many aspects of life, including access to and use of free time, outdoor recreation and tourism behavior, and NPS visitation.**

Changes in the age structure of the population and the aging of the population will have profound effects on outdoor recreation and tourism behavior as well as visitation to NPS sites in the NER. The median age of the U.S. population was 32.8 in 1990 and currently (2000) stands at 35.75, and is projected to rise to 38.2 by 2025. The current median age of the population of the NER states is 37.19, which is higher than the current national median age. By 2025, median age of the population of the NER states is projected to increase to 40.87, surpassing national median age projections for 2025 by 2.67 years (see Table 4).



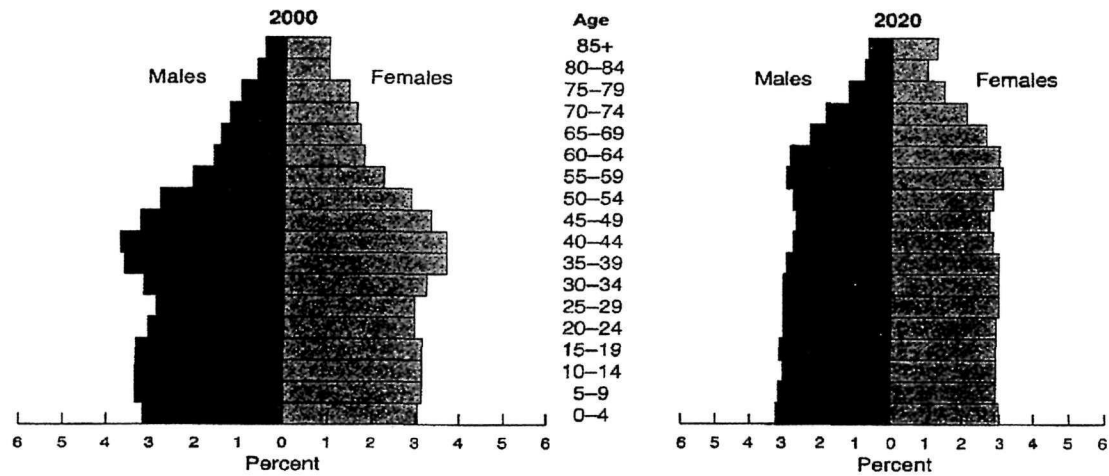
**Table 4. Projections of US Population and Individual Northeastern States by Median Age (Years)**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	35.75	36.67	37.31	37.40	37.78	38.20
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	37.61	39.09	39.96	39.91	39.57	39.71
<b>Delaware</b>	36.33	37.71	39.08	39.34	39.74	40.23
<b>Maine</b>	38.29	40.36	41.98	43.51	44.47	45.41
<b>Maryland</b>	36.22	37.52	38.12	37.84	37.93	38.32
<b>Massachusetts</b>	36.85	38.33	39.50	39.42	39.01	39.11
<b>New Hampshire</b>	36.40	37.85	39.26	39.59	39.81	40.72
<b>New Jersey</b>	37.34	38.64	39.18	39.04	38.91	38.93
<b>New York</b>	36.48	37.58	38.26	38.00	37.96	37.99
<b>Pennsylvania</b>	38.26	39.63	40.67	41.41	41.55	42.09
<b>Rhode Island</b>	36.91	37.93	39.17	38.95	38.84	39.35
<b>Vermont</b>	37.61	39.62	41.40	43.35	44.07	44.87
<b>Virginia</b>	35.78	36.85	37.59	37.64	37.96	38.31
<b>West Virginia</b>	39.37	41.14	42.51	44.04	45.29	46.32
<b>Average Median Age of NER States</b>	<b>37.19</b>	<b>38.63</b>	<b>39.74</b>	<b>40.16</b>	<b>40.39</b>	<b>40.87</b>

Source: Woods and Poole, 2000

Figure 3 illustrates these dramatic changes for the U.S. Perhaps the most single important age-related prediction is that the portion of the population which is 65 and over will increase from 13 percent in 2000 to 19 percent in 2025—a leap in the elderly population from 35 million to 63 million.

**Figure 3. U.S. Population by Age and Sex, 2000, and Projections for 2020**



Source: Accessed online at: [www.census.gov/population/projections/nation/summary/](http://www.census.gov/population/projections/nation/summary/), on March 15, 2000; In Riche (2000).

Within the NER states, the population which is 65 or over is projected to increase at rates comparable to national figures — 65 to 69 years (2.4 million in 2000 to 4.4 million in 2025, with a growth rate of 87.4% within a 25 year period), 70 to 74 years (2.3 million in 2000 to 3.5 million in 2025, 54% growth), 75 to 79 years (1.9 million in 2000 to 2.7 million in 2025, 40% growth), 80 to 84 years (1.3 million in 2000 to 1.7 million in 2025, 29% growth), and 85 years and over (1.1 million in 2000 to 1.7 million in 2025, 55% growth). The NER states of Pennsylvania, Rhode Island and West Virginia already have at least 15 percent of their population in the 65 and older category. Detailed U.S. and NER projections for specific age structures are presented in the Appendices.

These changes have significant consequences for the operation of NPS sites in the NER. While “elderly” people are becoming more diverse, there are central tendencies associated with older people which will require increased attention. Older people, on average, have higher levels of fear of crime, are less tolerant of weather extremes or loud noise, are generally more deliberate in their behavior, commit far fewer crimes, drive more slowly, stay longer onsite in parks, exhibit great interest in plant and animal life and in American history, are less tolerant of litter, pay more attention to diet, etc. As a higher portion of elderly who are “active” make greater use of NPS sites in the NER, these tendencies will need to be addressed.

As the Baby Boomers, born between 1946 and 1964, move toward retirement, the 65-75 portion of older people, sometimes called the “young-old” will dominate until about 2030, when people 75 and older will become the majority of older Americans. Certainly, there is reason to believe that the growth of this 65-75 year old contingent will increase visitation to NPS sites. There is evidence that the 65 to 75 age group is slightly more likely than other age groups to visit local parks on a frequent basis (Godbey, Graefe and James, 1997).

**Sub-proposition: A smaller portion of elderly people will retire in the traditional sense and those who do will retire later.**

As Baby Boomers begin to retire, the 50-year-old trend toward earlier retirement will come to an end. “Rather than retiring abruptly and at earlier and earlier ages, as many in their generation did, boomers will stretch out their working lives, moving in and out of new and varied careers” (Lewis, 1998, p. 6). Retirement will be viewed as a process rather than a single event.

For years, federal laws provided incentives for people to stop working at earlier and earlier age. The average age of retirement fell steadily after World War Two. Now, provisions which are age neutral or encourage people to work longer are replacing anti-work incentives. The age at which Social Security payments are made will begin to rise in 2003 from 65 to 67 years of age.

This will likely produce a long-term trend toward later retirement. Later retirement may not mean people staying in the same job longer, but rather working part-time after retiring from their career jobs. Some people may continue working full-time while others work part-time and still others serve as volunteers.

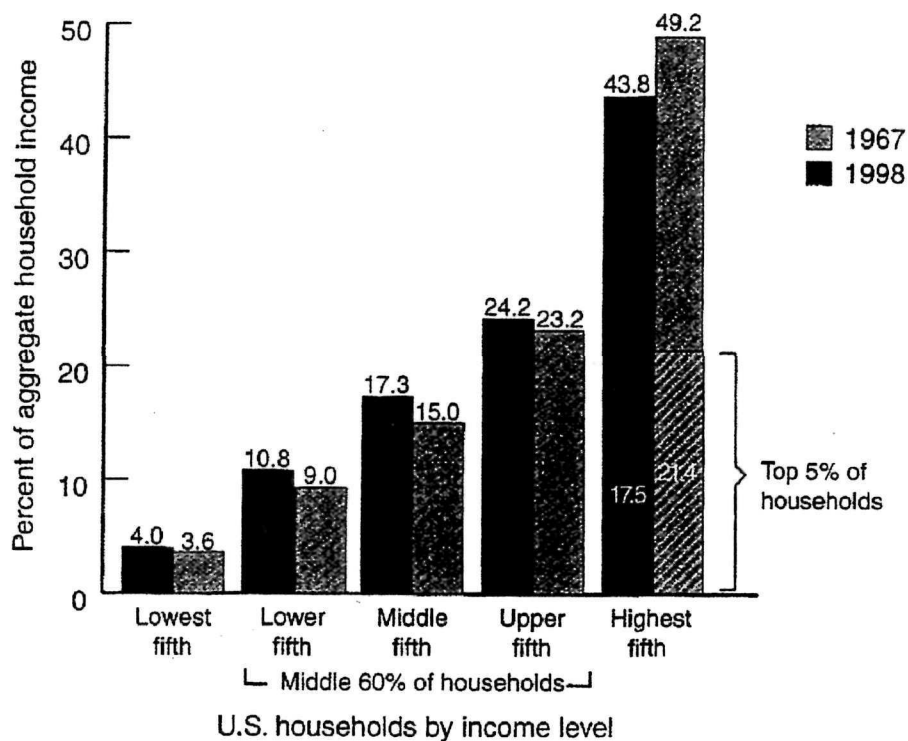
Not all observers agree that later and later retirement will become a reality. Some researchers think that Baby Boomers will retire when they can afford it regardless of their age. Some Baby Boomers will have to work longer to finance the style of life they are accustomed to.

If retirement comes later in life with a higher portion of “retired” people continuing to work part- or full-time, their visits to NPS sites may be for shorter durations of time than those who are completely retired. Non-retired elderly will otherwise more closely conform to the behavior and attitudinal patterns of those in the labor force in terms of NPS park visitation.

**Proposition: The economic distance between haves and have-nots is increasing rapidly, particularly in the NER. This makes it increasingly unlikely that one set of organizational strategies will work for dealing with both groups.**

The gap between haves and have-nots is increasing. As may be seen by Figure 4, the percentage of household income possessed by the highest fifth of U.S. households grew from 43.8 percent to 49.2 percent during the last 20 years. For the lowest fifth of all households, incomes dropped from 4.0 percent to 3.6 per cent. Also, while the U.S. historically has prided itself on the potential for upward mobility through hard work, today the U.S. is among the least economically mobile modern nations. That is, the chances of a person changing their comparative economic status in the U.S. are less than most other modern nations.

**Figure 4. Percent of Aggregate Household Income by Household Income Level, 1967 and 1998**



Note: Each category consists of one-fifth of households, ranked by income. Aggregate household income is the sum of the total income of every U.S. household.

Source: U.S. Census Bureau, U.S. Current Population Reports P60-206: Table C; In Riche (2000).

The U.S. had the highest overall poverty rate among 16 advanced economies in the late 1980s and 1990s. (Bianchi and Casper, 2000). High-income families (those in the 90th percentile of family income) in the U.S. earn almost six times more than their low-income counterparts (those in the 10th percentile). The average ratio for other advanced economies is under four, with only the United Kingdom (with a ratio of about five) anywhere near the U.S. level. In fact, U.S. inequality is so severe that low-income families in the U.S. are worse off than low-income families in the twelve other advanced economies for which comparable data exist, despite the higher average income level in the U.S. The United Kingdom is the only country where low-income families are worse off than in the U.S. Inequality in the U.S. (along with the United Kingdom) has also shown a strong tendency to rise over the last two decades, even as inequality was relatively stable or declining in most of the rest of the advanced economies.

This variation in income also exists among NER states (see Table 5). As may be seen in Table 6, while most NER states have higher wealth indexes than the national average and are expected to maintain these higher averages during the next 25 years, a few states are dramatically below national averages, particularly West Virginia, Maine and Vermont.

During the 1980s, the Northeast outperformed the rest of the country with respect to most important economic indicators, including median hourly wages, median family incomes, poverty, and unemployment (Economic Policy Institute, 1999). However, despite low unemployment, low-wage workers in some northeastern states (New York and Pennsylvania, for example) still lost ground. During the 1980s, the top-fifth/bottom-fifth ratio grew 2.4 points in New York and 2.1 points in California. West Virginia was another state where income inequality grew faster than the national average in the 1980s. Inequality continued to grow in most states in the 1990s, with faster growth in both New York and California. By the end of the period, the average income of the richest fifth of New York families was 13.7 times that of the poorest families in that state.

California and New York suffered most acutely in the 1990s recession, as these states' incomes and employment contracted and poverty grew. The most recent data show incomes of working families in these large states to be lower than at the previous business cycle peak in 1989.

While inequality has increased in most states during the 1990s, several states in the NER have had a very high rate of increase in inequality. In terms of the rise of inequality between the top fifth of household incomes and the bottom fifth, Rhode Island, New York and Connecticut were among the top ten states. Since the 1970s, for example, the average income of the top five percent of families grew by \$107,880 while the average income of the bottom 20 percent dropped by \$2,900. Table 7 provides mean household income projections for the NER states (Economic Policy Institute, 1999).

**Table 5. Projections of US Population and Individual Northeastern States by per Capita Income Level  
(Thousands) Current \$**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	28469	34470	42567	53099	66157	82410
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	39672	47890	59266	74308	93269	117304
<b>Delaware</b>	30977	37027	45253	55892	68949	85050
<b>Maine</b>	24760	29877	36857	45960	57268	71369
<b>Maryland</b>	32634	39664	49097	61375	76609	95581
<b>Massachusetts</b>	35011	42287	52311	65485	81954	102616
<b>New Hampshire</b>	31023	37603	46590	58276	72744	90722
<b>New Jersey</b>	36358	44011	54478	68196	85314	106744
<b>New York</b>	33787	40641	50110	62600	78277	98051
<b>Pennsylvania</b>	29027	35245	43694	54747	68527	85773
<b>Rhode Island</b>	28636	34621	42860	53626	67043	83861
<b>Vermont</b>	25944	31359	38668	48185	60007	74767
<b>Virginia</b>	29702	36217	44916	56210	70215	87666
<b>West Virginia</b>	21183	25824	32156	40482	50939	64143

Source: Woods and Poole, 2000



**Table 6. Projections of US Population and Individual Northeastern States by W & P Wealth Index  
(Thousands) U.S. = 100**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	100.00	100.00	100.00	100.00	100.00	100.00
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	134.93	134.54	134.73	135.26	136.06	137.13
<b>Delaware</b>	109.54	108.26	107.22	106.24	105.29	104.35
<b>Maine</b>	87.60	87.38	87.32	87.30	87.32	87.35
<b>Maryland</b>	112.95	113.30	113.52	113.72	113.90	114.05
<b>Massachusetts</b>	119.53	119.27	119.43	119.76	120.20	120.70
<b>New Hampshire</b>	110.62	110.70	110.97	111.20	111.36	111.45
<b>New Jersey</b>	125.45	125.40	125.62	125.96	126.37	126.81
<b>New York</b>	113.70	113.07	112.90	113.02	113.33	113.83
<b>Pennsylvania</b>	100.42	100.66	100.98	101.34	101.73	102.14
<b>Rhode Island</b>	98.44	98.32	98.51	98.75	99.02	99.35
<b>Vermont</b>	94.78	94.61	94.46	94.35	94.28	94.26
<b>Virginia</b>	104.93	105.52	105.88	106.15	106.37	106.57
<b>West Virginia</b>	74.28	74.66	75.13	75.65	76.23	76.87

Source: Woods and Poole, 2000

**Table 7. Projections of US Population and Individual Northeastern States by Mean Household Income  
(Thousands) Current \$**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	74488	89057	108994	135569	169672	213277
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	102275	121895	149479	186842	235555	298899
<b>Delaware</b>	79348	93316	112631	138213	170677	211721
<b>Maine</b>	61688	73055	88770	109703	136467	170560
<b>Maryland</b>	86042	103030	126121	156892	196352	246754
<b>Massachusetts</b>	88450	104991	128105	159139	199119	250433
<b>New Hampshire</b>	79678	94947	116070	144115	179901	225399
<b>New Jersey</b>	98603	118066	145090	181414	228380	288837
<b>New York</b>	88349	104979	128329	159905	200933	254096
<b>Pennsylvania</b>	73847	88490	108657	135663	170474	212202
<b>Rhode Island</b>	72293	86136	105469	131312	164588	207354
<b>Vermont</b>	64711	76723	93142	114962	142869	178467
<b>Virginia</b>	76299	91630	112330	139796	174947	219818
<b>West Virginia</b>	52755	63253	77745	97205	122395	154920

Source: Woods and Poole, 2000

Increasing inequality between economic, educational and informational haves and have-nots has implication for the operation of all organizations, including public sector organizations such as the NPS in the NER. Perhaps most critical is the recognition that a single strategy, method of operation, policy or program will not be likely to satisfactorily serve both the haves and the have-nots. Historic sites will need to be interpreted at more than one level of complexity. Multiple strategies will have to be developed for assessing entrance fees. Transportation to and from the site, methods of communicating with the public and other issues must be segmented into multiple approaches that recognize distinct differences between haves and have-nots. It may be argued that such an approach is defeatist or cynical, in effect admitting that there is no single “public” for whom services are provided. Nevertheless, the counter argument is that, in the face of overwhelming evidence of a vast disparity in resources among “the public,” involving the have-nots at all will require more highly targeted strategies which are pro-active and proceed from different assumptions about every aspect of NPS visitation, from logistics to health needs onsite.

The have and have-not split is particularly important to the NPS since, historically, the middle class has been disproportionately likely to be NPS visitors.

**Salient Issue: The NPS in the NER must find new ways to serve the “have-nots.”**

The NER is characterized by population diversity and income inequality. Many cities in the NER have lost tax revenues and upper income residents as improvements in transportation have blurred urban and rural delineations. However, the social and economic movement to the suburbs has trapped many low-income individuals in city populations who are less politically and socially powerful. An astonishing 20% of the U.S. population is currently below the poverty line (Population Reference Bureau, 2000). If this percentage remains the same, as it has done since the early 1970’s, with projected population increases in the NER, the absolute number of individuals who will be poor in the NER will increase.

While the NPS has been successful in addressing the needs of “haves,” largely ignoring 20% of the population, (a figure that will rise in an economic downturn) is not a solution. It must be remembered that not all players will be equal in their ability to exert power. In fact, the underrepresented are usually those most in need of representation. To further complicate matters, because of increased visibility of Hispanics, Asians, and African Americans (in part due to migration and in part due to relocation of white population), voting power will shift more dramatically in the NER than other areas of the U.S. For example, while New York and New Jersey lost white voting age population during the 1990’s, the population of voting age Hispanics and Asians increased significantly (Population Reference Bureau, 2000). Tourism to, and management of, sites in the NER will increasingly reflect these shifts. Innovative out-reach programs adopted by some sites in the NER will reflect greater ethnic and cultural diversity.

**Proposition: U.S. society may currently be characterized as “de-familied” and this situation is unlikely to change dramatically in the next twenty years.**

While there is a tendency to think of the U.S. as a nation of families, almost half the adult population of the U.S. (44%) is unmarried. Many facts account for this, including later average age of marriage—24.5 for women and 26 for men, increased cohabitation of unmarried couples, divorce, and the greater longevity of females who live many years after the death of their husbands. Additionally, females are becoming more economically independent and may feel less economic need or incentive to marry. The average household size in the U.S. has shrunk to 2.6 people per household and slightly less than one in four of these households has a family in it, if family is defined as a married male and female with one or more children under the age of eighteen. Single person households have increased dramatically in the U.S., as they have in other modern nations, now accounting for about twenty-five percent of all households.

Existing families are more likely to be “nontraditional,” with children from more than one marriage in them, gay families, interracial or interethnic, or non-related people living as a “family.”

A disproportionate part of the constituency of the NPS has been traditional families, usually from the middle-class. A de-familied society implies both that visitors to NPS sites will increasingly visit in non-family groupings and that new assumptions will have to be made about the social relations of visitors to continue to attract them. Table 8 shows the predicted expansion of households in the NER. As may be seen, the number of households increases substantially in all states, even in West Virginia that will show almost no population growth. Since the household remains the primary social group from which NPS visitation takes place, this increase in number of households may mean that they will need to be socialized into the process of visiting NPS sites in the NER.

**Table 8. Projections of US Population and Individual Northeastern States by Number of Households (Thousands)**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	103011.31	108540.45	113947.41	118990.33	123180.80	126559.14
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	1244.86	1265.39	1284.00	1298.27	1303.32	1300.27
<b>Delaware</b>	289.06	306.42	323.60	339.91	353.89	365.57
<b>Maine</b>	495.39	518.12	540.49	561.36	578.51	592.27
<b>Maryland</b>	1946.62	2055.43	2162.06	2261.88	2345.80	2414.75
<b>Massachusetts</b>	2375.93	3440.01	2501.10	2554.38	2589.31	2606.67
<b>New Hampshire</b>	458.80	483.47	507.84	530.84	550.24	566.22
<b>New Jersey</b>	2965.45	3049.39	3128.72	3197.32	3243.19	3268.81
<b>New York</b>	6797.40	6893.22	6978.02	7038.94	7049.19	7013.84
<b>Pennsylvania</b>	4624.95	4722.57	4813.19	4887.72	4927.23	4934.81
<b>Rhode Island</b>	381.85	390.63	398.88	405.83	409.85	411.12
<b>Vermont</b>	233.34	245.37	257.28	268.55	277.99	285.63
<b>Virginia</b>	2630.17	2788.99	2945.79	3094.12	3220.93	3326.83
<b>West Virginia</b>	718.23	735.19	751.01	764.23	772.00	774.92

Source: Woods and Poole, 2000

**Proposition: Males will begin to emerge in the next decade as the educationally disadvantaged group, compared to females. In a knowledge economy, this will change numerous forms of relationships.**

There is cultural lag in Americans' perception of the educational attainment and achievements of girls and boys. While the feeling persists that girls are ignored in public school, remain passive, have low self esteem, etc., girls are far higher achievers in public schools than boys and they are more likely to go to college. According to the U.S. Department of Education, girls get better grades in public schools, are slightly more likely to enroll in higher level math and science courses, and outnumber boys in student government, honor societies, school newspapers and debating teams (Sommers, 2000). Girls read more books than boys, outperform them on tests for artistic and musical ability, and are more likely to study abroad. Boys are more likely to be suspended from school, held back, drop out, or be involved in crime, alcohol or drugs. Boys are more than three times more likely to receive a diagnosis of attention deficit hyperactivity disorder. While girls are more likely to attempt suicide, boys are more likely to succeed in killing themselves by a ratio of more than five to one. In 1996 there were 8.4 million women but only 6.7 million men enrolled in college and the projections are that by 2007, women will outnumber men in college even more substantially—9.2 million women and 6.9 million men (Sommers, 2000).

In the emerging knowledge economy, this is likely to mean that the comparative power of women with high levels of education will increase, the wage gap will close or favor women, more joint career decisions will be made which consider women's job prospects first, and the centrality of women as decision-makers will increase in regard to use of free time within families and couples.

Such changes may mean that women will visit NPS sites more frequently, will place increasing demands for differentiation of sites and services to meet their interests, and will exert more power in shaping NPS operations. This may affect numerous areas of NPS operations, from restrooms to the ways in which historical and natural sites are interpreted. In terms of history, for example, NPS may have to interpret family history and cultural history more than they currently do, while not excluding, military, political and natural history.

**Salient Issue: Women will play an increasing role in shaping visitation to NPS in the NER.**

Women's increasing economic independence has led to marketing recognition. The former pattern of women's dependence on, and male power in, the family travel decision making process is slowly being transformed, but changes will not be equitable over time and space.

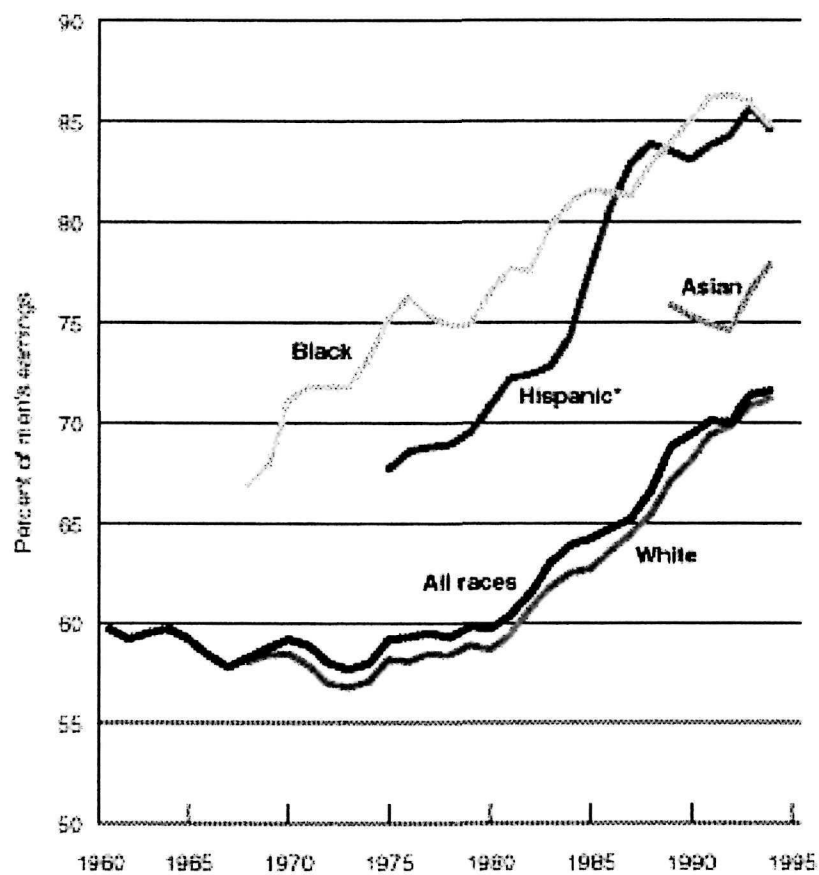
Women live longer than men do. As life expectancy increases in the U.S., the population of elderly women will expand enormously across racial and ethnic lines. Additionally, although still significantly below men's income, women's median income grew 63% between 1970 and 1988. Men's median income grew 0.6% over the same period. The increase in the absolute number of women coupled with their relative increase in income translates into considerable political and market power (Figure 5). Women are increasingly being recognized as reshaping the tourism marketplace both nationally and internationally (Lurin, 1999). Currently, for example, 35% of all Elderhostel bookings are from solo women travelers.

An increasingly diverse NPS user base in the NER will require flexible, perhaps uniquely site-specific, management policies and procedures that provide public spaces reflecting the contributions and interactions of varied groups. Women, for example, will increasingly articulate what tourism means to them, and how parks mesh with and reflect their definitions. For instance, not all women may consider camping as a leisure activity, and consequently women's attitudes, and their desire to express them, will increasingly be recognized as shaping park management and operation. Wearing (1998) raises a cautionary note, worthy of consideration:

“Future policies and procedures should not try to implement uniform policies for all women, nor try to give women equality with men by *treating them the same as men*. Public leisure facilities and leisure programs which act in the manner of preformed pigeon-holes into which women can be fitted will not be used by many women” (p. 186).

For sites in the NER, this may mean operational changes from the way restrooms are designed and maintained to the presentation of historical and cultural information, with greater emphasis on family life and the diverse roles of women in society.

**Figure 5. Women's Earnings as a Percentage of Men's Earnings by Race and Ethnicity: 1960–1994**



Note: Percentages are based on three-year moving averages of median annual earnings of full-time, year-round workers.

\* Hispanics may be of any race.

Source: U.S. Bureau of the Census, unpublished tabulations.



**Proposition: The changing ethnicity of the NER population, which will occur at a slower rate than other regions of the U.S., will produce complex changes which will vary by state and sub-region of states.**

The Northeast, like the rest of the U.S., will become more ethnically diverse, although, in some cases, at a slower rate than other regions of the U.S. As Tables 9a through 9d show, the white population of some NER states such as Connecticut, Massachusetts, New Jersey and New York will actually decline in number during the next twenty-five years while the population of African-Americans will increase substantially, and the increase in “other” ethnic groups, mainly Hispanic and “Asian” will increase dramatically. No NER state will have a non- white majority by the year 2025, but the increase in non-whites will be substantial enough to influence all areas of life, from politics to food. In particular, the Hispanic population in many of the NER states will double or triple in the next twenty-five years, reaching totals of over four million in New York, and almost one million in Pennsylvania, Virginia and Massachusetts.

The NPS in the NER is likely to respond to such changes by making concerted efforts to hire more staff from these ethnic backgrounds, seeking to understand the issues of concern to these groups and, in general, reflecting the changing population characteristics’ preferences.

**Table 9a. Projections of US Population and Individual Northeastern States by Race – White Population (Thousands)**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	226107.07	233048.15	240193.54	247803.41	255480.56	262846.00
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	2875.81	2849.21	2824.04	2802.61	2781.73	2757.06
<b>Delaware</b>	586.64	596.17	605.36	615.05	624.89	634.06
<b>Maine</b>	1237.30	1268.71	1302.13	1338.65	1376.15	1412.71
<b>Maryland</b>	3509.08	3549.13	3592.60	3645.09	3698.97	3745.99
<b>Massachusetts</b>	5510.24	5478.31	5441.25	5406.24	5363.32	5308.02
<b>New Hampshire</b>	1177.70	1219.19	1262.62	1309.28	1357.15	1404.36
<b>New Jersey</b>	6447.42	6404.13	6355.69	6309.35	6259.78	6196.59
<b>New York</b>	13807.44	13570.11	13359.78	13186.38	13026.76	12858.25
<b>Pennsylvania</b>	10641.10	10666.83	10709.78	10778.76	10854.19	10919.07
<b>Rhode Island</b>	912.04	912.21	913.85	917.81	922.91	927.74
<b>Vermont</b>	589.09	607.89	627.63	648.68	670.17	691.12
<b>Virginia</b>	5232.45	5386.48	5541.36	5703.73	5864.14	6014.40
<b>West Virginia</b>	1746.40	1757.57	1771.07	1788.11	1806.	

Source: Woods and Poole, 2000

**Table 9b. Projections of US Population and Individual Northeastern States by Race – Black Population (Thousands)**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	35382.08	37679.89	40053.22	42515.99	45000.25	47453.24
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	311.44	330.33	350.32	370.93	390.67	408.82
<b>Delaware</b>	152.30	172.71	194.65	217.91	241.92	266.06
<b>Maine</b>	6.72	7.23	7.87	8.56	9.19	9.84
<b>Maryland</b>	1481.41	1610.32	1740.75	1872.05	2003.73	2135.58
<b>Massachusetts</b>	412.33	456.38	504.75	557.09	612.91	670.57
<b>New Hampshire</b>	8.94	9.41	9.91	10.35	10.76	11.10
<b>New Jersey</b>	1219.02	1292.07	1364.49	1435.35	1500.39	1558.71
<b>New York</b>	3261.96	3352.84	3435.22	3514.34	3582.53	3639.45
<b>Pennsylvania</b>	1187.57	1232.72	1275.85	1317.74	1358.06	1395.79
<b>Rhode Island</b>	51.70	57.10	62.56	68.23	73.70	78.86
<b>Vermont</b>	3.48	3.58	3.71	3.87	4.07	4.26
<b>Virginia</b>	1403.42	1500.26	1599.82	1701.99	1804.82	1905.18
<b>West Virginia</b>	59.81	62.30	65.09	68.54	72.26	76.09

Source: Woods and Poole, 2000

**Table 9c. Projections of US Population and Individual Northeastern States by Race – Hispanic Population, Any Race (Thousands)**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	32293.63	37116.67	42341.94	48065.77	54181.93	60638.86
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	286.34	328.83	373.21	421.20	474.60	531.91
<b>Delaware</b>	29.22	38.05	47.07	57.11	68.07	81.79
<b>Maine</b>	9.53	10.98	12.56	14.31	16.28	18.40
<b>Maryland</b>	217.67	291.95	370.27	454.52	544.29	637.83
<b>Massachusetts</b>	416.96	512.63	609.06	710.04	813.76	917.50
<b>New Hampshire</b>	21.49	30.55	41.06	51.02	63.29	73.31
<b>New Jersey</b>	1068.88	1220.36	1376.52	1538.78	1704.55	1848.88
<b>New York</b>	2756.93	3039.24	3315.58	3584.98	3891.27	4242.74
<b>Pennsylvania</b>	353.98	452.88	558.93	670.18	780.78	905.12
<b>Rhode Island</b>	73.93	95.45	118.17	142.99	169.21	197.24
<b>Vermont</b>	5.50	6.59	7.80	9.16	10.68	12.36
<b>Virginia</b>	286.59	381.14	477.10	596.48	707.88	825.56
<b>West Virginia</b>	11.96	16.15	20.59	25.32	30.38	35.62

Source: Woods and Poole, 2000

**Table 9d. Projections of US Population and Individual Northeastern States by Race – Other Population  
(Thousands)**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	13716.60	15880.49	18159.07	20543.93	23020.60	25571.45
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	97.01	120.71	147.15	176.82	209.01	243.59
<b>Delaware</b>	19.05	22.74	26.50	30.32	33.92	37.42
<b>Maine</b>	15.18	16.56	17.69	18.70	19.45	20.08
<b>Maryland</b>	236.55	282.54	330.88	382.06	434.96	489.56
<b>Massachusetts</b>	260.39	320.00	390.15	468.70	555.37	647.11
<b>New Hampshire</b>	17.49	19.89	22.16	24.19	25.93	27.36
<b>New Jersey</b>	517.99	639.08	778.61	937.43	1110.97	1297.85
<b>New York</b>	1154.06	1368.96	1594.23	1828.16	2069.97	2316.24
<b>Pennsylvania</b>	233.11	278.17	326.75	378.46	432.43	488.95
<b>Rhode Island</b>	29.88	34.20	38.51	42.57	46.32	49.74
<b>Vermont</b>	6.97	7.76	8.51	9.32	10.03	10.73
<b>Virginia</b>	289.04	350.49	418.38	492.74	573.11	659.22
<b>West Virginia</b>	13.22	14.52	15.95	17.41	18.85	20.06

Source: Woods and Poole, 2000

**Sub-proposition: Changing ethnicity will produce a need for the NPS in the NER to inform and re-inform ethnic groups about use of NPS sites. Such informing will need to be done through numerous outreach efforts.**

Merely responding to changing ethnic groups onsite is unlikely to be a successful strategy for increasing NPS visitation among ethnic groups. Such informing will need to be done through numerous outreach efforts, using ethnic communication channels such as urban ethnic societies, newspapers, non-English TV channels and radio stations and websites (Jeong, 1999). In some cases, the Western NPS region has developed useful methods for doing this.

**Sub-proposition: The interpretation of history, nature and culture will need to recognize numerous ethnic perspectives.**

The interpretation of history as well as culture and even nature by the NER of the NPS will need to recognize the interests, philosophies and heritage of various diverse ethnic groups. In some cases, this will involve the presentation of competing views of the world which are antagonistic to each other. Some interpretation, therefore, may be presented in a debate or dialectic format rather than a mere exercise in informing about "facts."

**Sub-proposition: Immigrant populations, which are sometimes considered as a single group. i.e., "Asians" or "Hispanics" are actually quite diverse among different nationalities in terms of outdoor recreation and tourist behavior.**

Significant variation exists among Asian subgroups such as Chinese, Filipino, Japanese, Korean and Vietnamese in terms of number of recreational pursuits, desirable park attributes, usage patterns within parks, the extent of consumptive uses (such as harvesting plant and animal life), social interactions, and motivations to visit natural areas. Though they are commonly referred to as "Asian," they comprise groups who share little common background. Many studies that have examined Asians have grouped all Asians together even though there are substantial differences in language, education, and skill level (Borjas, 1995; White, Biddlecom, & Guo, 1993). For example, a study found that Korean immigrants are selective and highly homogenous in class, occupation, and religious affiliation (Kim, 1981; Kim & Hurh, 1993). Chinese immigrants, by contrast, are heterogeneous in class and regional and linguistic background. Recent Chinese immigrants have been drawn from Taiwan, Hong Kong, Mainland China, and Vietnam, and their class and occupational status have varied widely (Logan & Zhou, 1991; Zhou, 1992). Chinese and Koreans are overwhelmingly foreign-born while the Japanese are overwhelmingly native-born. In short, while their behavior, norms, values, and attitudes may be modified over time, Asian immigrants will nonetheless retain diverse traditional components.

Such differences suggest that the NPS in the NER may need to use specific ethnic media and provide written materials in ethnic languages, based on the increasing numbers of Hispanics and Asians in concentrated geographic areas within the United States (Jeong, 1999).

**Sub-proposition: While onsite adaptation to ethnic groups will need to be made, such change will be incremental. The basics of the visitation process will remain fairly constant.**

In spite of the previous discussion, immigrants from diverse countries and from diverse ethnic backgrounds will visit NPS sites in the NER in ways which are mostly in common with present visitors. Particularly at urban NPS sites in the NER, visitors will pursue a common pattern of onsite behavior regardless of ethnicity. They will also not vary greatly in terms of what satisfies them. Safety, cleanliness, attentive staff who know about them and care about them, convenient access, contact with nature, and memorable experiences are all features which these diverse groups will value in common.

**Proposition: Changes in the aggregate demographic characteristics of the NER and of individual states within the NER, while of significant importance, may be less important to the operation of a specific site of the NPS in the NER than the fact that the demographic characteristics of small geographic areas within a state or urban area are becoming more distinct and diverse.**

While it is useful to understand aggregate demographic data about the NER or individual states, the “demographic Balkanization” of the population means that individual sites of the NPS in the NER will vary dramatically in terms of visitor characteristics. “This term describes the process through which people are separated by race, ethnicity, class, and age across regions and metropolitan areas. These demographic differences are reinforced by internal and international migration” (Frey cited by Riche, 2000, p. 14.). Part of the balkanization of the population reflects choices made by those who wish to live with others of similar ancestry while another reflects lack of choice. The opportunity for different residential choices for some Americans but not others disturbs those concerned with “demographic balkanization” of the population. Increased balkanization, which is particularly acute in many regions of the NER, has multiple causes, including the fact that some metropolitan areas are thriving with diversified economies which include advanced service and knowledge industries, leisure services and retirement opportunities while other areas which lack these features stagnate. Well-educated people are clustered together geographically based on better paying jobs. Also, within the NER, African-Americans who migrated from the south often continue to live in segregated areas. Within metropolitan areas, people continue to live close to others who share their income, age and educational levels. Neighborhoods are subject to rapid change from low income to high income or from one racial group to another.

It may be argued that this balkanization applies to visitors to NPS sites in the NER who come from other sections of the U.S. and other countries as well. That is, there will be an increasing tendency for individual NPS sites to attract a unique mixture of local, regional, state, national and international visitors, much as some Florida vacation spots attract Germans or Quebecois. Such balkanization of visitors may mean more customization of operations at NPS sites. Not only do NER states vary in their population growth, changing ethnicity and age structure of the population, but such variation is also evident in the specific counties in which NPS sites are located.

In summary, demographic balkanization of the population may mean that aggregate demographic trends in the NER region or the U.S. may not serve as a useful basis for predicting visitation or the characteristics of visitors *at a given site*. Instead, site specific information concerning user characteristics and preferences must be obtained on a continuous basis.

**Proposition: Residents of the NER are becoming less transient and are the least likely to move of any region. This may mean a greater likelihood of visiting the same outdoor recreation sites over a greater number of years, more familiarity with such sites and a more critical attitude toward them.**

While the rate at which people move is declining slowly in the U.S., due in large part to the aging of the Baby Boom Generation, those in the NER are less likely to move than those in any region of the U.S. The Northeast had the lowest moving rate among the nation's regions (11.7 percent), followed by the Midwest (15.1 percent). The South (17.1 percent) and the West (18.5 percent) were both above the national average (Armas, 2000). Those who did move within the NER didn't move very far. Two thirds of home buyers in the NER moved ten miles or less.

In terms of the NPS in the NER, this lack of mobility may have several implications. First, those who visit NER sites from the region may be more likely to be making a repeat visitation, thus knowing more about the site. It may also deter some visitation since more potential visitors will have "been there, done that." Third, it could mean a greater portion of visitation will come from "non-locals," since longtime residents may lose interest. Locals who continue to use such sites may become more highly specialized in their onsite behaviors and there may also be more potential for education about the site to longtime visitors.



## **Time Use and Leisure Behavior**

What changes will take place in the ways in which people use time, the sequencing of daily activity and activity across the life cycle, and demographic correlates of time use? What are the affective aspects of time, such as feeling rushed?

**Proposition:** While Americans average between thirty and forty hours per week of free time (more than they think), amount of free time as such is not a critical issue in visitation to NPS sites in the NER. Rather, the distribution of such time and the synchronization of household schedules are more critical.

**Proposition:** The distribution of free time is such that, for households where people are employed full time, free time is dysfunctionally distributed. Most free time comes on weekdays in small chunks of an hour here and there. Flextime work schedules and more annual leave days will increase, providing more opportunities for larger blocks of free time.

**Proposition:** Those in the NE region, as elsewhere, are entering an era of mass customization of time. When people do various activities will become more diverse, in terms of not only daily, weekly, monthly and yearly time use patterns, but also across the life course.

**Salient Issue:** The amount of free time devoted to various forms of activity will continue to be volatile, with the potential for sudden swings in time devoted to activity such as visitation at NPS sites.

**Proposition:** The total amount of free time in the US is likely to increase in the next decade.

**Proposition:** Rushing and feeling rushed will continue to shape daily behaviors for much of the population, although it will begin to subside.

**Proposition:** While Americans average between thirty and forty hours per week of free time (more than they think), amount of free time as such is not a critical issue in visitation to NPS sites in the NER. Rather, the distribution of such time and the synchronization of household schedules is more critical.

Americans average between thirty and forty hours of free time per week, with only about one-fifth of the adult population averaging less than twenty hours of free time per week (Robinson and Godbey, 1997). While the common perception of the American public is one of a "time famine," numerous time diary studies using national samples find otherwise. Many factors of daily life, however, make this free time more difficult to "use" for visitation to NPS sites. As analyzed below, most free time comes in small chunks. The increase in two (or three) workers in households and the more highly scheduled nature of teenage life means that finding common time periods for visitation among household members or friends is more difficult. Almost no one visits NPS sites

alone.

**Proposition: The distribution of free time is such that, for households where people are employed full time, free time is dysfunctionally distributed. Most free time comes on weekdays in small chunks of an hour here and there. Flextime work schedules and annual leave days, however, will increase, providing more opportunities for larger blocks of free time.**

The distribution of free time across the week and the year is a more important variable than amount of free time per household in predicting outdoor recreation behaviors which involve travel. While, contrary to popular belief, the amount of free time has been increasing, particularly among those age 55 and over, on average about 25 of the roughly 40 hours of free time per week which adult Americans average come on weekdays rather than weekends and they come in small chunks of a hour here and there. Such small chunks of free time are ideal for television viewing but not for most forms of leisure which involve travel outside the home.

The notion of weekdays being primarily about work and weekends being about leisure is simply not true for most households. This distribution pattern contributes to the tendency toward short NPS visits by time-conscious visitors. Numerous NPS staff commented in an informal survey of NPS staff the authors conducted that they observed an increasing tendency for visitors to their site to be more rushed now than in the past and to spend less time onsite.

There is every evidence that flextime, more employee control over their scheduling of paid work, is a high or highest priority in terms of desired workplace changes (Richie, 2000). This issue is distinct from working nontraditional hours. Many employees who have no control over their work schedules already work nontraditional hours. The majority of employees in the labor force no longer work eight to five or nine to five schedules during weekdays. Most, however, still have little control over their schedule. Increased flextime, to the extent it is adopted, will give employees options in terms of customizing schedules and such customization may result in the ability to have larger blocks of time for outdoor recreation and other more time-intensive forms of leisure.

There is also evidence that annual leave days may increase, although somewhat dependent on economic conditions. While U.S. workers currently take an average of 10.2 annual leave days per year, it is estimated that the number of days they take will increase to 30 during the next thirty years (Kentworth, 1998). Such days may increase slightly faster for NER workers, who have slightly higher income and are slightly more likely to be unionized than other regions of the country.

Flextime and annual days, part of the “mass customization of life” which is taking place, may well mean that visitation patterns to NPS sites become even more diverse in terms of time of visit, length of visit, and the extent of feeling rushed onsite.

It should also be noted that currently the U.S. has no policy which mandates vacation time for employees. Unlike most other modern nations, which specify vacation periods by law, the longest mandated "vacation" periods in the U.S. are the three day long weekends for government employees created by rearranging a few holidays, such as Washington and Lincoln's Birthday. Even China now has three seven day vacation periods mandated by law. Should the U.S. change and establish some mandated vacation, either under the Fair Labor Standards Act or otherwise, the consequences for the NPS in the NER, particularly sites which usually involve overnight stay, would be huge. There would seem to currently be considerable support among workers for such an idea and a movement in California recently sought to bring a mandated vacation period to a state level referendum.

**Proposition: People are moving from "specialists" to "generalists" in terms of time use and females and males are generally becoming more similar in use of time. For the NPS in the NER, this may mean more visitation at historic and cultural sites from "non-traditional" visitors.**

There is considerable evidence that our population is moving from specialist roles in terms of time use to generalist roles in terms of time use. More specifically, differences between males and females, young and old and upper class and other classes are diminishing (van den Broek, 1998). There is, for example, more male participation in food preparation, more attendance at concerts by middle and lower-middle class people and comparatively more participation in sport and exercise activity by older people. The number of roles individuals perform appears to be increasing and, as that happens, the range of activities a given individual is likely to undertake increases. For the NPS in the NER, this furthers the contention that those who visit a given site will become more diverse in their behavior.

**Table 10. Ratio of Men's to Women's Time on Various Activities Across Time**

	1965	1975	1985	1995	1995-1965 Toward Gender Heterogeneity
Contracted Time					
Work	2.50	2.10	1.70	1.40	More
Commute	2.60	2.30	1.70	1.45	More
Committed Time					
Housework	0.18	0.31	0.50	0.56	More
Child care	0.27	0.31	0.29	0.32	Same
Shopping	0.73	0.65	0.67	0.61	Less
Personal Time					
Sleep	0.98	0.96	0.99	0.97	Same
Meals	1.21	1.18	1.08	1.05	More
Groom	0.78	0.88	0.87	0.85	More
Free Time					
Education	2.70	1.50	1.30	1.39	More
Religion	0.67	0.63	0.57	0.62	Same
Organizations	0.79	0.66	0.75	1.04	More
Events	1.50	1.00	1.00	1.16	More
Visiting	0.82	0.96	1.06	0.97	More
Sports	2.60	2.90	1.90	1.70	More
Hobbies	0.58	0.57	0.85	1.11	More
Communication	0.56	0.78	0.78	0.78	More
TV	1.28	1.12	1.09	1.11	More
Read	1.24	0.91	0.90	0.95	More
Stereo	1.45	1.19	1.66	1.76	Less
Total Free	1.04	1.01	1.03	1.09	Same
Travel	1.36	1.27	1.13	1.08	More

**Proposition:** Those in the NE region, as elsewhere, are entering an era of mass customization of time, not only when people do various activities will become more diverse, in terms of both daily, weekly, monthly and yearly time use patterns, but also across the life course. How time is used, how the day, week, month, year and life unfold will become much more decided on an individual basis.

The old industrial world has almost disappeared. It was built on manufacturing, mass production, mass media, common time schedules and uses of time and common notions of what was good and real. Bells and buzzers announced the next phase of the day, a practice begun by monks in monasteries many centuries before. Beneath that mass organization were a few divisions based on one's gender, race, age or income. There were certain things one did or didn't do if they were a housewife, or a welder, or 68 years old or a young Black woman.

In a mass society, it should be noted that there have been few systematic differences among various regions of the country or even between rural and urban populations. "Differences (in time use by region) are minimal, and the differences that are found seem mainly a function of education or age differences among people of the various regions" (Robinson and Godbey, 1997, p. 194-5). In terms of rural-urban differences, rural people engage somewhat more in religious activities, organizational activities and sports/exercise, but they read somewhat less. Rural residents spend less time at work and commuting to work. By and large, however, such differences are minimal compared to the public perception of the slow South or the work-obsessed New Englander. (Robinson and Godbey, 1997).

In the emerging world, as described elsewhere, diversity will increase in most areas of life, sometimes dramatically, producing more variation in behavior, sequencing of behavior, pace, meaning and satisfaction with what is done.

For the NPS in the NER, this will mean an increasing preference among visitors to visit during all hours of the day and night and at all times of the year. It will also mean that such visits will vary more in terms of length of stay. NPS sites in the NER may more closely resemble a supermarket in terms of hours of operation. This will produce problems of staff scheduling, visitor safety, and decisions as to when interpretive and other onsite events should be scheduled.

**Salient Issue:** The amount of free time devoted to various forms of activity will continue to be volatile, with the potential for sudden swings in time devoted to activities such as visitation at NPS sites.

As the Table 11 shows, the amount and use of free time between 1965 and 1995 changed substantially. With a 7.5 hour per week increase in amount of free time and the time devoted to "recreation," an omnibus category which would encompass most of the time spent in activities such as NPS site visits is up four hours per week. There is no reason to assume this volatility will decline. This suggests that visitation to NPS sites could decline or increase rapidly within a single decade.

**Table 11. Summary of Trends in Free Time Use per Week by Gender: 1965-1995**

	<b>1965-85</b>	<b>1985-95</b>	<b>1965-95</b>
<b>MEN</b>			
WORK (Employed only)	Down 7 hrs.	Up 1.5 hr.	Down 5 hrs.
WORK (All men)	Down 9.5 hrs	Same	Down 9.5 hrs
Housework	Up 4.5 hrs.	Same	Up 4.5 hrs.
Child care	Same	Same	Same
Shopping	Same	Same	Same
FAMILY CARE	Up 4.5 hrs	Same	Up 4.5 hrs
Sleep	Up 1 hr	Down 1 hr	Same
Eat	Down 1 hr	Down 1 hr	Down 2 hrs
Groom	Up 1.5 hr	Down 2 hrs	Down .5 hr
PERSONAL CARE	Up 1.5 hrs	Down 4 hrs	Down 2.5 hrs
TV	Up 4 hrs	Up 2 hrs	Up 6 hrs
Read/Listen	Down .5 hr	Down .5 hr	Down 1 hr
Social capital	Down 1.5 hrs	Same	Down 1.5 hr
Recreation	Up 2 hr	Up 2 hrs	Up 4 hrs
TOTAL FREE TIME	Up 4 hrs	Up 3.5 hrs	Up 7.5 hrs
<b>WOMEN</b>			
WORK (Emp. only)	Down 6 hrs	Up 5.5 hrs	Down .5 hrs
WORK (All women)	Up 3 hrs	Up 3 hrs	Up 6 hrs
Housework	Down 9 hrs	Down 2 hrs	Down 11 hrs
Child care	Down 1.5 hrs	Same	Down 1.5 hrs
Shopping	Same	Same	Same
TOTAL FAMILY	Down 12.5 hrs	Down 2 hrs	Down 12.5 hrs
Sleep	Up 1 hr	Up 1 hr	Up 2 hrs
Eat	Same	Down 1 hr	Down 1 hr
Groom	Same	Down 2 hrs	Down 2 hrs
TOTAL PERSONAL	Up 1 hr	Down 2 hrs	Down 1 hr
TV	Up 5 hrs	Up 1.5 hrs	Up 6.5 hrs
Read/Listen	Same	Down .5 hr	Down .5 hr
Social capital	Down 1.5 hr	Same	Down 1.5 hr
Recreation	Up 1.5 hrs	Up 1.5 hrs	Up 3 hrs
TOTAL FREE TIME	Up 5 hrs	Up 2.5 hr	Up 7.5 hrs

Source: Robinson, J. and G. Godbey. Time for Life—The Surprising Ways Americans Use Their Time, Revised Edition, 1997. p. 221.

**Proposition: The total amount of free time in the US is likely to increase in the next decade.**

While such predictions are extremely complex, there are numerous indications that free time will increase, in the aggregate, for the American public. Among these reasons are the likelihood of continuing demographic trends which are associated with more free time, including: later entry into the labor force, later marriage and a higher portion of the population which remains single, fewer children per couple, earlier retirement or shifts in later life from full-time to part-time employment and a greater preference for free time. Thus, while NPS visitation is more dependent on factors other than aggregate amount of free time in society, the temporal potential for significantly greater visitation is increasing.

**Proposition: Rushing and feeling rushed will continue to shape daily behaviors for much of the population, although it will begin to subside.**

Americans feel rushed. More than one-third report “always” feeling rushed to do the things they perceive as necessary. In effect, a “time famine” exists—the feeling that one needs more time than one has (Robinson and Godbey, 1999). The response to the time famine has been “time deepening” behavior. Time deepening assumes that, under pressure of expanded interests and compulsion, people are capable of higher rates of “doing.” Rather than thinking of human behavior in “either-or” terms, that is, a person either does one activity or another, some people develop the capability of doing both activity A and activity B. Time deepening occurs in four ways.

- Attempting to speed up a given activity. Bringing the relief pitcher in from the bull pen in a golf cart, visiting a national park without getting out of your car, telling a date your life story in under two minutes.
- Substituting a leisure activity which can be done more quickly for one which takes longer. Phoning for home-delivered fast food instead of cooking it yourself. Substituting the game of racquetball or squash for tennis, since tennis takes longer.
- Doing more than one activity at once. Watching television while reading the newspaper and eating dinner. Eating, drinking, doing your income tax and watching a movie while traveling in an airplane.
- Undertaking a leisure activity with more precise regard to time, perhaps planning an evening with friends of cocktails, dinner and attending the theater with only a five minute tolerance in the schedule.

Time deepening is more likely to occur among upwardly mobile Americans who are middle or upper class. While it may have some advantage in terms of accomplishment, it has many disadvantages. First, it produces great stress. It additionally means that, during leisure, many Americans never experience anything fully; never living in the moment. They may also avoid leisure activities which require a long time to learn the necessary skills (Robinson and Godbey, 1998).

There is evidence, however, that these high stress levels are declining. The 1998 release of data from the 1995 National Institute of Health survey, showed that, not only was the proportion (48%) of American adults saying they had experienced substantial stress in the previous two weeks lower than that reported in 1993 (56%), but also lower than the 50% level reported in the first 1985 survey.

The eight percentage point decline in feelings of stress was not concentrated in certain groups like the elderly, college graduates, or the more affluent (Robinson and Godbey, 1999). Virtually all groups in the survey registered that decline and at about the same level, both the elderly and young adults, etc. Interestingly, women continued to report greater stress than men, but that gap also declined in the 1995 data. Moreover, parallel declines were found in the two other stress questions in the NHIS, one dealing with stress felt in the last year and the other with the effects of stress on one's health, so that it was not an isolated item.

The survey of NER staff revealed a common perception concerning changes in visitors over the last two decades: visitation expectations were higher, they stayed onsite for a shorter length of time than previously, they sometimes combined activities while onsite (such as cell phone use) and they rushed more while at the site. All of these characteristics correspond to the notion of "time deepening" as described above.

Onsite behavior of rushed people may be managed by attempting to accommodate the feeling of being rushed by shortening the length of programs, events and waiting time, or by slowing down the visitor by purposefully seeking to provide a more tranquil, less rushed environment. Most market researchers who write about time stress suggest accommodating the visitors' rushed feelings. As Machlis (2000) suggested, however, it may be possible to shorten the length of an activity such as an interpretive nature walk but to do so by covering less of the trail or territory. Thus, the level of interpretation might be the same although the activity takes a shorter period of time.



## Outdoor Recreation

What changes are predicted to take place in outdoor recreation behavior which takes place both on and off public lands?

**Proposition: Participation in outdoor recreation will continue to increase but at a lower rate than in the 1990s, although such a prediction is subject to change based on climate change and weather change.**

**Sub-proposition: While participation in outdoor recreation activities will increase, trips taken to participate in such activities will not increase as fast, resulting in increasing demand for multipurpose recreation sites and more multiple onsite activity by a given visitor group.**

**Proposition: The amount of outdoor recreation taking place within small geographic regions will vary dramatically.**

**Proposition: Watching plant and animal life as opposed to taking or killing it will become more prevalent, although many conflicts will result.**

**Proposition: Participation in outdoor recreation will likely continue to increase but at a lower rate than in the 1990s, although such a prediction is subject to change based on climate change and weather change.**

Using a time period from 1990 to 2050, Murdock's (1997) analysis of changes in outdoor recreation behavior produced the following generalizations. There will be slower rates of growth in outdoor recreation activities than in population growth, due to the generally lower income levels of ethnic minorities. Activities whose growth is dependent upon Anglo involvement and the involvement of young people, such as backpacking, tennis and golf will grow more slowly. There will be an increase in all outdoor recreation activities studied but that increased participation will be most pronounced among ethnic minorities—by 2050 minority populations would account for a majority of participants in seven of sixteen activities and at least 40% in all but three activities. For all activities surveyed, the largest percentage increases in number of participants are among those age 50 and over (Murdock, 1997).

NER-specific projections on outdoor recreation activity participation, annual days, of participation and annual trips are currently unavailable. Activity projections for the NER states can, however, be extrapolated from regional projections for the North (Bowker, English, & Cordell, 1999), obtained from the National Survey on Recreation and the Environment (NSRE) (Cordell, McDonald, Lewis, Miles, Martin, & Bason, 1996). A detailed list of activity projections from the NSRE for the North in comparison with National figures are presented the Appendices in Tables 11a through 11x (Bowker, English, & Cordell, 1999). NSRE estimates for the total number of annual days an individual will spend in a given outdoor recreation activity (days), total number of annual trips an individual will take for the primary reason of participating in a selected activity

(trips), and the total number of participants in an activity per region (participation) are provided in indexed form relative to the base year 1995. These indices represent changes, including growth and decline, from the 1995 base year totals for millions of participants, millions of days, and millions of trips at 10-year intervals from the year 2000 to the year 2050 (Bowker, English, & Cordell, 1999).

**Sub-proposition: While participation in outdoor recreation activities will increase, trips taken to participate in such activities will not increase as fast, resulting in increasing demand for multipurpose recreation sites and more multiple onsite activity by a given visitor group.**

On a national level, growth in the total participation in outdoor recreation and the total number of annual days an individual will spend in a given outdoor recreation activity (days or activity-days) for the North will be fairly consistent with other regional projections - faster than population growth. The total number of annual trips an individual will take for the primary reason of participating in a selected activity (trips or activity-trips) will be the fewest in the North (7 out of 22). The Pacific Coast has the highest figure with 13 out of 22 trips. This can be interpreted as follows: from a total of 22 annual trips undertaken by an individual in the North for outdoor recreation purposes, only seven of these trips will be undertaken for the sole purpose of engaging in one, specific recreational activity such as fishing, hiking, canoeing, snowmobiling, etc. The growth in days, trips and participation in outdoor recreation for the NER will be slower compared to the rest of the North owing to the slower rate of population growth in the NER in comparison with the rest of the northern states. This growth trend, reflecting more days being spent on a given outdoor activity with fewer trips for any specific activity, indicates that participation in outdoor recreation activities in the Northeast increasingly will be planned with the intent of participation in multiple outdoor recreation activities. In other words, outdoor recreational activities increasingly will be part of multipurpose recreation trips (Bowker, English, & Cordell, 1999). Outdoor recreation trips will more likely be undertaken with the objective of participating in a multitude of recreational activities during a single trip, as opposed to engaging in a single activity during a single trip. Concomitantly, the NER will experience increasing pressure from outdoor recreationists demanding sites that provide a diverse resource base for multipurpose recreational trips, involving water- and land-based outdoor recreation activities. This may also somewhat minimize friction between various participant groups onsite, since they are more likely to be doing activities which “compete” with each other.

Appendix 2a-x examines projected changes in participation in specific outdoor recreation activities. None of these projections consider climate change. From these projections, it appears that annual days of participation in a wide range of outdoor recreation activities will increase faster than the number of trips undertaken for the primary purpose of participating in such activities. Most of the previous projections, however, are made less certain by the multiple influences of global warming.

**Proposition: The amount of outdoor recreation taking place within small geographic regions will vary dramatically.**

Projections based on the National Survey on Recreation and the Environment (NSRE) (Bowker, English, & Cordell, 1999) suggest that, by 2020, the NER states will exhibit a wide range of outdoor recreation participation levels, varying both by state and county. It is worth noting that in their projections, Bowker, English, & Cordell (1999) have computed outdoor recreation participation as a summated index of land, water, and snow activities participation per square mile per annum. Additionally, the 2020 projections of outdoor recreation participation per square mile was derived by multiplying the 1995 level by projected population growth rate through 2020.

Overall, among the NER states, Howard County, MD will experience the highest level of growth in outdoor recreation participation per square mile with a 62% growth rate over a 25-year period (1995 to 2020). By the year 2020, Howard County will have approximately 3109 outdoor recreation participants per square mile per annum. Stafford County, VA, Cumberland County, ME, and Rockingham County, NH will also experience high growth in outdoor recreation participation levels between 1995 and 2020, with 56%, 43%, and 42% growth, respectively in outdoor recreation participation per square mile. On the other hand, Portsmouth County, VA will experience decline (-21%) in outdoor recreation participation per square mile, along with McDowell County, WV (-16%) and Cameron County, PA (-11%). It is increasingly evident from these projected figures (see Table 12, Bowker, English, & Cordell, 1999) that outdoor recreation participation levels in the NER states will be heterogeneous and non-generalizable. That is, small sub-regions of a state will have a population whose characteristics are dramatically different from other sub-regions with regard to age structure, ethnicity, income, household composition, etc. Most importantly, in addition to population growth rates, future outdoor recreation participation levels in the NER states and their respective counties will be highly dependent upon a variety of factors such as the racial composition and income levels of their residents, population density, and the general proximity and availability of resources for participating in outdoor recreation activities, as well as weather (Bowker, English, & Cordell, 1999).

**Table 12. Projection of Outdoor Recreation Participation per Square Mile (ORP per sq. mile) for 2020**

[Outdoor Recreation Participation = Sum of Land, Water, and Snow Activities Participation]

State	Greatest ORP Growth by County 1995-2020		ORP per sq. mile for 2020	Lowest ORP Growth by County 1995-2020		ORP per.sq mile. for 2020
Connecticut	Middlesex	7%	930.07	Hartford	1%	2433.34
	New London	7%	875.84	New Haven	1%	2799.67
	Tolland	7%	767.88			
Delaware	Kent	26%	533.65	New Castle	14%	2629.76
Maine	Cumberland	43%	939.69	Aroostook	-8%	28.39
Maryland	Howard	62%	3108.52	Allegany	-9%	315.44
Massachusetts	Plymouth	18%	1767.26	Berkshire	-4%	292.39
New Hampshire	Rockingham	42%	1182.09	Coos	0%	40.06
New Jersey	Atlantic	26%	1069.23	Hudson	-5%	22170.92
	Burlington	26%	1342.31			
New York	Oswego	21%	356.74	Kings	-6%	50300.20
	Saratoga	21%	634.46			
Pennsylvania	Cumberland	36%	1083.02	Cameron	-11%	25.87
Rhode Island	Washington	35%	1037.86	Newport	-4%	1620.45
Vermont	Lamoille	25%	127.43	Bennington	1%	114.67
Virginia	Stafford	56%	861.52	Portsmouth	-21%	3613.82
West Virginia	Jefferson	32%	522.12	McDowell	-16%	100.22

Source: Bowker, English, & Cordell, 1999

**Proposition: Watching plant and animal life as opposed to taking or killing it will become more prevalent, although many conflicts will result.**

The U.S. outdoor recreation participant is increasingly likely to take pleasure from observing, identifying, photographing, and understanding plant and animal life (<http://www.ipcc.ch/>). In Australia, it is estimated that birdwatching is already the third most popular outdoor recreation activity, behind angling and golf (Youth, 2000). Much the same is occurring in the U.S. As huge extinctions of animal life draw closer, many species are worth more alive than dead. In effect, the value of observing animals and plantlike may have increased in relation to their scarcity. Having “conquered nature,” many outdoor recreation participants now want to better understand the nature of the world which has been conquered (Youth, 2000).

The popularity of nature photography, birdwatching, plant and animal identification, and other forms of watching nature will likely lead to increasingly divisive desires of visitors to NPS sites which contain significant flora and fauna specimens. Some visitors will want the site to be kept minimally disturbed by human presence to maximize the chances for viewing plant and animal life while others will want to undertake activities that minimize the chances of successful plant and animal observation.

## **Tourism**

**Proposition:** The U.S. domestic tourism market, both within the Northeast Region and outside the region, will be of increasing importance to NPS site visits in the NER. Distance will continue to act as a constraint to long haul travel.

**Proposition:** Challenges to tourism interweaving economic, social and environmental change will crystallize public attention in the next twenty years. Growth in tourism will be redefined, partly from environmental necessity and partly from changing social norms.

**Sub-proposition:** Advances integrating multiple levels of information technology will play a critical role in allowing tourism managers sophistication in managing natural crises, risks, and variations.

**Proposition:** Increasing population densities in the NER will significantly affect tourism, making it more urban in character with heightened negative environmental impacts.

**Salient Issue:** Tourism, which depends on geopolitical stability, will be increasingly amenable to terrorist acts. Image and damage control will be more critical.

**Salient Issue:** Crude oil prices have a direct link to tourism activity.

**Proposition:** National Park management strategies for all sites considered “global” will increasingly reflect not only national, but also international opinion on matters of protection.

**Proposition:** Management of local tourism sites in the NER will reflect different strategies, goals, and stakeholders to “global” sites.

**Salient Issue:** Since 1980, the annual value of corporate mergers has increased 100 fold. The tourism industry is being reshaped and redefined by this remarkable concentration of power.

**Proposition:** Individual states in the NER will vary considerably in their commitment to, and endorsement of, tourism over the next twenty years.

**Proposition:** Shifts in demography will affect tourism patterns and behavior in the NER over the next twenty years.

**Salient Issue:** Demographic projections for the NER suggest not only an increase in the absolute number of tourists, but also a significant shift toward a more diverse tourism base with which the NPS has had little experience in dealing.

**Salient Issue:** The aging of the NER region will drive expectations for, and marketing of, tourism participation.

**Sub-proposition:** Targeted tourist markets will emerge for many NPS sites in the NER.

**Sub-proposition:** NPS in the NER will develop increased awareness of, and focus on, previously underrepresented tourism groups in the NER.

**Proposition:** The use of time will play a fundamental role in tourism behavior. Seasonal tourism cycles will soften and visitation patterns customize.

**Salient Issue:** Time will be structured to optimize a variety of travel and tourism needs.

**Proposition:** Consumer choice and satisfaction will continue to affect tourism behavior. Customized experiences will increase.

**Salient Issue:** Tourism will increasingly reflect demand for “experience” and personal engagement.

**Salient Issue:** Shopping and entertainment are now fundamental categories in travel and tourism.

**Salient Issue:** Similar to other tourism sites, individual NPS sites in the NER may follow cycles of evolution.

“The world in the year 2020 will be characterized by penetration of technology into all aspects of life. It will become possible to live one’s life without exposure to other people with automated service the norm and full access to, and exchange of, information on everything possible from one’s own home.... In consequence, people will crave the human touch; and tourism will be the principle means through which they seek to achieve this.” (WTO, 1999, p. 4).

Tourism is arguably one of the largest multinational activities (Figures 6, 7 & 8). In support of the above statement, the World Tourism Organization forecasts that by the year 2020 there will be 1.6 billion trips, with a value of over \$2 trillion annually (World Tourism Organization, 1999, p. 4). Fraught with definitional and measurement inconsistencies in both the private and public sector, this complex phenomenon is estimated to account for an astonishing 12% of global economic activity. The social, cultural and environmental implications of these statistics are staggering. There can be no denying tourism’s potency as a force for social change and cultural development (Dann, 1996; Kelly, 1999).

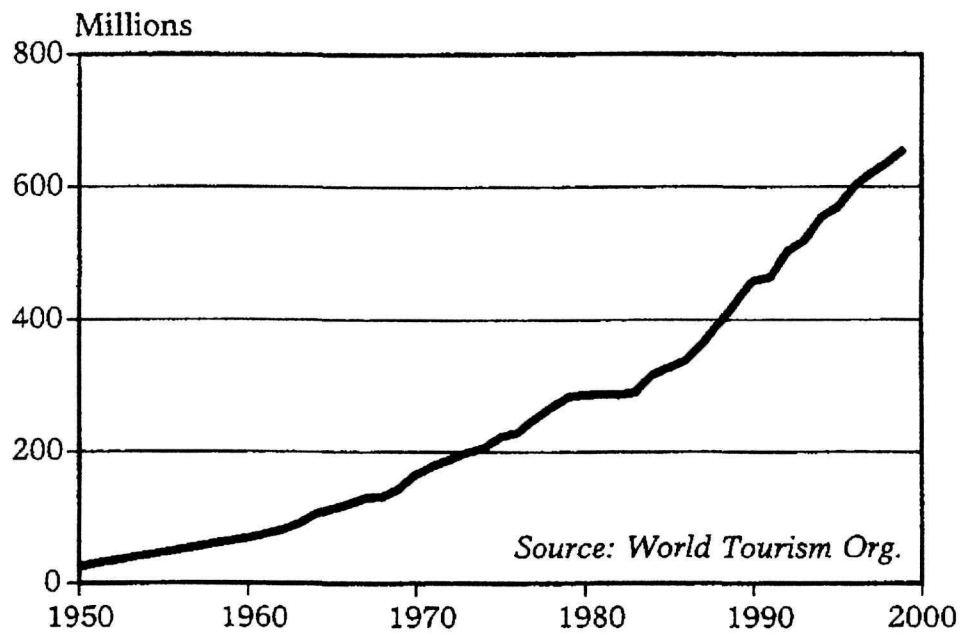
The reality of tourism is that, like all other forms of economic activity, it has positive and negative impacts. Although National Parks and tourism in the Northeast region have long been inter-twined, only recently has there been recognition of the complex, far reaching significance of this inter-play. Tourism to sites in the NER is embedded in broader patterns and processes of society. In short, it is not a prescriptive, apolitical, asocial phenomenon. Understanding -- the basis for making informed decisions -- requires integrative perspectives that accept multiple models of exploration and knowing. The issue is how to orchestrate the multiple tensions of all tourism players in National Parks in the Northeast region to create a continuing symphony rather than a persistent cacophony. This is clearly a difficult and complex challenge in times of globalization and expanding economic and market forces; a task that requires cooperation, alliances and flexible, adaptive approaches to defining tourism strategies, methods and plans.

“Chains of interdependence within and between nations have lengthened and multiplied...the current balance between culture, technology and nature is such that the pursuit of high-risk development strategies in one society has implications for all societies” (Rojek, 1995, p. 153).

Recognizing that tourism is a voluntary, seasonal, infrequent activity, involving expenditure of time, money and effort, this section seeks to *selectively* highlight how tourism processes weave into the lifestyles, patterns and investments predicted for the NER over the next 20 years.



**Figure 6. Worldwide International Tourist Arrivals: 1950–1999**



**Figure 7. Worldwide International Tourism Receipts: 1950-1999**

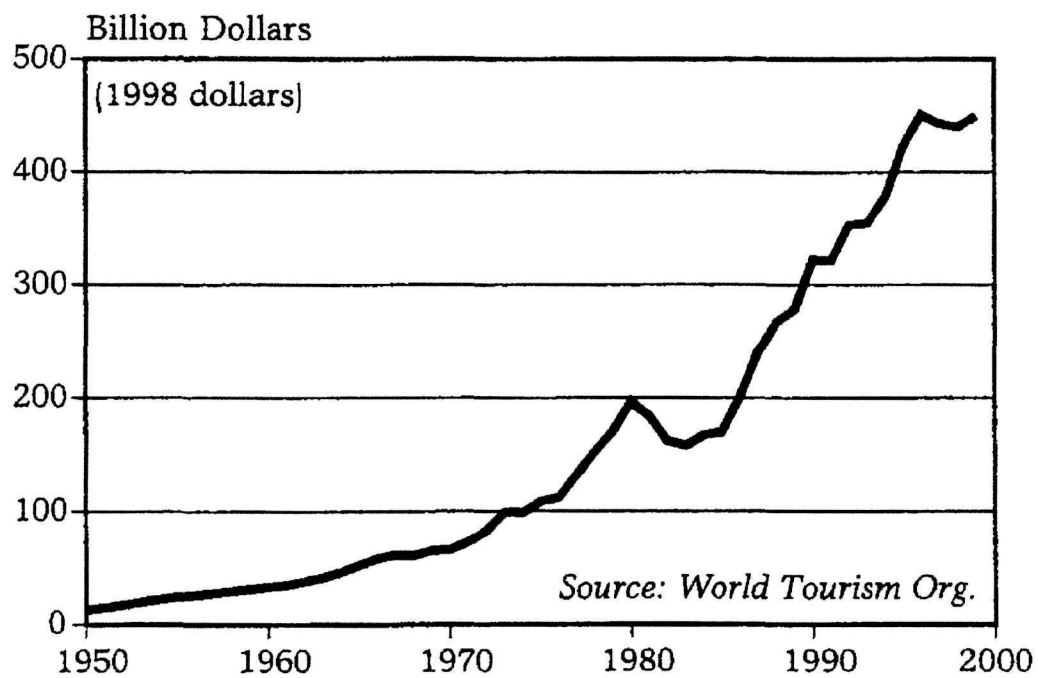
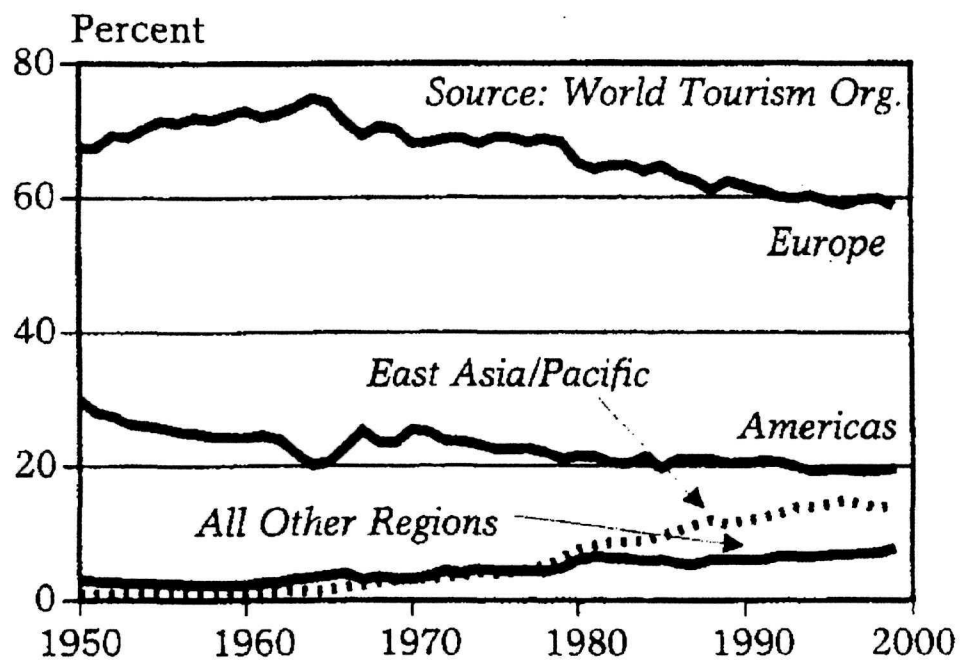


Figure 8. Worldwide Share of International Tourist Arrivals by Region: 1950-1999



**Proposition: The U.S. domestic tourism market both within and outside the Northeastern U.S. will be of increasing importance to NPS site visits in the NER. Distance will continue to act as a constraint to long haul travel.**

### **Contextual Background**

- Globally, international tourist arrivals have increased twenty-seven fold since 1950 to an estimated 657 million in 1999 and are projected to double by 2020 (Table 13).
- In 1999 tourism related spending accounted for \$4.5 trillion of global economic activity - 12% of Gross World product (WTTC, 1999).
- U.S. GDP from Travel and Tourism in 2000 was \$1,106,000 billion. Japanese GDP, the next highest player was \$442,971 billion (WTTC, 1999).
- Tourism to North America will increase over the next twenty years with a projected “modest” annual growth rate of 3.5%, a rate five times faster than U.S. population growth (WTO, 1999, p. 14).
- Only 15% of Americans have passports. 95% of U.S. Americans who travel, travel *within* the United States. The U.S. domestic market is therefore of vital importance to tourism in the NER (WTO, 1999 p. 67).
- Although small in number relative to domestic tourism (ratio of one international for every four domestic travelers) Canada, Mexico and Europe are vital, relatively stable players in the U.S. tourism market (Table 14).
- Geographic centrality, and its pivotal role in tourism in the NER, is critical. For example:
  - Of the 15.5 million leisure air travelers to the U.S. in 1999, over 20% entered the country through the NER. New York alone accounted for 13%. Over 30% visited New England and Middle Atlantic States. 25% visited national parks.

**Table 13. Forecast of International Tourist Arrivals, 1995-2020 and Forecast of Inbound Tourism by (World) Regions, 1995-2020**

RECEIVING REGIONS	International Tourist Arrivals (Millions)			
	1995	2000	2010	2020
Europe	336	393	527	717
East Asia/Pacific	81	93	195	397
Americas	110	130	190	282
Africa	20	27	47	77
Middle East	14	18	36	69
South Asia	4	6	11	19
<b>TOTAL</b>	<b>565</b>	<b>668*</b>	<b>1,006</b>	<b>1,561</b>
* Does not aggregate to total owing to rounding.				
RECEIVING REGIONS	Average Annual Growth Rates (%)			
	1995- 2000	2000- 2010	2010- 2020	1995- 2020
Europe	3.2	3.0	3.1	3.1
East Asia/Pacific	2.7	7.7	7.4	6.5
Americas	3.4	3.9	4.0	3.8
Africa	6.1	5.6	5.1	5.5
Middle East	6.2	7.0	6.7	6.7
South Asia	5.7	6.7	5.8	6.2
<b>TOTAL</b>	<b>3.4</b>	<b>4.2</b>	<b>4.5</b>	<b>4.1</b>

Source: World Tourism Organization (WTO)

**Table 14. Top 30 Markets for International Visitor Arrivals to the United States – 1999 and 1998**

		1999 Total	1998 Total	98-99 % Change
	TOTAL ALL COUNTRIES	48,491,187	46,395,587	4.50%
	TOTAL OVERSEAS	24,466,187	23,697,587	3.20%
	Country of Residence			
1	Canada	14,110,000	13,422,000	5.10%
	Canada Air	4,963,000	4,595,000	8.00%
2	Mexico	9,915,000	9,276,000	6.90%
	Mexico Air	1,489,170	1,420,832	4.80%
3	JAPAN	4,826,077	4,885,369	-1.20%
4	UNITED KINGDOM	4,252,160	3,974,976	7.00%
5	GERMANY	1,984,627	1,901,938	4.30%
6	FRANCE	1,059,014	1,013,222	4.50%
7	BRAZIL	665,013	909,477	-26.90%
8	ITALY	626,217	610,796	2.50%
9	VENEZUELA	552,225	540,685	2.10%
10	NETHERLANDS	526,819	490,198	7.50%
11	ARGENTINA	501,660	523,909	-4.20%
12	SOUTH KOREA	498,643	364,061	37.00%
13	AUSTRALIA	483,157	460,705	4.90%
14	TAIWAN	453,299	386,413	17.30%
15	COLOMBIA	415,724	367,968	13.00%
16	SWITZERLAND	405,626	410,900	-1.30%
17	SPAIN	362,848	326,339	11.20%
18	SWEDEN	314,258	300,925	4.40%
19	ISRAEL	283,306	269,752	5.00%
20	BAHAMAS	282,286	251,929	12.00%
21	BELGIUM	248,821	230,190	8.10%
22	IRELAND	246,394	232,391	6.00%
23	JAMAICA	233,547	217,730	7.30%
24	INDIA	228,072	210,975	8.10%
25	DOMINICAN REPUBLIC	200,817	195,287	2.80%
26	AUSTRIA	194,230	185,799	4.50%
27	HONG KONG	192,911	213,020	-9.40%
28	CHINA, PRC	191,175	208,930	-8.50%
29	CHILE	181,234	179,133	1.20%
30	GUATEMALA	163,095	163,468	-0.20%

Source: WTTC 2000 Country League tables.

- Canada and Britain have particularly strong ties with tourism to the U.S. In 1997, 79% of overnight trips taken by Canadians were to the U.S. with almost half of that percentage originating from the Province of Ontario. New York State received over 1.5 million visitors from Ontario (Table 15).
- Shopping is a primary driver of leisure activity (Table 16). In 1997, 89% of the overseas visitors (21,533,000) to the U.S. indicated they engaged in shopping as an activity. 45% visited national parks (Department of Commerce, 1997).
- In terms of tourism numbers, established economies are more reliable and predictable “Growth patterns of emerging markets in general are very dynamic and can be rather fickle” (WTO, 1999, p. 12).
- Emerging markets such as China, Philippines, and Brazil will play a small, but increasing, role in tourism to the U.S.
- Compared to other export-oriented industries, tourism has the advantage of not being subject to quotas or tariffs.

Although there are significant transportation advances affecting short haul travel experience, the ability of the human body to adapt to time changes from air travel experiences will be an increasingly important issue in long haul travel, due to aging populations.

In the U.S., tourism is the second largest employer, with well over 5 million workers (USTTA, 1998). This figure reflects a remarkable social and psychological transformation of the importance placed on leisure travel in the last five decades. Fifty years ago, travel was either a luxury undertaken only by elite members of society, or something to be feared, avoided and of limited short term benefit. Reflecting economic circumstances at that time, acquisition of material goods took precedence over travel (Plog, 2000, p. 17). In stark contrast, travel today is considered an inherent right, a psychological necessity and, because of perceived long term benefits, worthy of social, cultural and economic expense. Four primary factors have contributed to the transformation and growth of tourism in the U.S. since World War II:

- The U.S. has evolved into a market driven, consumer based affluent society and an annual vacation is a routine part of most lifestyles.
- Television has created universal images of the pleasure, freedom, status and allure of travel. It is a significant driver of taste and fashion and can transform a little known destination into an overnight spectacle.
- Automobiles and, to a lesser extent, jet airplanes have become the standard mode of transportation.
- Tourism infrastructure in the U.S. has flourished.

**Table 15. Top Tourist Destination States by Canadian Province of Origin (top) and Purpose of Trip (bottom).**

**VFR: Visiting Friends and Relatives.**

1998					
Ontario (000)		British Columbia (000)		Quebec (000)	
New York	1.537	Washington	1.320	New York	524
Florida	1.174	California	384	Vermont	409
Michigan	1.104	Nevada	262	Florida	310
Pennsylvania	421	Oregon	240	Maine	257
4 State Share	47%	4 State Share	75%	4 State Share	53%
Total	9.097	Total	2.930	Total	2.831

Source: TOURISM INDUSTRIES, International Trade Administration and Statistics Canada

July 1999

1998					
Business (000)		VFR (000)		Vacation (000)	
New York	349	New York	465	Florida	1 334
California	258	Michigan	403	New York	1 089
Florida	179	Washington	352	Washington	931
Total	2 972	Total	3 292	Total	10 522

Source: TOURISM INDUSTRIES, International Trade Administration and Statistics Canada

July 1999



Table 16. Top Shopping Markets by Percent of Total Travelers Who Shopped, 1997

**Definitions:**

**International Travelers:** Persons visiting the U.S. for leisure and/or business purposes whose residency is outside the U.S. In 1997, the U.S. hosted 47,754,000 international visitors.

**Overseas Travelers:** Persons whose residency is outside the U.S. and visited the U.S. for leisure and/or business purposes, excluding Mexicans and Canadians. In 1997, the United States hosted 24,194,000 Overseas visitors.

**Shoppers:** Overseas travelers who indicated that they engaged in shopping as an activity during their trip to the U.S. In 1997, this represented 21,533,000 or 89% of the overseas visitors to the U.S.

**American Culturalist Shoppers:** This is used to denote overseas travelers who engaged in both shopping and cultural and/or ethnic heritage tourism activities during their visit to the U.S. To qualify, the traveler had to have shopped and done one or more of the following activities:

- Visited a Cultural Heritage Site
- Visited an Ethnic Heritage Site
- Visited at least two of the following:
  - Art gallery/museum
  - Concert/play/musical
  - American Indian Community
  - Historical Place
  - National Park

In 1997, this represented 7,852,000 of the overseas visitors to the U.S. or one in three overseas visitors.

**Cultural Shoppers:** Travelers who engaged in both shopping and visiting a cultural heritage site. In 1997 this represented 4,477,000 or 19% of the overseas visitors to the U.S.

**Ethnic Shoppers:** Travelers who engaged in both shopping and visiting an ethnic heritage site. In 1997, this represented 1,190,000 or 5% of the overseas visitors to the U.S.

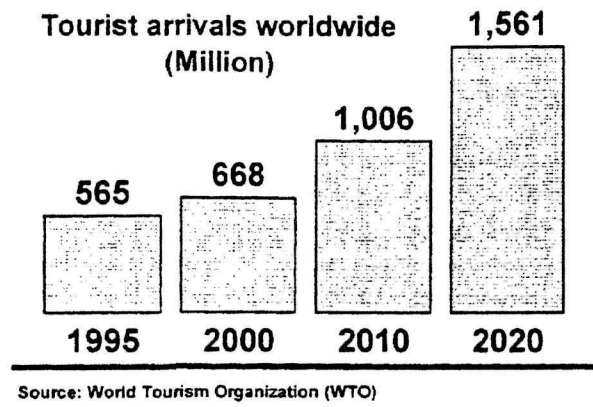
Yet, tourism, frequently understood and viewed *only* in economic terms, is also strongly dependent on environment (physical, social, and cultural). Therefore, it follows that tourism has a responsibility for -- and a need to invest in -- maintenance of that environment. If undertaken using sustainable principles, tourism can be a positive force for protection and conservation, and can provide phenomenal opportunities for education, awareness raising and conservation support. Consequently, the NPS sites in the NER, which are disproportionately small, located in urban areas and more highly historically and culturally themed, may be *the* most conducive to being effectively managed as tourism sites of any NPS region.

**Proposition: Challenges to tourism interweaving economic, social and environmental change will crystallize public attention in the next twenty years. Growth in tourism will be redefined, partly from environmental necessity and partly from changing social norms.**

Notoriously optimistic in outlook, the drives of the tourism industry are return on investment and future growth. The prevailing assumption of tourism is; a market economy is optimal and self-regulating. Established tourism *appears* to be resilient in the face of economic downturn. According to the WTO (1999), crises of confidence occur periodically, demand may fluctuate cyclically, but passage of time, and market mechanisms will prevail in a stable political situation. In short, for better or worse growth is the mechanism of choice in a capitalist society (Figure 9). Given this scenario, Poon (1993) argues that to be successful in the future, tourism destinations will have to embrace an emerging reality driven by a complex interplay of factors including:

- New consumer values and behavior – reflected in increased education, flexibility, and independence.
- New technology – including increased ability to deal with large volumes of information, individualization and diversity.
- New production practices – including vertical, horizontal and diagonal market linkages.
- Changing management techniques – greater emphasis on marketing to the individual.
- Changing frame conditions – including increased awareness of growth limits; increased tourist protection, and spread of both vacation time and the public school year.

**Figure 9. Forecast of International Tourist Arrivals: 1995-2020**



Population shifts stemming from demographic, social and cultural changes, new patterns of production and consumption, evolving social and political structures and changing forms and patterns of urbanism will require redefining parks and park use on an ongoing basis. Some National Park sites want more tourists, others want less; some NP sites play a central role in the economic health of regions, others have a smaller, secondary or even tertiary role. These roles, and the mix of elements that creates them, evolve and change in importance over time. Therefore, to be sustainable as tourism destinations, individual sites, and the NPS as a whole will constantly have to assess, adapt, adopt, and be accountable. Price (1996), for example, argues people believe that as consumers they have rights; as consumers they are always right; and that they want to enjoy what is “rightfully” theirs, namely the environment. “Erudite papers, reasoned argument, even National Parks and other protected areas can do little to check the onslaught of voracious consumers” (p. 227). He further argues that because of heavy investment in training, service industries are experts in managing consumers.

“Training in people-management and customer service has been developed to the highest and most effective levels and is common to every service industry – except the tourism industry, education and administrators: those upon whom the environmental future of the planet depends. The knowledge and skills are there. They just need to be applied” (p. 226).

Therefore, for sites in the NER, continued growth will mean embracing staff training as ongoing and multidimensional, with increased emphasis on continuous education and communication both within the park system itself, and with society at large. Skilled people management will be fundamental and ranger training will involve presentation skills, group dynamics, and non-confrontational management in addition to knowledge of sound environmental practices. Fluidity in roles and functions will be key. Achieving a balance among the various tourism components should be thought of as an ongoing, dynamic process that reflects the uniqueness and strengths of each park.

**Sub-proposition: Advances integrating multiple levels of information technology will play a critical role in allowing tourism managers sophistication in managing natural crises, risks, and variations.**

In the NER, improvements in climate forecasting already permit ski resort managers, for example, to plan snowmaking operations months to seasons in advance. Projections of climate change impacts in the NER over the next twenty years further suggest shifts in geographical location and length of ski season, thus affording the benefit of long-term planning for the industry. Additionally, because of increased pressure on infrastructure, issues of tourism safety will come to the forefront for parks in the NER. A level 4 hurricane hitting New York City, for example, would incur \$50 billion in damage (Miller, Sethi & Wolff, 2000). Integrative frameworks for understanding these types of risks and crises will mean the NPS must demonstrate readiness for unpredictable weather events and “surprises.” (<http://www.climatehotmap.org/>)

However, mature systems, such as the NPS, are not amenable to quick solutions to such problems, if only because of the complexity of underlying structural and behavioral relationships as well as skepticism associated with long-range projections. For example, because people think of climate change as a slow progression, they either ignore or underestimate its power as a driving mechanism for change. Nonetheless, significant environmental changes will occur with or without adaptive park policies. Policymaking needs to reflect this harsh reality by considering that adaptation may be preferable to compensation (Miller, Sethi & Wolff, 2000). No matter what the course of park policy, and there is no one perfect strategy, credible science should underlie every plan and decision. Establishing partnerships with scientists, government agencies, business, and community leaders and citizens to share information and technology, and debate the pros and cons of various approaches will foster the application of sound scientific and management practices.

**Salient Issue: Increasing population densities in the NER will significantly affect tourism, making it more urban in character with heightened negative environmental impacts.**

NER population projections indicate low population growth. Because there is no reference to geographical area, these statistics mask significant state and county complexities. The following is critical to understanding park use in the NER:

- National population density is 77 people per/square mile; areas in Nevada have 4/square mile; Kings County, New York has 32,000/square mile (1990).
- Counties showing the greatest increases in density do not correspond to states showing above average population growth. For example, New York, Pennsylvania, Connecticut and Rhode Island exhibit low population growth rates, but individual counties within these states show the greatest rate of density increase.
- Seven of ten states with the largest increase in population density are located in the NE megalopolis, including three in Boston, ten in New York, six in Philadelphia and one each in Providence, Hartford and New Haven.
- 67.9% of total national population growth from 1980 to 1990 came from 150 counties. The NE accounted for 35 of the 150.
- Contrary to popular belief, increased density may *augment*, rather than decrease, further density.
- Human and environmental health are directly and positively linked to population density (Fonseca and Wong, 2000).

The implications of these statistics for the NER are worrisome. Tourism is frequently a generator of, rather than a solution to, environmental and social problems. Impact studies often assume that tourism is a homogeneous activity displaying uniform effects. Rather, impacts are inconsistent over time and space and vary with type and intensity of use. Ultimately, tourism appeal depends on maintenance of both built and natural environments, and it is unfortunate that complex tourism patterns often intersect with fragile, dynamic environments. Because the NER is demographically heterogeneous,

unevenness in benefits and costs to park sites will become increasingly evident. Urban and sub-urban sites will be sorely challenged to meet demands resulting from population growth and an increasingly diverse user base. At some sites, for example, it may be necessary to adopt strict entrance controls requiring advance reservations for peak use periods. Sophisticated technology for predicting tourism “loads” will be used. There will be emphasis on techniques for diverting tourists from over used parks.

**Salient Issue: Tourism, which depends on geopolitical stability, will be increasingly amenable to terrorist acts. Image and damage control will be more critical.**

Violent protests, civil unrest, terrorism, and even perceived human rights abuses play a role in tourism behavior.

“Tourism may decline precipitously when political conditions appear unsettled. Tourists may simply choose alternative destinations. Unfortunately, many national leaders and planners either do not understand or will not accept that political serenity, not scenic or cultural attractions, constitute the first and central requirement of tourism” (Richter and Waugh, 1986 p. 231).

The role that political stability, image, and the perceptions of safety and risk play in tourism are underestimated. Paradoxically, although tourism safety may actually increase in the next twenty years, perceived safety may decline because of media attention and heightened awareness. The fact is, “most of the evidence on tourist motivations points to fear and insecurity as a major barrier to travel” (Buckley and Klemm, 1993 p. 19). Safety is, however, a double-edged sword. On the one hand, instability overseas can positively affect travel within the U.S. A study undertaken by TIAA on the impacts of the Gulf War on the U.S. travel industry showed that national park use *rose* during the war; partly because of a recession, and partly because of safety issues. On the other hand, political stability within the U.S. is critical to travel, as evidenced by the sharp drop in both overseas and national bookings to Miami following random shootings of tourists peppered throughout the 1990’s. From a marketing perspective, it is easier to maintain or enhance a positive image than to transform a negative one. Therefore, more should be made of the positive image of National parks and National Park sites.

**Salient Issue: Crude oil prices have a direct link to tourism activity.**

The shift to gas-guzzling sports utility vehicles in the U.S., and the doubling of global air travel in the last 12 years, have all contributed to driving up oil consumption from the lows of the 1970’s and early 80’s. With 4 percent of the world’s population, the U.S. consumes nearly one-fourth of the world’s oil, and is now importing over half its supply. In short, oil is a political commodity. Stability in both demand and supply sectors of the oil business is critical to tourism. Hoffman (1999) argues that since the 1970’s, tourism recessions in the U.S. are attributable to sharp spikes in oil prices. The main future concern, in his view, is sustained periods of high oil prices, or a global shift to an

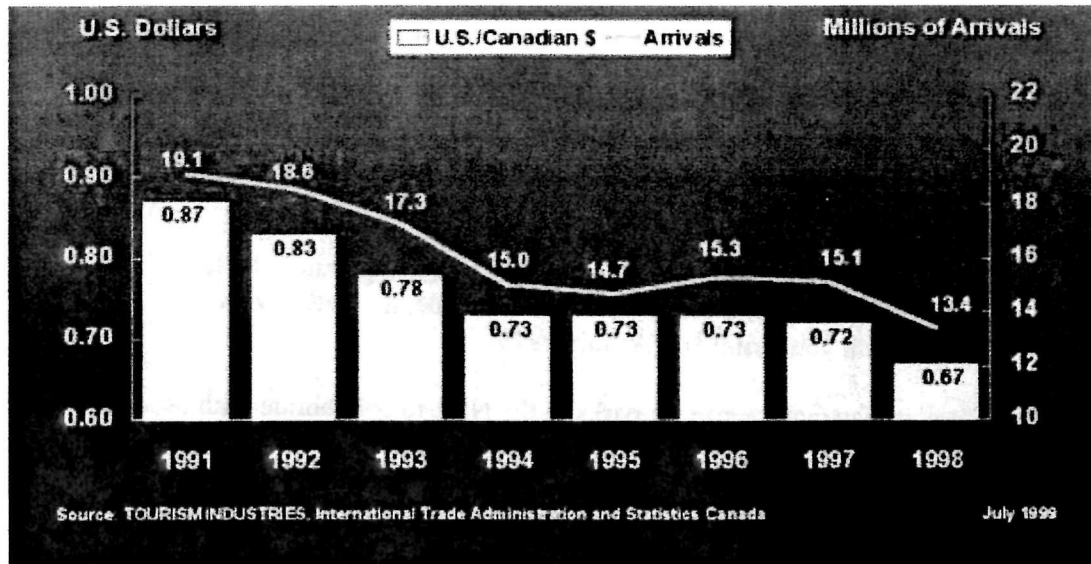
alternative fuel, leading to interest rate rises, inflation, volatile rates of exchange, and perhaps a worldwide depression. The impacts on tourism to NER sites would be multi-dimensional ranging from; trip deferral or substitution, to increased use of alternative modes of transportation requiring different allocations of time, to changes in the way parks are used by tourists, to increased unemployment in the service sector, to a decreasing tax base.

Canada recently provided evidence of potential impacts of oil prices on tourist numbers. Unfavorable rates of exchange, stemming in part from oil price instability, coupled with Government policy encouraging Canadians to vacation within their own country, led to a significant drop in the number of Canadians vacationing in the Northeast during the mid to late 1990's (Table 17). As a result 1992 to 1998 saw a 24% drop in U.S. receipts from Canadian travelers.

“Canadians are definitely affected by the exchange rate - the less favorable, the more likely they will not come, no matter what mountain you build!” (ITA, July 1999).

Therefore, it may make sense for parks in the NER to collaborate with academic and business institutions capable of providing base line indicators for a variety of tourism scenarios.

**Table 17. The Impact of the Exchange Rate on Canadian Travel (1+ Nights) to the U.S.**





**Proposition: National Park management strategies for all sites considered “global” will increasingly reflect not only national, but also international, opinion on matters of protection.**

The symbolic, timeless value of Ellis Island supercedes regional and national issues framing most other parks in the NER. Like it or not, preservation of Ellis Island is a global issue. According to Rojek (1994), some monuments appeal to collective consciousness. The original purpose of the monument may be unrelated to what it signifies now. Ellis Island falls into this category. National park management strategies for all sites considered “global” will reflect not only national, but also international, opinion on matters of protection. Considered part of global heritage, environmental threats to sites such as Ellis Island will increasingly highlight the need for global preservation and responsibility.

**Proposition: Management of local tourism sites in the NER will reflect different strategies, goals, and stakeholders than “global” sites.**

Differences in type and intensity of tourism use means that local tourism sites in the NER will adopt different management strategies and goals for sites at the “global” level. A number of approaches are worthy of consideration:

- The contribution of secondary or tertiary tourism sites to the NPS mission in the NER could be re-assessed. As a hypothetical example, research has shown that “homegrown” tourism activities, unique to the area, add significantly to the local economy by engendering partnerships and a strong sense of identity and pride (Pearce, Moscardo and Ross, 1996). Consideration might be therefore given to returning certain National park sites to the local community.
- Alternatively, NER parks may benefit from increased interaction and networking with the private sector, including not-for-profit organizations. Expanded partnerships with local communities and agencies to “do more with less” may merit increased exploration. The park could establish acceptable base operating costs. Local communities and stakeholders could absorb costs beyond the base, allowing park operation to continue.

**Salient Issue: Since 1980, the annual value of corporate mergers has increased 100 fold. The tourism industry is being reshaped and redefined by this remarkable concentration of power.**

Large corporations have enormous influence on the way we live. Of the largest ten organizational budgets in the world, four are not national governments but corporations. In the U.S. “Urged on by a coalition of big industries, one state after another is adopting legislation to protect companies from disclosure or punishment when they discover environmental offenses at their own plants” (New York Times, April 7, 1996). Corporations are being given exemption from environmental laws if they self-report such offenses. Documents showing such self-reporting are secret by law and cannot be divulged to the public or used in any legal proceedings. In both developed and

developing nations, corporations are part of a “permanent government” that rules regardless of who are elected to political office. As the Editor of Harper’s, Lewis Lapham, recently stated:

“The permanent government, a secular oligarchy . . . comprises the Fortune 500 companies and their attendant lobbyists, the big media and entertainment syndicates, the civil and military services, the larger research universities and law firms . . . Obedient to the rule of men, not laws, the permanent government oversees the production of wealth, builds cities, manufactures goods, raises capital, fixes prices, shapes the landscape, and reserves the right to assume debt, poison rivers, cheat the customers, receive the gifts of federal subsidy, and speak to the American people in the language of low motive and base emotion” (1996, p. 34).

Minimizing corporate control of much of the modern world would involve limiting corporations. Such limitations would include; requiring corporations to have a specific purpose, with penalties or removal of corporate privileges if that purpose were not fulfilled or exceeded; requiring a percentage of stockholders to live in the state in which the corporation is licensed; prohibiting corporations from owning stock in other corporations; issuing corporation charters for a fixed period of time; prohibiting all political donations and imposing strict liability on corporate officers and stockholders. Until such steps are taken, corporations will continue to be a central component of the permanent government (Montague, 1996).

In 1999, 32,000 corporate deals took place, more than 30 times the number in 1981. The aim of mergers is to increase shareholder value and promote efficiency. Thus, corporate consolidation trends threaten not only democratic norms, labor standards, human rights and environmental quality, but also the control of individual states and non-global institutions (Brown, Renner & Halwell, 2000). Recent mergers, and the possibility of increased profit, have attracted companies whose original business had little to do with tourism. The following two examples serve to illustrate this point:

- L. L. Bean, a well-known outdoors clothier, for example, has created a user friendly, multilingual web site providing a searchable database of 1800 national and state parks, outdoor discovery schools and conservation efforts promoted by the company. Clothes sales are secondary; the primary focus is outdoor life experience and how this experience can be used to market a variety of products under the L. L. Bean umbrella (<http://www.llbean.com/outdooronline/index>).
- Because of mergers, by 2010, most passenger flights will take place on one of three airline groups. The problem for travelers will be if the three groups informally divide up the world between them, creating strong spheres of influence that cannot be challenged, and in consequence fares rise (WTO, 1999). The tourism accommodation and entertainment sub-sectors are following similar patterns.

How this remarkable shift in power will play out in the tourism market has yet to unfold. Consumer activist groups and government regulation may come to the fore. For the NER, increased accommodation and transportation prices may mean fewer overnight stays, increased camping activity, fewer repeat visits, less park revenue and an increasingly stratified user base. International visitors may decline, but pressure on local and urban park sites may increase.

**Salient Issue: Individual states in the NER will vary considerably in their commitment to, and endorsement of, tourism over the next twenty years.**

The extent to which tourism is a lifestyle parameter in the NER is reflected in the continued growth in use of both state and National Park resources and concomitant allocation of funds. An informal telephone survey of state tourism agencies undertaken for this project, did however, reveal varying structural, financial and philosophical commitment to tourism. Some states considered tourism a low priority and allocated funds accordingly. Others were extremely sophisticated in both their methodological and technological approaches to understanding tourism. Interestingly, tourism numbers did not necessarily correlate with philosophical or financial commitment. The survey revealed changing political power and the need for long term projections to be two of the most salient issues. Although state tourism projections for the NER are virtually nonexistent, available statistics suggest that tourism is expected, and projected, to increase.

**Proposition: Shifts in demography will affect tourism patterns and behavior in the NER over the next twenty years.**

"The principal appeal and purpose of tourism appears to have changed relatively little in basic terms: it is to experience something different from the normal pattern of existence. What has changed enormously is the variety of ways in which this experience can be obtained, and by whom" (Butler, 1999, p. 100).

Tourists in the NER will be more diverse ethnically, both older (and younger) than tourists in previous decades, and they will have a greater diversity in their level of education. Tourists will access travel, hotels, transportation and food services in various ways, some using more sophisticated online services which allow them to "try out" the site prior to visiting. Some will use the Internet to preorder specific hotel room locations, advance dining reservations, preordered menus, concierge services and customized itineraries. Others will continue to use travel agents, many of whom will become highly specialized in terms of function or geographic areas for which they arrange travel. Most will travel by car, but traffic congestion and increased focus on the total travel experience, from inception to completion, will lead to growth in alternative forms of transportation and styles of travel.

In an increasingly densely populated environment, parks in the NER will be critical for providing diverse, multilevel, multifaceted experiential elements: 'islands' for escape, rejuvenation, health, development, and challenge.

**Salient Issue: Demographic projections for the NER suggest not only an increase in the absolute number of tourists, but also a significant shift towards a more diverse tourism base with which the NPS has had little experience in dealing.**

The next twenty years will reflect cumulative shifts leading to increased social and cultural polarization in the NER. Based on the assumption that change is linear, and affects individuals and groups in a uniform manner, tourism and park visitation exhibit *apparent* stability and consistency. In reality, this masks acute regional and local variations within the NER. Coupling racial, ethnic and economic diversity with a focus on social context and life transitions (e.g., childbirth, divorce, unemployment, relocation, death of a spouse etc) provides added explanatory power. A number of examples will serve to illustrate this point (Table 18):

- Known as the “sandwich generation,” Baby Boomers are caught between caring for children, saving for their own retirement and the stress of tending to aging parents.
- Many boomers are in their second or third marriage, and children come later, even twice, in life.
- AARP estimates that 11% of grandparents are helping raise grandchildren.
- African-Americans and Hispanics in the 55-64 age group are more likely to have children at home.
- 60% of young adults in the 18-24 age category still live with parents or relatives. In 1970, 81 percent of all households were family households, but by 1997, this was down to 70 percent.
- Becoming adult and retiring are increasingly an ongoing process rather than a delineated event.

**Table 18. Average Annual, Indexed, and Market Share of Spending by Consumer Units on Recreational Expenses While on Out-of-Town Trips, by Selected Demographic Characteristics, 1995. Index Definition: 100 is the Average.**

	<i>average</i>	<i>index</i>	<i>market share</i>
Total	\$21.21	100	100.0 %
<b>Age</b>			
Under age 25	6.98	33	2.3
Aged 25 to 34	17.82	84	15.9
Aged 35 to 44	25.62	121	27.5
Aged 45 to 54	28.98	137	24.7
Aged 55 to 64	25.49	120	14.7
Aged 65 or older	14.97	71	14.9
<b>Income</b>			
Under \$20,000	8.29	37	13.6
\$20,000 to \$29,999	11.28	50	7.6
\$30,000 to \$39,999	23.72	105	13.4
\$40,000 to \$49,999	23.28	103	10.1
\$50,000 to \$69,999	37.37	165	20.6
\$70,000 or more	61.84	274	34.7
<b>Race</b>			
White and "other"	22.58	106	94.4
Black	10.47	49	5.6
<b>Hispanic origin</b>			
Non-Hispanic	22.15	104	96.3
Hispanic	10.05	47	3.7
<b>Education</b>			
Not a high school graduate	6.08	29	6.0
High school graduate only	14.50	68	21.9
Some college	24.25	114	26.1
College graduate	40.23	190	46.0
<b>Household type</b>			
Married couples, total	\$29.35	138	72.5%
Married couple only	28.01	132	28.2
Married couple with children	29.11	137	37.2
Oldest child under age 6	16.34	77	4.1
Oldest child aged 6 to 17	30.79	145	20.7
Oldest child aged 18 or older	35.11	166	12.4
Single parent with children under 18	7.99	38	2.5
Single person	12.92	61	17.2
<b>Region</b>			
Northeast	21.28	100	20.1
Midwest	23.02	109	27.2
South	16.08	76	25.8
West	27.33	129	26.9

*Note: The average spending figures are extremely low because both purchasers and non-purchasers are included in the calculation. While the average spending figures do not show how much buyers of recreational activities while on out-of-town trips spend, the patterns revealed by the index and market share figures do show who is most likely to spend on recreational activities while traveling and how much spending is controlled by each demographic segment.*

*Source: Bureau of Labor Statistics. 1995 Consumer Expenditure Survey; calculations by New Strategist*

Thus, marketers will recognize that “parenting” spans an increasing time and age spectrum. Intergenerational tourism will flourish in the next twenty years, particularly given demographic complexities of the NER. Site visits will increasingly reflect the need to deal with multiple needs and wants within the same tourism group. Cruise lines have been particularly successful in this regard.

Most Americans take a vacation at least once a year. There is, however, considerable variation in the style and cost of travel, ranging from inexpensive camping vacations planned and saved for months in advance to personalized, fully escorted tours purchased at the last minute. Sites in the NER will increasingly accept the impossibility of meeting all tourists needs. Increased effort will be made to frame a viable regional, national and in some cases, international niche for each site based on deeper understanding of how that specific site can meet its tourism needs.

**Salient Issue: The aging population of the NER region will drive expectations for, and marketing of, tourism participation.**

Just as income may not be a reliable indicator of travel and tourism activity, chronological age is not necessarily an accurate indicator of physical ability or the propensity to travel. Kelly and Freysinger (2000) argue:

“Because of advances in public and environmental health knowledge, on average both men and women are living longer with more years of functionally healthy life. That is, the onset of functional impairment or debilitating health conditions has shifted upward toward the eighth and ninth decades of life...The active or “young old “ are seen as competent and relatively independent, and as a major market for travel and other leisure” (p. 117).

Furthermore, research shows that individuals do not perceive themselves as old until health becomes an obvious problem (Eisenhandler, 1989). Although the U.S. must deal with a succession of unevenly sized cohorts, and it is debated whether future elderly cohorts will be more or less healthy, at any one time less than 10% of individuals over 65 require institutional care. The dilemma an aging population presents is that increases in younger adults do not keep pace with the growth of the older population. There are more old people in need of help and fewer working age adults to help them. Certain park locations in the NER will display patterns of tourism use reflecting this dilemma.

In terms of numbers, an aging population has greater propensity to travel, particularly after the last child leaves home. Personal equity and discretionary dollars in “childless” older age groups are flexible. In the U.S., over 50% of those over 65 take vacations and their expenditure is above average. The entry of the Baby Boomers into the retirement cohort in the next twenty years will result in a more focused symbiotic relationship between consumer demand for, and industry attention to, tourism needs in the NER.

“It is not simply sheer numbers and disposable income that attract market focus on this group “it is also the lifestyles of many of them... it implies the existence of a large cohort of older consumers with very different styles and consumption habits from older people in the past” (Morgan and Pritchard, 1998, p. 129).

Having gained additional years of health and life, some older persons will choose to lengthen their retirements, others will prefer extended, part time or episodic employment. Older workers frequently want to use their expertise and contribute intellectually (Treas, 2000). Kelley and Freysinger (2000) state the main issue is “what kinds of leisure activities contribute most to the quality of life of older adults”(p. 263). For example, at Boston based Elderhostel, a global network of educational and cultural institutions that offer “cost-effective” programs *throughout the calendar year* to individuals 55 and older, participation has soared from 220 travelers in 1975 to more than 400,000 today. The company projects a threefold increase by the year 2020.

As a management tool, it may make sense for parks in the NER to explore networking with other tourism groups and agencies that have knowledge of, and success in, distinct markets (e.g., teens, Hispanics, gays or lesbians). For example, children and teens are being socialized into a world of changing technology and immediate gratification. Consequently, the ways in which they define and use parks will be fundamentally different to previous generations. Additionally, research has shown that loyalty and patterns of use created at early ages tend to endure over the life span. This speaks to the benefits of early and on-going education as a mechanism for promoting understanding of tourism, visitor satisfaction, and ultimately resource protection.

**Sub-proposition: Targeted tourist markets will emerge for many NPS sites in the NER.**

For many park destinations in the NER, it may make sense to target both national and international markets. In the U.S., it might be advantageous to collaborate with travel, hotel, and transportation firms to advertise NPS sites and to develop tours highlighting NPS itineraries. Similarly, it might be beneficial to target essential international markets. Britain, for example, has particularly strong ties with the Northeast, so marketing NPS destinations to British audiences could improve this potential customer base. Some U.S.-based hotel and transportation groups target British markets; it might be worth exploring strategic alliances with these groups to expand the British market.

**Sub-proposition: NPS in the NER will develop increased awareness of, and focus on, previously under-represented tourism groups in the NE.**

Framed by the dialectic of assimilation and pluralism, tourism reflects and enfolds issues central to society. Demographic trends in fertility, mortality, and migration have an impact on family size and household structure, especially as these trends interact with changing gender roles, increased education, and diversified leisure opportunities. In a pointed discussion of citizenship rights and management of leisure resources, Rojek



(1995) maintains:

- Equal access in terms of the law is not translated into practice; “the state defines minimal set of uses for the site and tends to stigmatize and obstruct groups who define use-value in different terms”
- Facilities are provided to accommodate the normal visitor; “this raises questions about the definition of normality”
- Freedom and choice have different meanings for different user groups; “although state policy on leisure is often legitimated on the grounds that it benefits all of us...it actually marginalizes and scapegoats the citizenship rights of certain groups” (p. 74).

Tourism is highly diversified and continually evolving to meet reflect created or actual needs. In general, travel for pleasure is assumed to have similar meaning, regardless of gender, race, ethnicity, age, or marital status. Research shows, however, individuals and groups may understand and interpret the same experience through a variety of lenses. Key travel behaviors of different groups may be interpreted as similar, but apparent similarity masks underlying complexities and assumptions that are not yet fully understood, and which may have significant implications for future NPS operations. For example, arguing day to day family schedules revolve around the assumption that “family” reflects a two parent, primary bread winner model Cootz (1997) states:

“It is no more a realistic solution to American’s family dilemmas than the proposal to revive the male breadwinner family. Just as working mothers are here to stay, diversity in family form and marriage is going to remain a fact of life” (p. 75).

Single and multigenerational households’ schedules do not reflect the same realities as traditional families. Parks reflect traditional norms and lag in adjusting to an increasingly complex society. For example,

- Non-Hispanic whites in New Jersey and New York constitute 61% of the voting age population. The national average is 74%. Asians and Hispanics make up 29%.
- In the late 70’s, the African-American travel market was estimated to be worth \$7 billion, but by the beginning of the 90’s this figure had grown to \$25 billion and continues to grow.

Given that networking and outreach should be a central tenant of socially inclusive management strategy, are the above trends evident in park policy? What do these shifts mean for physical site management? If tourism is important to a particular site, can adaptations be made to enhance the diverse types of tourism experience? Could mobile teams of park rangers cascade through the NER as tourism demand fluctuates seasonally? The purpose of the highly trained, versatile teams would be to act as “stress” relievers by providing social and environmental support as tourism cycles fluctuate seasonally.



**Proposition: The use of time will play a fundamental role in tourism behavior. Seasonal tourism cycles will soften and visitation patterns customize.**

Increased need for social interaction stemming from focus on home-centered activities will lead to greater desire to travel. Reflecting the desire to maximize flexibility, tourism decisions will increasingly be a function of time available, accompanying individuals, perceived risk and generic destination attributes such as sea, mountains, and educational opportunities. Time allotted to vacations may increase for a variety of reasons; employment incentives, early retirement or transition from full-time to part-time employment, unemployment, government mandates, etc. The fragmented nature and quality of time available, coupled with increasing household diversity, will mean both non-traditional families and traditional families will find it harder to schedule overlapping periods. The net result will be:

- Interactive customized planning. For some, the goal will be to reduce uncertainty in travel planning by creating orchestrated schedules. For others, the goal will be to maximize flexibility and scheduling will be open-ended.
- Vacations scheduled throughout the year. For example, shifts to year round schooling, a reflection of both social (e.g., parental pressure) and structural need (e.g., air conditioning), will further exacerbate the trend towards vacations interspersed throughout the year. Parents will be more willing to take children out of school if education is a component of the trip.
- Although commitment to the car remains absolute, congestion will increase. Travel to park locations will be a function of available modes of transportation and travel “costs.” Further development of high-speed rail networks in the NER may mean, for some parks, location is everything.

**Salient Issue: Time will be structured to optimize a variety of travel and tourism needs.**

Some argue that there is greater abundance of free time, others find time is increasingly scarce. For some, the issue will be time filling, for others multitasking will be the norm in all segments of life, including leisure. Overall, time pressure ebbs and flows reflecting periods of high demand offset by periods of relative stability. The essential transformation is diversity of time use. Institutions have been slow to acknowledge this diversity. For many households, future time for travel will be a more precious resource than the availability of disposable income; “time poor-money rich” (WTO, 1999). The affluent will increasingly be willing to pay for experiences. Time is worth a lot more than money to many workers. Companies will embrace quality of life issues as the boundaries between work and life blur. Vacation incentives will be increasingly important as employees struggle to articulate actual and perceived demands on time. For some, the key will be a maximization of available vacation time reflected by significant mental, physical and emotional activity. For others, seeking relief from the pressures of life, inactivity, relaxation and escape will be key. Tourists will seek condensed tourism products weaving the desired level of experience and activity into discrete time blocks (Table 19). Inter-generation travel will increase. Customized

visitation schedules will be common. Beneficial for planning purposes, they will impose different kinds of rigidities on the NPS in the NER. Tourists will be increasingly intolerant of uncertainties and inflexibility regardless of origin.

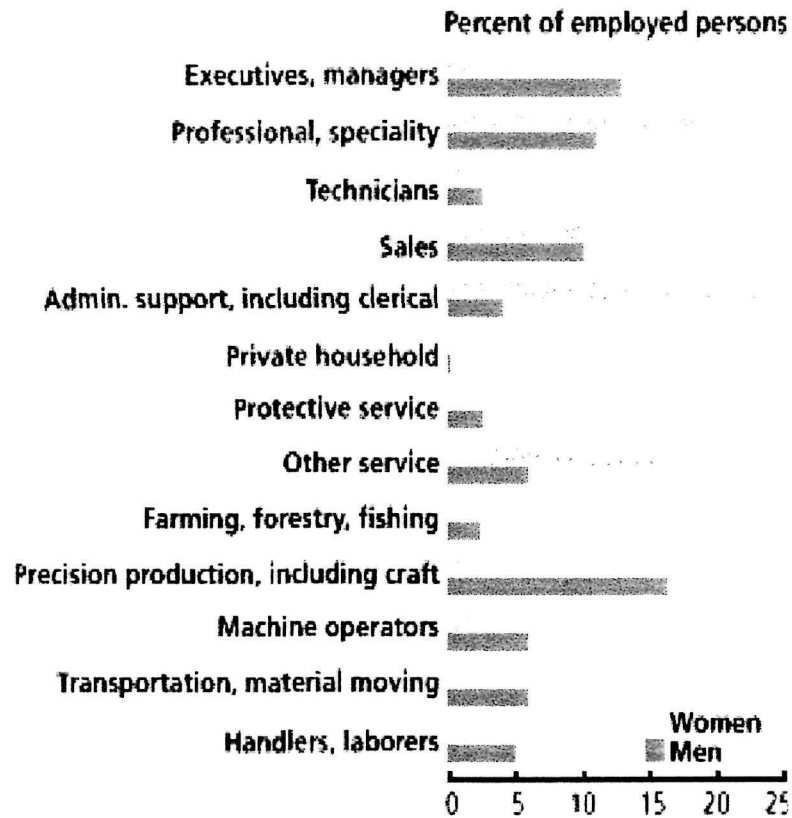
As service sector employment increases (Figure 10), time schedules and pressures will become increasingly uncertain. Service industries, which tend to reflect lower wages, varied hours, less worker control and “deskilling,” are themselves becoming increasingly flexible and adaptive. “One problem is that society is deceived by statistics of average work weeks and has not responded to either those in a time crunch or a time abundance” (p. 294). Given the concentration of population in the NE corridor, the net result of increased employment in the service sector may be disproportionate pressure on sites in or near urban centers. Creative management systems will be required.

**Table 19. Percent of Men and Women Aged 16 or Older Who Have Participated in Selected Outdoor Recreational Activities at Least Once in the Past 12 Months, 1994-1995; Ranked by Percentage Point Difference**

	<i>men</i>	<i>women</i>	<i>percentage point difference</i>
1. Freshwater fishing	32.3%	17.2%	15.1
2. Golf	22.4	7.8	14.6
3. Basketball	18.5	7.4	11.1
4. Big-game hunting	12.7	2.0	10.7
5. Small-game hunting	12.1	1.4	10.7
6. Running, jogging	31.6	21.1	10.5
7. Camping (primitive area)	19.0	9.1	9.9
8. Football	11.9	2.0	9.9
9. Motorboating	27.4	19.9	7.5
10. Saltwater fishing	13.3	5.9	7.4
11. Swimming (nonpool)	42.8	35.6	7.2
12. Hiking	27.1	20.9	6.2
13. Softball	16.2	10.1	6.1
14. Baseball	9.7	4.0	5.7
15. Backpacking	10.2	5.1	5.1
16. Water-skiing	11.5	6.6	4.9
17. Bicycling	31.0	26.5	4.5
18. Volleyball	16.6	12.2	4.4
19. Camping (developed area)	22.9	18.7	4.2
20. Canoeing	9.1	5.1	4.0
21. Downhill skiing	10.5	6.5	4.0
22. Migratory-bird hunting	4.1	0.4	3.7
23. Snorkeling	9.1	5.5	3.6
24. Soccer	6.2	3.4	2.8
25. Rock climbing	5.1%	2.5%	2.6
26. Mountain climbing	5.8	3.3	2.5
27. Swimming (pool)	45.6	43.1	2.5
28. Personal watercraft riding	6.0	3.6	2.4
29. Orienteering	3.6	1.3	2.3
30. Snowmobiling	4.7	2.5	2.2
31. Floating, rafting	8.7	6.6	2.1
32. Tennis	11.7	9.6	2.1
33. Caving	5.7	3.8	1.9
34. Surfing	2.2	0.5	1.7
35. Rowing	5.0	3.5	1.5
36. Sledding	10.8	9.7	1.1
37. Sailing	5.2	4.3	0.9
38. Kayaking	1.8	0.9	0.9
39. Cross-country skiing	3.5	3.0	0.5
40. Windsurfing	1.3	0.9	0.4
41. Snowboarding	1.0	0.7	0.3
42. Ice skating	5.2	5.3	-0.1
43. Horseback riding	7.0	7.3	-0.3
44. Walking	65.1	68.5	-3.4
45. Picnicking	47.1	51.0	-3.9
46. Bird watching	24.7	29.2	-4.5

Source: USDA Forest Service, 1994-95 National Survey on Recreation and the Environment

**Figure 10: Women's Earnings Compared to Men's Earnings by Occupational Category: 1960-1994**



Sources: PRB analysis of data from the U.S. Census Bureau, Current Population Survey, March 1999; and Mary Bowler, "Women's Earnings: An Overview," Monthly Labor Review (December 1999): 13-21.

**Proposition: Consumer choice and satisfaction will continue to affect tourism behavior. Customized experiences will increase.**

“The tourist chooses to travel not out of duty or responsibility, but out of personal, discretionary choice in leisure time. The tourist is not bound to seek satisfaction from a limited set of choices. In the end, tourists simply expect to satisfy themselves through the services that are available to them during leisure time” (Noe, 1999, p. xi).

For some tourists, a satisfying tourism experience is defined by an individual event, for others it is the interaction of a series of events, some satisfying, others not. An unsatisfactory travel experience on route to the park need not detract from the park experience itself, and statistics indicate that the vast majority of park visitors are satisfied with their visit. Associated with emotion, satisfaction is a function of a host of interwoven, dynamic variables such as desire, needs, personality, stress, time, past experience and culture. It is a slippery, elusive concept, particularly given increasing tourism choice and types of experiences sought. Managers of individual NPS sites will increasingly recognize the impossibility of satisfying all tourists. Management emphasis will be placed on elements that are standard components of all tourism experiences, such as perceived value. Perceived value has a financial component, but of equal, and perhaps more critical, importance are emotional and social components. For example, a simple gesture such as allowing a child to try a ranger hat may mean more to the child, and the caregiver, than the rest of the travel experiences combined.

Choice, for tourists, will span a spectrum from being passively entertained to actively creating their own entertainment, from learning to allowing boredom, from sensing nothing to heightening all senses, from solitude to orchestrated social gatherings— the list will be endless. Singles, families, and groups will increasingly seek customized experiences at NPS sites focused on learning, education, and entertainment. All family members, including children and grandparents, will be actively involved in the decision making and booking process. Technology and gear will increasingly affect tourism behavior, making it possible to experience trips taken by explorers like Lewis and Clarke, without participants feeling the trip is destined to be their last.

**Salient Issue: Tourism will increasingly reflect demand for “experience” and personal engagement.**

Manufactured destinations or, experience tourism, such as Disney’s Animal Kingdom or Carnival Cruise Lines provide rational, flexible, specialized, controllable and, some argue, dehumanized and inauthentic means of tourism consumption (Ritzer, 1998, p. 9; McCannell, 1976, p. 169). The fact is they are highly successful. They provide relatively uniform experiences that meet most people’s expectations. “There may be a lot of people around you, but Disney theme parks are clean and neat. And the people who serve you are extraordinarily well trained and helpful” (Plog, 2000). Competition for the tourist dollar in the NER region is fierce (USA Today, June 2000). With an increasing

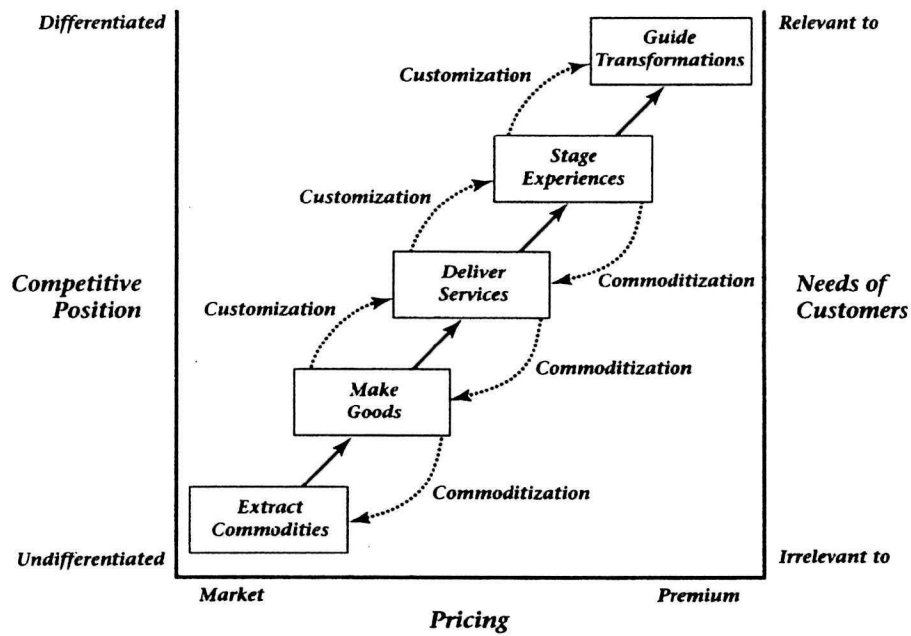
proportion of the population finding less time for travel, tourists are offered “maximum thrills in minimum time” (WTO, 1999, p. 36). Theme tourism has the added dimension of being divorced from place. The location is flexible and merely provides a backdrop for the activity or product. Cruising provides a prime example of this concept. For tourism to national parks, this presents an interesting dilemma. In terms of place, park space is essentially a fixed commodity and a limited resource. Change is limited to:

- Structural re-organization and/or improvement
- Attitude/behavior shifts on the part of the tourist

Plog (2000) argues that market flexibility and adaptability coupled with the ability to provide a homogeneous, yet individual, unique, memorable, and personally engaging experience, is crucial to future success in the travel and tourism industry. Pine and Gilmore (1999) go a step further stating that merely providing a product, or performing a function, is no longer a logical focus. The issue, and this is particularly true of tourism, is the provision of an experience. “When a person buys a service, he purchases a set of intangible activities carried out on his behalf. But when he buys an experience, he pays to spend time enjoying a series of memorable events that a company stages – as in a theatrical play – to engage him in a personal way” (p. 2). Arguing that the service economy has peaked, purchasers increasingly define satisfaction in terms of experiences, framed by memories, emotions, relevance, and personal value (Figure 11)

“Most parents don’t take their kids to Disney World just for the event itself but rather to make that shared experience part of every day family conversations for months, and even years afterward. While the experience itself lacks tangibility, people greatly value the offering because of its value within them, where it remains long afterward” (p. 12).

Figure 11. Completing the Progression of Economic Value



Source: B. Pine and J. Gilmore, *The Experience Economy*. Boston, MA: Harvard Business School Press.

Indeed, many argue that the keys to successful tourism lie with recognizing these emerging themes:

- Tourism is a game that starts at the initiation of the tourism process. For many, it is no longer a search for authenticity. Representations are acceptable and to some, preferable. The tourist pretends knowing that representations are not real.
- Tourism is fragmented – simulation is almost endless, therefore it is possible to construct attractions almost anywhere, even at sites that were once the antithesis of tourism such as sewers.
- Categories such as work and leisure are less distinct. As a result, tourism now includes:
  - trips to places of work, such as coal mines or old industrial sites;
  - work, such as bird counting or seashore clean up where tourists become active, paying participants.

The NPS offers a huge range of diverse, intense, sensory experiences from canyoneering to birding, to historic site re-enacting, to whale kissing. Pine and Gilmore argue that to be successful in the future, businesses will pay attention to two fundamental factors. First, marketing the experience based on the value provided by the activity or service. For example, will group tours to Cape Cod see whale kissing as a valuable experience and be willing to pay for the activity accordingly? Second, management focus on the need to stay exclusive, relevant and scarce. The NPS environment must be presented in such a way as to give it intrinsic and commercial value. What people value, they respect, protect and preserve.

This has significant implications for tourism management in the NPS. How can tourism experience provide multiple levels of engagement, enrichment and activity? Can each individual experience become unique and more memorable? Could consideration be given to a pricing system that is a function of type/intensity of tourist use and associated risk posed to the site environment, or desired level of interaction with the park employees, or value placed on non-typical experiences?

**Salient Issue: Shopping and entertainment are now fundamental categories in travel and tourism.**

As a tourist activity, shopping requires little skill and provides immediate response. “Raised in McDonaldized systems, accustomed to daily life in those systems, most people not only accept but embrace them. Instead of being put off by McDonaldized vacations, many will gravitate toward them” (Ritzer, 1998, p. 139). Ritzer argues that because of what individuals are accustomed to, contemporary tourism will increasingly reflect the need for:

- Highly predictable vacations- “they may not want to be in step with their fellow man, but many want few, if any, surprises”
- Highly efficient vacations- “accustomed to efficiency in their daily lives, many people have little tolerance for inefficient vacations”



- Highly calculable vacations- “many people want to know in advance how much a vacation is going to cost, and they abhor cost overruns”
- Highly controlled vacations.

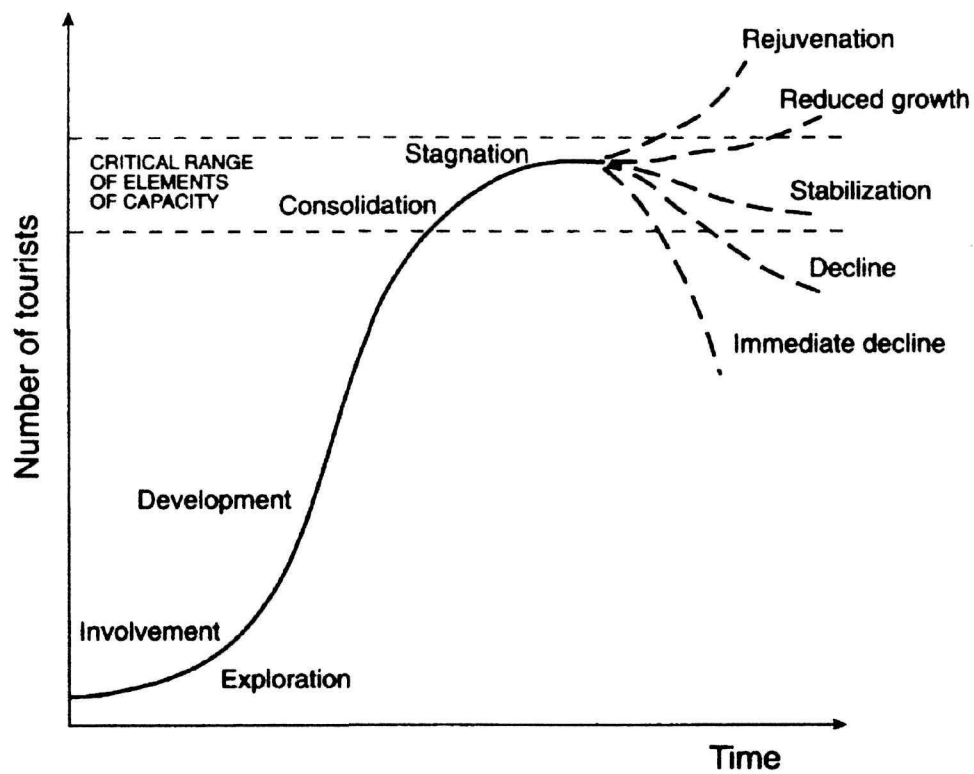
For example, with the advent of computer technology, it may be feasible for the NPS to serve a diverse user base by thinking in terms of “smart cards” (Travel Weekly, June 2000). Carried by tourists, the cards would provide information on demographics, patterns of use and behavior, preferences, etc., thus allowing for “mass customization” (Pine, 1993). The tourist could select elements such as composition of group, type of experience desired, time available, etc., and a number of alternatives could be provided.

**Salient Issue: Similar to other tourist sites, individual NPS sites in the NER may follow cycles of evolution.**

A number of authors have suggested tourism sites are inherently organic in nature, cycling through predictable stages of evolution. Without exception, all cycles peak and eventually decline. Phasing *through* the cycle depends on quality of the experience and relevance to the lifestyle (Butler, 1980; Cohen, 1984; Pearce, 1989). Placement *in* the cycle determines behavior patterns. The stages are as follows:

- *Exploration* – site is discovered by a few individuals, elevated in status by naming e.g. acts of Congress, which establish national parks. Relationships between hosts and guests are amicable.
- *Involvement* – visitors increase. A “frame” is placed around the site for protection/enhancement. Guest/host relations are commercialized, but remain good.
- *Development* – increased growth leads to less local control. Mass tourism increases. Corporate involvement increases. Host guest relations become more impersonal.
- *Consolidation* – unique characteristics of the site are lost. It may be simply a backdrop for other leisure activities. Tourist enclaves emerge close to the site. Relationships between host and guest are formal. Locals are increasingly dependent on tourists. Service sector employment increases.
- *Stagnation* – carrying capacity is reached, infrastructure deteriorates, and profit margins are reduced. Maintenance becomes an issue. Government involvement increases.
- *Decline* – competition from sites at earlier stages in the cycle leads to tourism decline and economic stagnation. Subsidies are common. At this point in the cycle, a number of alternatives are possible including:
  - Immediate decline
  - Slow decline
  - Stabilization
  - Reduced Growth
  - Rejuvenation
- *Rejuvenation* – new images are created based on nostalgia/manufactured attractions. Investment capital returns and the cycle begins again (Figure 12).

Figure 12. The Butler model of tourism site development



Source: Richard Butler, "The Concept of a Tourist Area Cycle of Evolution: Implications for Management of Resources," *Canadian Geographer* 24 (1), 1999, p. 7.

It may make sense to recognize that NPS sites in the NER exhibit different levels and types of maturity, but all sites will eventually follow the above stages. Current and projected statistics indicate that many sites in the NER will be at stagnation point during the next twenty years. To the extent that this is the case, a number of site-specific management and organizational strategies could be adopted. First, for example, the site could be redefined in terms of function and structure. Improvements could be made that would allow for continued growth and expansion. Second, the site could be allowed to decline in terms of site numbers and allocation of funds. Third, a policy of no growth is possible. Some sites may *not* require change. Apart from operating cost increases, these sites would essentially remain stable in terms of growth.

Recognizing that sites vary significantly in terms of tourism function, recreation visits, and operating costs, an analysis of *selected* individual NPS sites in the NER was undertaken. Using 1999 data on Annual Operating Budgets and Total Visits per site, the purpose of the analysis was to compare the relative costs per visit for different sites in the NER. Table 20 provides summarized information. A detailed explanation of the procedure is provided in Appendix 3. Interesting findings emerged:

1. There was enormous variation both within and between states in the cost of visitation per visitor. For example, in Massachusetts the operating cost of a visit to Cape Cod National Seashore was \$1 per visit in 1999. In contrast, the operating cost of visit to Fredrick Law Olmsted National Historic Site was \$203.00 per visit. Similarly, in Maryland the operating cost of a visit to Assateague Island National Seashore was \$1.56 per visit, whereas Thomas Stone National Historic Site cost \$142.00 per visit.
2. States with only one site (i.e. Connecticut, Maine, New Hampshire, Rhode Island, and Vermont) also ranged significantly in operational cost per visit. Weir Farm (Connecticut) cost \$49.00 per visit, whereas Roger Williams National Memorial (Rhode Island) cost \$2.25.

Although no consideration was given to length of visit, type of visit, type of visitor, type of site etc., and therefore, care must be taken in interpretation, the figures none the less raise a number of noteworthy, controversial issues for sites in the NER, particularly given the context of this study. Demographic shifts, balkanization, changing norms, greater mobility, increased inequality, and environmental transitions will sharpen focus on the symbiotic role of the NPS in society. Although certain sites will be maintained, regardless of financial, social, ethical or political costs, other sites will be subject to critical evaluation. Questions will be raised as to whether it is justifiable, or indeed fair, that one site costs 87 cents per visitor, whereas another site in the same state costs \$28 per visitor.

While it is clear that the relationship between tourism and the NPS is often unsettled and uneven, it is extremely unlikely that park use in the NER will do other than increase in the next twenty years. However, short-term gain, resulting from tourism pressures, preferences and potential income, should not be sacrificed at the altar of long term integrity. Indeed, Butler and Boyd (2000) argue that although tourism is not sustainable,

this does not preclude the necessity of operating along sustainability principles. Maintaining NPS sites that are costly per visitor may not be sustainable to the overall health and vibrancy of all sites in the NER.

“With all this connectivity I’m afraid we’re going to come back from far away places feeling like we never left. Because, in a sense, we never have” (Russell Frank, Centre Daily Times, June 2000).

**Table 20. 1999 Operating Budget/Total Visits and Cost per Visitor**

	1999 Annual Operating Budget \$ (Cost)	1999 Total Visits* (Visit)	1999 Cost/Visit \$
<b>Connecticut</b>			
Weir Farm	738,000	15,058	49
<b>Maryland</b>			
Assateague Island NS	2,958,000	1,895,592	1.56
Thomas Stone NHS	575,000	4,038	142
<b>Massachusetts</b>			
Fredrick Law Olmsted NHS	1,696,000	8,348	203
Cape Cod NS	4,739,000	4,944,962	1
<b>New Hampshire</b>			
Saint Gaudens NHS	884,000	29,031	30
<b>New York</b>			
Castle Clinton NM	542,000	4,478,193	0.12
Martin Van Buren NHS	755,000	21,045	35
<b>Rhode Island</b>			
Roger Williams NMEN	329,000	146,333	2.25
<b>Virginia</b>			
Booker T. Washington NM	648,000	22,707	28.5
Colonial NHP	4,451,000	5,091,296	0.87

\*Includes recreation &

non-recreation visits

Operating Budgets Source: [www2.nature.nps.gov/stats](http://www2.nature.nps.gov/stats)

Total Visits Source: [www.nps.gov/parks.html](http://www.nps.gov/parks.html)

## **Lifestyle and Values**

How will lifestyles change among residents of the Northeastern U.S.? How will values change? To what extent will such changes increase or decrease use of NPS sites in the Northeast Region and the desired benefits?

**Salient Issue:** Several conflicting desires characterize much of the public and, where such desires are not in conflict, personal behavior often conflicts with attitudes and desires.

**Proposition:** In the emerging information economy, patterns of morality, socialization and feelings are emerging much more slowly than technology.

**Proposition:** The explosive growth of a sub-culture with new values, the cultural creatives, will increasingly shape NPS policies.

**Proposition:** As “literacy” expands in meaning, communicating with people, particularly younger people, will increasingly involve multiple media.

**Proposition:** The “Psychology of Entitlement,” which has developed in the U.S. since the 1960s, is being replaced by the principle of reciprocity—you get what you deserve.

**Sub-proposition:** The educational standards and expectations for all students, particularly ethnic minorities, will be increased.

**Sub-proposition:** Belief in reciprocity will create a lack of consensus about policies dealing with “senior citizens,” people with disabilities, and other groups.

**Proposition:** The explosive growth of a sub-culture with new values, the Cultural Creatives, will increasing shape NPS policies.

**Proposition:** The galactic city will continue to spread in the NER of the U.S.

**Salient Issue:** The unique life styles and historically unique situations of young people means that their interest in and use of NPS sites in the NER is highly unpredictable. In spite of this, they are a key variable in NPS success in the NER during the next few decades.

**Salient Issue:** Several conflicting desires characterize much of the public and, where such desires are not in conflict, personal behavior often conflicts with attitudes and desires.

These conflicts include the desire to simplify things vs. the desire for more information, the desire to slow down vs. the desire to speed up the pace and minimize the duration of given episodes of behavior, the desire to support higher environmental quality

vs. the desire to consume massive amounts of material goods, such as driving SUVs which get low gas mileage, and the desire to lead healthy lives vs. the desire to eat high-fat diets. Thus, contemporary life can only be understood in terms of the dialectic nature of both thought and behavior. Attitudes and behavior are increasingly not either-or but both-and. For the NPS in the NER, this means that there cannot be the expectation that visitors will exhibit consistency of attitudes and behavior or consistency among attitudes or among behaviors. Expectations of visitors, at least in the short term, may continue to increase, often unrealistically. Such unrealistic expectations may lead to the need for confrontational responses, even as visitors are supplied with more information.

There is considerable evidence of both major inconsistencies in the attitudes and desires of the American public and between attitudes and behaviors. Many such inconsistencies may be attributable to what Lasch (1979) termed a “culture of narcissism” and called the “psychology of entitlement.” Thus, people want rules strictly enforced but don’t believe such rules apply to them, claim to have no “free time” while watching 15-20 hours of TV per week on average, claim to love the environment but own products and exhibit behaviors which are in opposition to such beliefs, and think “drugs” are bad but participate in a drug culture. While this “psychology of entitlement” is diminishing (see next proposition) it is still a powerful influencer of behavior.

**Proposition: The “Psychology of Entitlement,” which has developed in the U.S. since the 1960s, is being replaced by the principle of reciprocity—you get what you deserve.**

In the 1960s and 1970s, a conception of fairness - fairness based on need - came into prominence, reflecting the belief that society has a moral obligation to take care of those who cannot take care of themselves. (Yankelovich, 1999). This communal concern with people’s needs was implemented through laws that codified certain needs as legal “rights.” This doctrine of need-based legal rights is generally known as “entitlement legislation.” It holds that people in need of the fundamentals of life are legally entitled to have these needs met and that the state is legally obligated to meet them.

One consequence was to imbue the public with a psychology of entitlement: “I have a right to the best medical care that money can buy whether or not I can afford it.” “I need a good education and therefore have a right to one.” “I am entitled to comfort and security in my old age.” (Yankelovich, 1999)

Ironically, what started as a moral conviction in the 1960s—that people must not think only of themselves but must also take care of others—ended up by the 1980s as a preoccupation with the self, its needs and its rights.

By the mid-1990s, the majority of Americans had arrived at three conclusions about fairness:

1. If we are to be a compassionate and just society, it is only fair that we support a safety net for the needy.
2. But it is not fair to put material benefits such as welfare, housing subsidies, health care, and education in the same category of moral/legal rights as life, liberty, and the pursuit of happiness.
3. It is only fair that people should give something back for these moral benefits, if they are mentally and physically able to do so.

Such conclusions satisfy the moral dilemma of the majority because they include elements of both definitions of fairness. They retain the idea of deserving because in reciprocity you must do something to “deserve” the benefit you receive. Social Security is regarded as fair because Americans spend most of their working life paying for it. And they honor the society’s obligations to those in need without falling into the trap of assigning a high moral or legal value to getting something for nothing.

**Sub-proposition: The educational standards and expectations for all students, particularly ethnic minorities, will be increased.**

As the psychology of entitlement is challenged during the next few decades, more will be demanded of public school children and teachers, particularly ethnic minorities. Demanding models of public school, such as the highly demanding Knowledge is Power program, which features long hours, high expectations from both students and teachers, discipline and commitment, will become more commonplace. Public schools will experiment with curriculum, learning styles and methods of discipline.

For the NPS in the NER this may have several consequences. Links with schools may be closer as public schools seek to use the interpretive services of the NPS in both classroom and onsite learning. School visits may be more educationally focused and onsite behavior more structured.

**Sub-proposition: Belief in reciprocity will create a lack of consensus about policies dealing with “senior citizens,” people with disabilities, and other groups.**

Many existing bases of entitlement will be challenged. Discounts to Senior Citizens, for example, will become more contentious as the children of the Baby Boomers are increasingly asked to subsidize the elderly, while becoming more uncertain about their own retirement and access to medical care.

Many of the provisions of Americans with Disabilities Act (ADA) will also be challenged. In some cases, NPS sites will be involved in such challenges or affected by them. The U.S. currently spends less on education per capita than any modern nation but it spends more on the education of people with mental disabilities than any modern nation (Howard, 1994). The ratio of spending on special education programs to gifted programs is about eleven dollars to one cent. While “mainstreaming” has been uncritically accepted as a desirable and workable way of integrating those with various disabilities into the rest of society, much of “mainstreaming” does not seem to have worked well,



from the mainstreaming of the mentally ill into community-based programs to the mainstreaming of autistic children into public school classes. "Disabled high school students who spend time in regular classrooms have a failure rate of 61 percent; those in special classes have a failure rate of 14 percent" (Howard, 1994, p. 149). While the overwhelming preponderance of ADA regulations "and virtually all cost and conflict . . ." (Howard, 1994, p. 153) deal with those in wheelchairs, and while the ADA in theory covers 43 million citizens, the number of people in wheelchairs is less than two percent of this total and many of that two percent are in nursing homes.

Many attempts to benefit one disabled group, in terms of special design, harm another. Low drinking fountains and telephones are harder to use for the elderly or those with bad backs; high toilets make transfer easier from a wheelchair but make bowel movements more difficult, especially for the elderly, curb cuts are more dangerous for the blind, ramps are sometimes slippery and dangerous for the frail, and warning bumps at the edge of train platforms are good for the blind but bad for those in wheelchairs. A particularly continuous issue will be whether or not to pave trails to make them wheelchair accessible.

The NPS in the NER may be increasingly caught in situations in which common sense interpretations of provision for those with disabilities will be legally challenged. Such common sense provision may involve selected withdrawal of specialized facilities for those with disabilities, particularly those in wheelchairs and a movement away from mainstreaming of visitors with disabilities,

**Proposition: The explosive growth of a sub-culture with new values, the Cultural Creatives, will increasingly shape NPS policies.**

With regard to values, U.S. citizens can now be classified into three major groups: Moderns, Traditionals, and Cultural Creatives (Ray and Anderson, 2000). Moderns and Traditionals are easily recognized but today there are 50 million Cultural Creatives, providing the potential for a cultural revolution—one which is already underway.

The Moderns are currently dominant, making the rules, controlling the civil service, the military, the courts, the media, and some multinational corporations. Moderns believe in a technological economy and dismiss other cultures and other ways of life as inferior. They accept the commercialized urban-industrial world without looking for alternatives. Growth is considered essential. What's most important to moderns is:

- (a) making lots of money;
- (b) climbing the ladder of success with measurable steps toward one's goal;
- (c) having lots of choices (as a consumer, or voter or on the job);
- (d) being on top of the latest trends, styles and innovations;

- (e) supporting economic and technological progress at the national level; and
- (f) rejecting the values and concerns of native people, rural people, Traditionals, New Agers, and religious mystics.

Moderns represent 48% of the U.S. citizenry (93 million adults) and, in 1995, they had a median family income of \$42,500.

Traditionals represent 24.5% of U.S. citizens (Ray and Anderson, 2000).

"Many Traditionals are not Republicans but elderly New Deal Democrats, Reagan Democrats, and old-time union people as well as social conservatives in politics...." p. 27.

Traditionals tend to believe that

- (a) patriarchs should again dominate family life;
- (b) FEMINISM is a swearword;
- (c) men need to keep their traditional roles and women need to keep theirs;
- (d) family, church, and community are where you belong;
- (e) customary and familiar ways of life should be maintained;
- (f) it's important to regulate sex -- pornography, teen sex, extramarital sex-- and abortion;
- (g) men should be proud to serve in the military;
- (h) all the guidance you need for your life can be found in the Bible;
- (i) preserving civil liberties is less important than restricting immoral behavior;
- (j) freedom to carry arms is essential; and
- (k) foreigners are not welcome.

Angry about the destruction of the world they remember, many are pro-environment and anti-big business. Traditionals tend to be older, poorer, and less educated than others in the U.S. As they die off, they are not being replaced.

The big news in terms of values is that there are now 50 million Cultural Creatives and their numbers are growing. Their values are such that they:

- (a) love nature and are deeply concerned about its destruction;

- (b) are strongly aware of the problems of the whole planet and want to see action to curb them, such as limiting economic growth;
- (c) would pay more taxes or higher prices if you knew the money would go to clean up the environment and stop global warming;
- (d) give a lot of importance to developing and maintaining relationships;
- (e) place great importance on helping other people;
- (f) volunteer for one or more good causes;
- (g) care intensely about psychological or spiritual development;
- (h) see spirituality and religion as important in your own life but are also concerned about the role of the religious Right in politics;
- (h) want more equality for women at work and want more women leaders in business and politics;
- (i) are concerned about violence and the abuse of women and children everywhere on Earth;
- (j) want politics and government to emphasize children's education and well being, the rebuilding of neighborhoods and communities, and creation of an ecologically sustainable future;
- (k) are unhappy with both left and right in politics and want a new way that is not the mushy middle;
- (l) tend to be optimistic about the future and distrust the cynical and pessimistic view offered by the media;
- (m) want to be involved in creating a new and better way of life in our country;
- (n) are concerned about what big corporations are doing in the name of profit: exploiting poor countries, harming the environment, and downsizing;
- (o) have their finances and spending under control and are not concerned about overspending;
- (p) dislike the modern emphasis on success, on "making it," and wealth and luxury goods; and

- (q) like people and places that are exotic and foreign, and enjoy experiencing and learning about other ways of life.

Cultural Creatives are not defined by particular demographic characteristics -- they are accountants and social workers, waitresses and computer programmers, hair stylists and lawyers chiropractors, truck drivers, photographers and gardeners. The large majority of them are very mainstream in their religious beliefs. They are no more liberal or conservative than the U.S. mainstream, though they tend to reject "left-right" labels. Really, their one distinguishing demographic characteristic is that 60% of them are women, and most Cultural Creatives tend to hold values and beliefs that women have traditionally held about issues of caring, family life, children, education, relationships, and responsibility. In their personal lives, they seek authenticity -- meaning they want their actions to be consistent with what they believe and say. They are also intent on finding wholeness, integration, and community. Cultural Creatives are quite clear that they do not want to live in an alienated, disconnected world. Their approach to health is preventive and holistic, though they do not reject modern medicine. In their work, they may try to go beyond earning a living to having "right livelihood" or a vocation.

"In the twenty-first century, a new era is taking hold. The biggest challenges are to preserve and sustain life on the planet and find a new way past the overwhelming spiritual and psychological emptiness of modern life. Though these issues have been building for a century, only now can the Western world bring itself to publicly consider them. The Cultural Creatives are responding to these overwhelming challenges by creating a new culture." p. 19

New businesses, new management styles, new technologies, new forms of social organization (for example, leasing products, such as carpets and refrigerators, to consumers instead of selling them to make sure they are recycled), and new decision-making techniques (the precautionary principle, for example) -- the Cultural Creatives are constructing a new world, largely ignored by the media (Ray and Anderson, 2000).

**Proposition: In the emerging information economy, patterns of morality, socialization and feelings are emerging much more slowly than technology.**

It remains to be seen how the public will react to genetically engineered food, genetic profiling, cell phones, virtual reality, "smart" houses, and other changes in technology. Thus, it is not possible to make planning assumptions concerning how much people will value a virtual reality visit to a national park or monument, how they will react to cell phone use on a guided tour, or what their reaction will be to use of ATVs which make no noise and have special tires to minimize damage to the ground over which they travel. Much of such reaction may simply reflect the extent to which the technology is perfected, e.g., cell phones which allow the speaker to talk into the phone without others hearing the conversation will be tolerated more than technology which does not.

Nevertheless, the reaction to numerous forms of technology remains to be seen and shifts in such reaction may be sudden and unanticipated, e.g., willingness to use automated reservation systems may increase or decrease dramatically. Tolerance for cell phones, pagers, and other devices may increase or decrease suddenly. There may also be dramatic splits in opinion concerning the appropriateness of such devices, causing the same type of friction among users which has been caused by hikers vs. ATV drivers, and sailors vs. jet ski drivers. etc. For the NPS in the NER, this means that attitudes and behaviors concerning a given technological will not be apparent for many years.

**Proposition: As “literacy” expands in meaning, communicating with people, particularly younger people, will increasingly involve multiple media.**

“The word “literacy,” meaning the ability to read and write, has gradually expanded its grasp in the digital age until it as come to mean the ability to understand information, however presented” (Lanham, 1996, p. 147). Thus, literacy involves multimedia, which include recorded sounds and images. The new media have the advantage of being able to be accessed almost instantly but also stored later. While books were “intellectual property,” it is much more difficult to determine whose property a camcorder view of the Statue of Liberty sent over the internet and downloaded into the printed text of a brochure for a bus tour company is.

Multimedia literacy captures the expressivity of oral cultures, which writing excluded.

“What has changed? Many of the clues we use in the oral culture of daily life, the intuitive stylistic judgements that we depend on have returned. You can see me for yourself. You can hear my voice. You can feed that voice back into the voiceless prose and thus animate it. Yet the writing remains as well. You can see the author with stereoscopic depth, speaking in a space both literate and oral” (Lanham, 1996, p. 148).

The private reflective self who is created by reading is being broadened by multimedia.

“The multiple facets of this digital signal constitute the core differences between the two media, which our efforts in data visualization and sonification have scarcely begun to explore. If we think of the institutional practices built on the separation of words, images, and sounds—such as separate departments for literature art and music—we can glimpse the profound changes that will come when we put them back together” (Lanham, 1996, p. 148).

These changes have profound implication for every aspect of life. For the NPS, such changes mean the increasing realization that NPS is not a number of “sites” surrounded on a map by special lines. Such ways of thinking spring from print media and are challenged by any satellite photo which shows the chunk of earth which is the NER as a primarily forested area which has portions altered by both concentrated and dispersed areas of human made environments.

There will also be the increased understanding that the borders between NPS sites and the surrounding territory are artificial. Such understanding may be helpful in seeking public support for needed zoning changes and other steps to prevent land surrounding NPS sites from being used in ways which are harmful to the integrity of the site. Finally, communicating with the public will become more complex, requiring multiple forms, languages, language levels and images.

**Proposition: The galactic city will continue to spread in the NER of the U.S.**

What is sometimes referred to as “sprawl” will continue and increase in the NER. Nucleated cities emerged in the nineteenth century; particularly in the Northeast. They had a well-defined commercial area, known as “downtown.” Industry was lined up along the railroad tracks and residential areas were arrayed around the edges and segregated along lines of income, ethnicity and race. At the edge of the city, the countryside began and the boundaries were sharp. Where there were suburbs, they also had sharp boundaries. “There was little debate about where the city was or where the country was.” (Lewis, 1995, p. 40).

These cities were replaced by emerging “galactic” cities as the automobile became the primary means of transport. Rather than think of this as urban sprawl, Lewis (1995) contends this is a new kind of city. Since rural land was cheap, buildings are spread out horizontally. The Interstate Highway Act of 1956, which financed limited access highways with a mandated gasoline tax, increased the galactic city’s viability. This was a new kind of city. “What Americans were doing, far beyond the old urban fringe, was building nothing less than an altogether new form of city—doing all the things that cities had traditionally done, but arranging them in a new geometric form.” (Lewis, 1995, p. 46. New cities are inevitably galactic. NER cities, such as Boston, Philadelphia, and even New York City are in the process of becoming galactic cities.

Characteristics of the galactic city:

- It has an internal transportation system made up of interstate and limited access highways.
- There is a considerable degree of internal commercial clustering, usually at the intersections of main arterial highways. “In contemporary America, the main crossroads occur where interstate and primary highways intersect.” p. 53.
- An industrial clustering which is no longer based on manufacturing but more on high tech and services or clean industry housed in industrial parks.
- Residential areas which are highly consumptive of space. Single houses with lawns and garages.

Traditional forms of rural life have disappeared in most of the Northeast. Farming is less important than residential areas. This is not urban sprawl—it is a new kind of city.

“The new non-urban landscape, in the U.S. at least, is being shaped largely by people to whom the rural landscape is nothing more or nothing less than an alternative residential location. Whether they be commuters, retirees, or desktop publishers earning a living in their den, to them, the rural landscape is not a productive system or a way of life, but a locational amenity.” p. 59.

Such people are genuinely urban in social outlook, personal relations and the way they make their living. Only in political outlook do they differ with traditional city residents. They resist urban authority and urban government, consolidation, and land use controls.

The dominance of the galactic city, particularly in the Northeast urban corridor, will have many implications for NPS in the NER. Such cities assure the dominance of the automobile as the primary means of travel. Currently, four out of five miles traveled within the US, (including walking) are traveled in automobiles (Robinson and Godbey, 1997). Thus, parking onsite or at intermediate staging areas close to NPS sites, sometimes with mass transit to and on the site, will become an increasingly important issue. This issue will become more complex as the number of visitors increases at many sites. While there is evidence that some ethnic groups are visiting parks in larger groups, the average household in the U.S. has only 2.6 people in it and cars on the road most typically have only one person in them. If the average number of occupants in a car does not increase faster than the increase in total number of visitors, more cars will be involved in NPS visitation.

At some NPS sites in the NER, it may make sense to charge entrance fees in ways that encourage car-pooling with a larger number of occupants in a car which enters the site or parks near it or to charge less to those who arrive by bus or other means of mass transit.

The coming dominance of the galactic city, which is associated with sprawl, means that boundaries surrounding NPS sites in the NER will be increasingly threatened with forms of development which have adverse effects on the nature and characteristics of the site in question.

**Salient Issue:** The unique life styles and historically unique situations of young people means that their interest in and use of NPS sites in the NER is highly unpredictable. In spite of this, they are a key variable in NPS success in the NER during the next few decades.

Young people are vastly different than their predecessors. They never knew a time before computers and not much time before the internet. They are the richest generation in history, the best educated, the healthiest, and they are the first to have grown up



knowing nothing of war, famine, disease or poverty (although about one-fifth grew up in poverty). They watch less TV, use the web much more, and invent their own leisure behavior, even as the lines between work and leisure blur for them.

1. They welcome change and are more able to adjust to rapid change.
2. They think differently. "Where years of education, training and experience were once necessary to success, now they are increasingly seen as irrelevant, even a liability (Anderson, 2001, p. 8).
3. They are independent, with little loyalty to company.
4. They don't expect to have a career but rather a zigzagging path from job to job, company to company, skill to skill.
5. They are entrepreneurial, with more than half of all teenagers over holding a job and a quarter of 12-13 year olds. Almost one fifth of high school students own shares of stock. (Anderson, 2001, p.83)
6. They want opportunity more than money or security.
7. They demand respect based on the fact that, in a rapid technological revolution, parents have less knowledge that is relevant. There is now a dialogue between young and old rather than a lesson taught by the old to the young.

The Millennial or Y Generation will determine the fate of the NPS in the NER during the next few decades. Of critical importance is what young people know about the NPS in the NER, the extent to which they see such governmental services as relevant, and their interest in visiting and supporting NPS sites.

For the NPS, relating to this generation will be problematic. The NPS is paramilitary in organizational structure, staffed by employees who are "career" employees with high levels of organizational loyalty, usually does not operate "outside the box" and often views its educational function as transmitting knowledge from old to young.

There is also the issue that the NPS has a sufficient visitor base composed increasingly of baby Boomers (born 1946-1964) and is likely to keep this visitor base without making many changes. One scenario is therefore that the NPS visitor base in the NER gets increasingly old but is not replaced by young people in the same numbers.

How to pass on knowledge and appreciations about the NPS in the NER to young people is therefore a critical variable in the evolution of the NPS in the NER.

Because the NER of the NPS is unique in the extent to which it manages a wide variety of diverse sites, many of which are comparatively small and urban in character, strategies for introducing young people to such sites may be unique from other NPS regions.



## **Transportation**

What changes will take place in the extent to which people travel, methods of transportation, cost and ease of travel and other travel related issues?

**Proposition:** The automobile will remain the most prevalent form of transportation in the U.S. and in the NER during the next 20 years, although mass transit may increase incrementally in the NER.

**Proposition:** The volume of traffic in many parts of the NER, particularly the urban corridor from Northern Virginia to Boston, will increase faster than the miles of road to accommodate it.

**Proposition:** The price of gasoline will continue to increase due to a complex of factors including tighter environment regulations requiring “cleaner” gasoline, the need to tax gas more to provide funding for additional highways and highway infrastructure repair or for start up costs for high speed trains.

**Proposition:** Auto travel will be more highly “guided,” both by onboard technology, which directs the driver’s travel in real time by voice command, and by software which provides non-real time direction. The onboard technology will allow for changing traffic conditions to be incorporated into instructions.

**Salient Issue:** Reliance on the automobile for almost every human task involving travel is linked to the prevalence of single use zoning. The extent to which such zoning is altered will be vital in determining how much other forms of transportation may be used and the extent of travel necessary in everyday life.

**Salient Issue:** The extent to which alternative fuels are used in automobiles may produce sudden declines in the cost of automobile travel, with the potential of produce a much higher rate of traffic congestion.

**Salient Issue:** The extent of development of high-speed trains along the eastern urban corridor may shape tourism patterns and other forms of daily leisure behavior.

**Proposition:** The NPS in the NER will conduct more experiments with diverse forms of transportation onsite. These may include people movers, light rail, bicycles, buses, and other forms.

**Salient Issue:** The extent to which alternative fuels are used in automobiles may produce sudden declines in the cost of automobile travel, with the potential of produce a much higher rate of traffic congestion.

**Proposition:** Tour buses will become a more prevalent way for visitors, particularly older visitors, to get to and from many NPS sites in the NER.

**Proposition: The automobile will remain the most prevalent form of transportation in the U.S. and in the NER during the next 20 years, although mass transit may increase incrementally in the NER.**

The automobile will continue to prevail as the dominant transportation form for many reasons. It allows the greatest customization of travel schedules, it is the most heavily subsidized form of travel by government, it provides privacy, it is more comfortable than mass transit, and it is the only means for negotiating the centerless galactic cities which have emerged as the dominant form of urbanism in the U.S. While light rail will make some gains, the investment costs to develop magnetic levitation or other high speed train systems is immense and start up time is more than a decade at best.

It should be noted that the NER currently has a greater share of mass transit users than any other region of the U.S. While the mass transit share of the journey to work is about five percent nationally, it is eleven or twelve percent in the NER. Further, the mass transit share of Hispanics, Blacks, the elderly and poor people is higher than average and the NER has a higher than average portion of elderly and Blacks. While mass transit may incrementally increase, it is unlikely that the number of people using mass transit will increase faster than the population will increase in the NER. Thus, there will likely be more cars and drivers.

While the urban corridor in the NER will be the site of many experiments in transportation and mass transit, such experiments will not significantly reduce auto traffic. Forms of mass transit such as magnetic levitation trains, while they are technologically feasible and in use in many countries, require a huge investment and many years of start up time. While Amtrak will likely gain ridership for certain routes between major urban areas, the auto will continue to prevail.

**Proposition: The volume of traffic in many parts of the NER, particularly the urban corridor from Central Virginia to Southern Maine, will increase faster than the miles of road to accommodate it.**

This will result in increased traffic congestion, lower average speeds, increased "rewards" for autos carrying multiple passengers, more auto travel during off peak hours, and higher costs in terms of time, stress and complexity associated with auto travel. Such increase will be particularly acute in the greater New York city area, where traffic has increased thirty percent in the last ten years but very little has been done to accommodate such increase (Lemley, 2000, p. 92).

For the NPS, this will increase the costs associated with visitation to most sites, make such travel more deliberate, done during off-peak hours, in larger groups, and by alternative means of transportation where they exist. It may also mean more visitation at sites closer to home or which are thought to be reachable on less congested roads.

**Proposition: The price of gasoline will continue to increase due to a complex of factors including tighter environment regulations requiring “cleaner” gasoline, and the need to tax gas more to provide funding for additional highways and highway infrastructure repair or for start up costs for high speed trains.**

Such increases will make some auto travelers more purposeful in their behavior, and more likely to visit outdoor recreation and tourism sites which are close to home. Others will buy autos whose hybrid engines get greatly expanded mileage (70-120 miles per gallon) or are powered by natural gas or fuel cells. In this transition period, those who own low mileage SUVs will find that travel is considerably more expensive while those who adopt the new technology will not.

While there are very few technical reasons right now for automobiles, buses, and trucks to use petroleum as a fuel source, there is a huge economic infrastructure dependent upon oil. A sudden shift to an alternative fuel source could touch off a worldwide depression. The U.S. is highly dependent upon other countries for petroleum, importing over half of all oil used. While Canada is currently its biggest supplier of oil, Canada’s currency has fluctuated in value during the last few decades and is now greatly devalued against the U.S. dollar. Should Quebec succeed or Canada adopt the U.S. dollar as its currency (which has been seriously proposed in the Canadian parliament), oil price and availability could be impacted.

The transition from gasoline to natural gas to fuel cells, hybrid cars, electric cars and buses, etc. will occur during the 2000 to 2020 period, cutting air pollution and noise levels. The extent to which gasoline becomes considerably more expensive and/or less available is important since the vehicles purchased for individual transportation during the last few years have actually gotten lower MPG than previously. Thus, for instance, if the price of gasoline increased to three dollars per gallon, either based on OPEC’s ability to control production or the need to produce less polluting forms of gasoline to meet emissions standards, currently owned SUVs, trucks and low mileage autos would be severely devalued. The financial cost of any onsite visitation to NER sites by auto would increase, but, due to relatively lower traffic flows, might decrease in terms of costs of time. A sudden increase in fuel costs would likely mean that those who visited NER sites would have higher education and income than presently. Conversely, cheaper fuel, due to technological breakthroughs such as high mileage cars and the introduction of fuel cell cars might somewhat “democratize” the profile of NER site visitors.

**Proposition: Auto travel will be more highly “guided,” both by onboard technology, which directs the driver’s travel in real time by voice command, and by software which provides non-real time direction. The onboard technology will allow for changing traffic conditions to be incorporated into instructions.**

A number of onboard technologies will make driving more automated. Onboard computers will guide drivers to less traveled routes and warn of traffic jams. Sensors imbedded in cars will monitor the activity and destinations of other cars on the road. “This technology will conserve fuel and save lives, but the pleasure of driving as you

know it will be gone” (D’Agnese, 2000, p. 58). If driving becomes less pleasurable, it may mean fewer discretionary trips are taken and that discretionary trips are undertaken more deliberately.

In spite of such innovations, “autopilot cars” remain a longshot for the foreseeable future. Autopilot systems for trains and planes fail frequently and trained humans step in when they do. Liability concerns for autopilot autos are such that an automobile company would risk going out of business if such onboard systems failed.

The NPS in the NER will do more to “guide” visitors to its sites and such guidance will become customized for any inquiring visitor. Such customized guidance will be increasingly valuable to the potential visitor, as the logistics of visitation become more complex due to higher volumes of traffic. The NPS in the NER may begin to promote the idea: “please come visit—but contact us first.” Those who contact the site in question would receive information not only about travel routes and estimated travel times but also about number of people onsite at various times. The NPS in the NER may develop websites which mimic Travelocity.

**Salient Issue: Reliance on the automobile for almost every human task involving travel is linked to the prevalence of single use zoning. The extent to which such zoning is altered will be vital in determining how much other forms of transportation may be used and the extent of travel necessary in everyday life.**

The biggest factor which necessitates automobiles for almost all travel is single use zoning. The prevalence of such zoning prevents life from occurring much as it does in some English villages, even though when Americans describe an ideal place to live they almost always describe an English village. Zoning prevents housing from being intermixed with stores, office buildings, hospitals, etc. Such zoning makes bicycles and walking largely useless in everyday travel.

To the extent that there is movement away from single use zoning, automobile use may be greatly affected, reducing traffic volumes substantially.

**Salient Issue: The extent of development of high-speed trains along the eastern urban corridor may shape tourism patterns and other forms of daily leisure behavior.**

While the automobile will remain the dominant form of personal transportation, the extent to which “mag lev” or other high speed trains are introduced may reshape tourism and other leisure patterns in important ways, increasing visitation at recreation sites which are near such train stops. A Delphi study of futurists contained the prediction that:

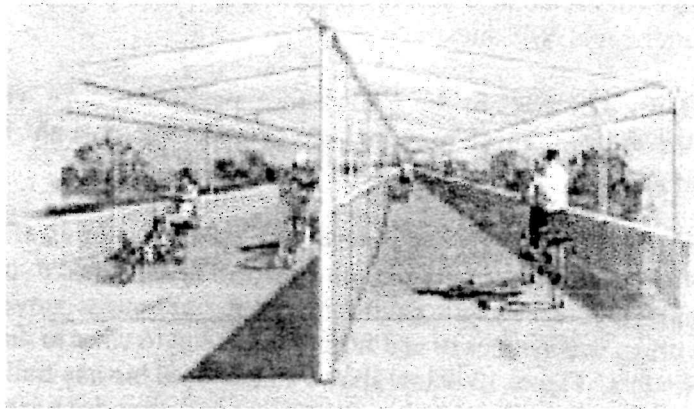
The technologies that may have the most direct impact on daily lives are in transportation. By 2017, high-speed rail systems will connect major cities of the developed world. (Halal et al., 1997, p. 21).

A primary function of such trains may be to replace short airplane flights from cities within 300 miles of each other. The route such trains travel could dramatically affect visitation to individual NPS sites.

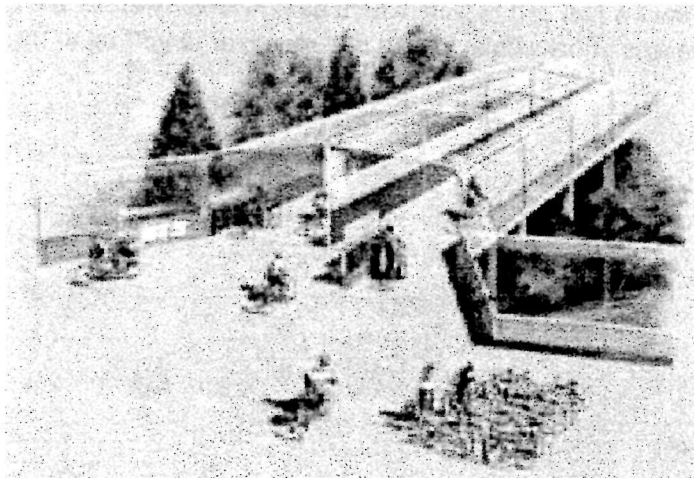
**Proposition: The NPS in the NER will experiment more with diverse forms of transportation onsite. These may include people movers, light rail, bicycles, buses, and other forms.**

The NPS in the NER will likely experiment with numerous forms of transportation both onsite and offsite. Such transportation schemes will be designed to move people onsite more efficiently, to protect fragile environments, to limit onsite movement, to bring people from urban destinations to and from the site and to cater to the onsite leisure interests of visitors. Figure 13 below shows an enclosed bicycle trail system, which greatly reduces the effort associated with pedaling and provides relative shelter from weather. People with disabilities can use various forms of tricycles. Such systems have great potential for onsite transportation in large, heavily visited outdoor recreation areas. Figure 14 shows a fuel cell bicycle which be powered by either the rider's legs or a fuel cell. Such means of travel may play a role onsite or in getting to the site.

**Figure 13. Bicycle Trail System**



Source: Accessed online at: <http://www.biketrans.com/>, on September 15, 2000.



Source: Accessed online at: <http://www.biketrans.com/>, on September 15, 2000.

**Figure 14. Fuel cell Bicycle**



Source: Accessed online at:  
<http://www.cnn.com/2000/NATURE/07/03/fuel.cell.bike.enm/index.html>, on September 15, 2000.

**Salient Issue: The extent to which alternative fuels are used in automobiles may produce sudden declines in the cost of automobile travel, with the potential of produce a much higher rate of traffic congestion**

The potential for alternative fuel sources for automobiles is great. Already, hybrid cars have been introduced which obtain 60 miles per gallon or more. Natural gas may be used widely and, ultimately, fuel cell cars may come on line during the next ten years. Such alternative fuel cars, and the extent to which they are purchased, will have a huge impact on travel as well as environmental issues. All such alternative fuel sources have lower carbon emissions.

**Proposition: Tour buses will become a more prevalent way for visitors, particularly older visitors, to get to and from many NPS sites in the NER.**

While the automobile will remain the most frequent means of traveling to NPS sites in the NER, considerably more use will be made of tour buses. The forces behind such increases of tour buses include: 1. Many Baby Boomers, as mentioned earlier, have not saved much money for retirement. Low cost bus tours will be increasing attractive for this group. 2. High volumes of traffic and increasingly complex traffic patterns may discourage many elderly visitors from trying to get to the site in a car. Instead, they may prefer to have someone else drive. 3. Tour operators and numerous organizations promoting tourism will increasingly work closely with NPS site managers and, 4. Tour buses may be viewed as a way of helping relieve congestion caused by park cars both onsite and near the site.



## **Health and Wellness**

How will the health and wellness of the public change and how will such changes shape use of leisure, outdoor recreation and visitation to National Park sites within the Northeast?

**Proposition: The “Active” life expectancy of older people is increasing, thus increasing the likelihood that they will travel for leisure purposes compared to the last generation of elderly.**

**Proposition: The American public will be more highly informed about their health statuses and problems and will act in ways, particularly during leisure, which recognize these health statuses.**

**Proposition: Level of crime and perceived level of crime will be increasingly important factors in NPS visitation in the NER.**

**Proposition: The potential for epidemics of both waterborne and airborne diseases will increase.**

**Proposition: Use of leisure will increasingly be understood to be related to state of health**

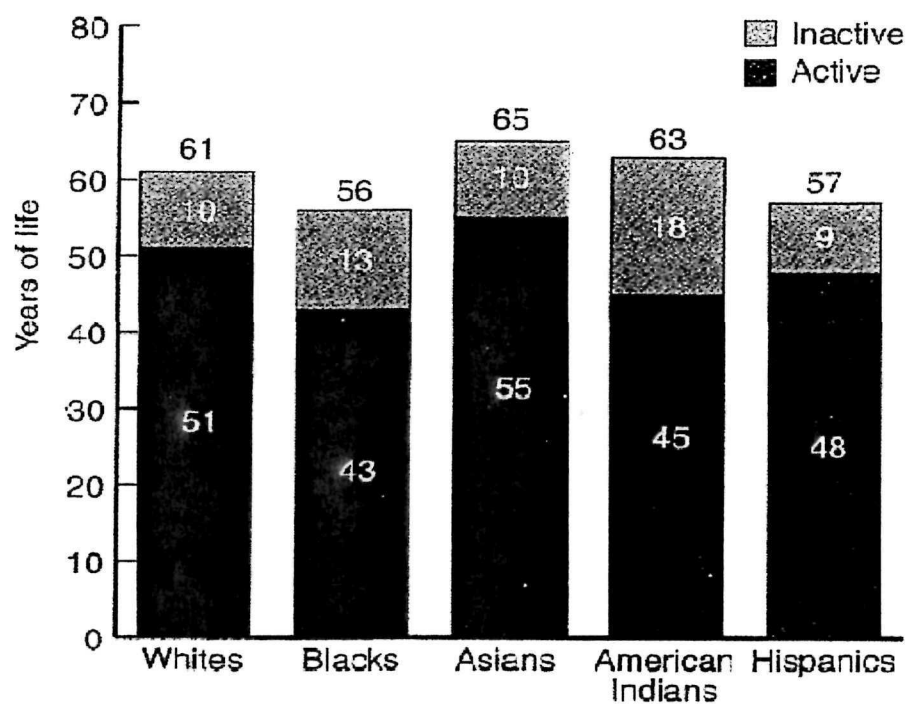
**Proposition: The “active” life expectancy of older people is increasing, thus increasing the likelihood that they will travel for leisure purposes compared to the last generation of elderly.**

Each generation of Americans entering its 80’s has had fewer disabilities that constrain activities that are part of daily living. The “active” life expectancy appears to be increasing as fast as life expectancy. It should be noted, however, that there is variation in both life expectancy and active life expectancy.

Figure 15 shows that active life expectancy is greater among Asian American (55 years) second greatest among whites and the least among African-Americans (43 years). Thus, it seems likely that visitation to NPS sites in the NER among elderly people would be disproportionately from Asian-Americans and whites, all other things being equal. While African-Americans are growing, as a percentage of the population faster than whites, their shorter active life expectancy may mean that the increase in the percentage of blacks who visit NPS sites in the NER may be small.

While active older people may visit more, they will not walk as far onsite, will be more affected by temperature extremes, and will need more water, shade, resting areas, and logistical support during their visits.

Figure 15. Life Expectancy in Inactive and Active Years by Ethnic Status



Source: <http://www.nacc.usgov/regions/midatlantic/>

Against this optimistic assessment, however, is evidence of greater restrictions in daily life activities which is not solely due to an aging population. While the “active” portion of life may be increasing, within that “active” period, health problems which limit activity are increasing.

In the U.S., the National Health Interview Survey, initiated in 1957, examines two measures of health of 100,000 people annually. One of these measures is “limitation of activity” which is a measure of long-term disability that is due to chronic conditions and diseases which have usually lasted at least three months. A person is limited in activity when he or she has difficulty performing his or her usual activity that is normal for their age group (Crimmins and Ingegneri, 1995). The other measure is “restricted activity days” which is how many days during the past two weeks the individual had to cut down on normal activity because of health. Restricted activity can be due to either acute conditions, such as colds and sore throats, or chronic conditions, like heart disease. Thus, it is an indicator of both acute and chronic illness.

In the U.S. population, between 1957 and 1989, “activity limitation” has increased 43 percent. The number of “restricted activity days” has increased 28 percent between 1961 and 1989. Some of the reasons for this, in addition to an older population, include: technologically keeping people alive who would formerly have died; overeating and a junk food diet; lack of exercise; higher stress levels; and increased chemical exposure which may be degrading the immune system, giving rise to increased infections and autoimmune disorders such as asthma, rheumatoid arthritis and diabetes (Montague, 1996).

Cancer rates are generally higher and such increases are not attributable just to an older population. The age-adjusted increases in the incidence of all cancers have increased 54 percent during the last forty-five years and the death rate due to cancer has increased almost ten percent. Numerous studies show that environmental factors are far more important than genetic, inherited factors in terms of contracting cancer. “Migration studies” show that when people migrate from one country to another, they tend to develop rates of cancer, which reflect the country they have moved to. (Montague, 1997).

“So long as we continue to bathe ourselves in carcinogens in air, water and food, and in chemicals which degrade our immune systems, more of us each passing year will have to learn to live with cancer. Present policies are exceedingly expensive (estimated at \$72.5 billion in 1985) and don’t make much sense from a public health standpoint, but they make eminently good sense from the viewpoint of the cancer industry — those who cause it and those who sell services that ameliorate its effects. The cancer industry is robust and healthy; by comparison, the proponents of prevention are sickly, weak and pallid” (Montague, 1997, p. 4).

While the portion of life during which people visit NPS sites may increase, this portion of life will be interspersed with more days of limited activity. Visitors may be both older and have more limitations in what they can do and what assistance they will need. Onsite medical treatment and provisions for medical emergencies will become more critical to the operation of NPS sites.

**Proposition: The American public will be more highly informed about their health statuses and problems and will act in ways, particularly during leisure, which recognize these health statuses.**

As the process of making people more responsible for their own health has begun, people have increasingly become knowledgeable about their own health statuses and needs. They are also more likely to monitor their own health problems and to behave in ways which recognize health problems. "Daily computer checkups of your blood, saliva, or bodily waste will be effortless, the medical equivalent of checking your stock portfolio" (D'Agnese, 2000, p. 60). People may even know what vitamins their body needs on a given day or what food would have maximum health benefits. Such monitoring behavior will further customize individual behavior at NPS sites. People with heart problems, high blood pressure, diabetes, arthritis, and a host of other ailments will be more likely to behave in ways which conform to these conditions. Some visitors to NPS sites in the NER will also demand monitoring technology onsite, particularly when staying overnight.

**Proposition: Level of crime and perceived level of crime will be an increasingly important factor in NPS visitation in the NER.**

This is true primarily due to higher rates of fear of crime and sensitivity to crime among an increasingly elderly population. While, overall, elderly people are the least victimized by crime of any age group, they have the highest overall fear of crime levels. They also suffer the most physical and psychological harm when they are victims of a given crime.

Changes in crime rates will be affected by a number of issues during the next twenty years. A major positive factor is the aging of the population. Older people commit substantially fewer crimes. Conversely, the population will contain more ethnic minorities, more people with lower levels of formal education and a greater split between rich and poor. These situations are associated with higher crime. Projections of increases in the average temperature and a longer period of warm weather are also positively associated with crime since crime takes place disproportionately in warm weather.

Fear of crime may increase even if commission of crime continues to decrease. The elderly, for instance, have higher levels of fear of crime and their portion of the population will increase. A greater amount of televised cop and crime shows may exacerbate people's perception of how much crime is actually committed.

**Salient Issue: The potential for epidemics of both waterborne and airborne diseases will increase.**

The increasing transport of people, plants and animal life from one country to another is greatly increasing the transportation of numerous communicable diseases. Thus, Tuberculosis outbreaks have occurred from Russian immigrants transporting and spreading the disease in an airplane or other places where recycling air makes TB easily spreadable. The U.S. Geological Survey (USGS) has issued Wildlife Health Alerts to state and federal natural resource agencies warning of the emergence of the West Nile virus in free ranging birds in several NER states, including New York, Connecticut, New Jersey and Maryland. USGS has initiated a multi-state surveillance network to detect and monitor the movement of the virus in birds, which can contract the disease from mosquitoes.

West Nile virus, a mosquito-borne disease never before reported in the Western hemisphere, has caused encephalitis in people in the New York City area. Birds are the natural hosts for this virus which can be transmitted to humans and other animals through bites of infected mosquitoes. USGS scientists and other investigators have diagnosed West Nile Virus in eighteen native bird species. USGS is monitoring the possible spread of the virus, has alerted state and federal wildlife agencies and has set up a surveillance network along the Atlantic and Gulf coasts.

In early October, 2000, USGS dispatched wildlife health specialists from the USGS National Wildlife Health Center in Madison, Wisconsin to New York to determine the magnitude of the outbreak and the geographic distribution of the virus, and to evaluate if crows, which had been found dead throughout the region, carried the virus. Investigators have yet to determine how many birds have died from this disease. Some areas reported very high bird mortality, especially in American crows, but a number of the birds died from other causes. About 49% of the 392 birds tested by USGS and the Centers for Disease Control and have tested positive for West Nile virus.

Any such outbreak has direct consequences for NPS in the NER. Entire sites might be quarantined, access limited, or attempts made to identify previous visitors to warn them of the discovery of contagious diseases onsite.

**Proposition: Walking, the most common form of exercise for Americans, will increasingly be recognized as a health benefit of NPS visitation.**

It is estimated that the amount of walking has declined 42 percent in the last two decades (Surface Transportation Policy Project, 2000). As mentioned elsewhere, Americans travel four out of every five miles they move in automobiles. As this had happened, the percentage of overweight Americans has increased by 40 percent. (Dateline, November 2000). Part of the reason for the decline of walking may be that walking is more dangerous in growing suburban and metropolitan communities (Fatality Analysis Reporting System, 2000). Most states are using very little of their federal transportation funds to make walking safer and more convenient. While states have been

spending an average of \$72 per person on highways, they spend only 55 cents per person on pedestrian projects.

Given rising health care costs and increased recognition of the huge rise in obesity, walking will be encouraged by health care providers and by government. For the NPS in the NER, this may mean that the role of walking while visiting NPS sites will be emphasized and encouraged. Walking is a common denominator of park visitation but it is often not thought of as a benefit. This will likely change.

**Proposition: Use of leisure will increasingly be understood to be related to state of health.**

Use of leisure is increasingly understood to be a critical variable in determining personal health, since fifteen percent of all money changing hands in the U.S. is for "health." This is of critical importance; new conceptions of wellness put use of recreation and leisure in the mainstream of both public and corporate strategies to enhance health and minimize health care costs.

There is growing evidence that parks of all varieties contribute to two very important health issues: stress reduction and exercise. While such understandings are important to all age groups, they are particularly important to the health of older citizens. The percentage of elderly people in the population will increase from 12% to almost 20% in the first half of the next century. Seventy-five million Baby Boomers are currently between the ages of 54 and 36. As they get older, demands on the health care system will skyrocket, since the ratio of health care spending on the elderly compared to adolescents is between seven and ten to one. People in their fifties and sixties routinely experience some health or medical trauma.

These situations require the rethinking of health care and the maintenance of health. The issue, increasingly, is a combination of the prevention of negative health and affordable rehabilitation when health traumas strike. Parks are going to play a key role in both these issues. The vast majority of older people currently use local parks, and those who do have been found to make fewer visits to a physician for reasons other than check-up than those who don't, even when controlling for the effects of age, health conditions, income, education level and other possibly influencing factors (Godbey, Graefe and James, 1992). About half of older adults state their mood or state of mind changed positively after visiting a local park. (Godbey and Blazey, 1987) A significant percentage of older adults are involved in numerous forms of both moderate and vigorous exercise while in parks.

NPS sites in the NER provide numerous forms of opportunity for both exercise and stress reduction. Such opportunities will increasingly be understood in terms of their value in reducing health care costs. In effect, the public cost of a visit to a NPS site may increasingly be understood as displacing health care costs.

## Governance

**Proposition:** Governance will continue to devolve toward state, county and municipal government and away from Federal government. For many federal agencies, such as NPS, this will mean a loss of power, a need for greater collaboration, more revenue generation, more partnering and a greater need for public relations.

**Sub-Proposition:** Devolution of government will mean the desires of both state and local government will become more central to the operation of specific NPS sites in the NER.

**Sub-Proposition:** Devolution of government will produce more corruption in state and local politics, particularly within the NER.

**Proposition:** The federal Government will increasingly move toward multi-nation regional alliances to deal with a variety of environmental, economic, migration, defense, cultural and other issues.

**Proposition:** Differing levels of U.S. government, federal, state, county, and local, will increasingly interact, forming alliances, partnerships, and cooperative arrangements.

**Proposition:** Within various agencies of government at all levels, “consolidation” will be a major theme.

**Proposition:** Government workers will have to become more efficient.

**Proposition.** Governance will continue to devolve toward state, county and municipal government and away from federal government. For many federal agencies, such as NPS, this will mean a loss of power, a need for greater collaboration, more revenue generation, more partnering and a greater need for public relations.

Government is devolving, and will continue to devolve away from the federal level and toward the state and local level in terms of power, available funds and responsibility and authority for both making and carrying out policy in areas such as health, welfare, education, environment, justice and others. Local government is going to become increasingly important. We are no longer a mass culture. We are a mosaic culture in which values, economic conditions, social problems and willingness to address them vary tremendously. Economically, we are a post-industrial society; not an industrial one. As Peter Drucker (1993) observed:

“. . . Postindustrial society has to be *decentralized*. Its organizations must be able to make fast decisions based on closeness to performance, closeness to the market, closeness to technology,



closeness to the changes in society, environment and demographics, all of which must be seen and utilized as opportunities for innovation” (p. 60).

There are a number of reasons that fundamental changes taking place in our world will elevate local government to the most important level of government. Not only is the nation-state less and less able to deal effectively with problems which are increasingly either supranational, regional or local, but also with the changing characteristics of our population. Such changes include the increasing number of people in service sector jobs whose productivity cannot be raised quickly enough to keep them in the middle class; the increasing percentage of the population that is elderly, live alone and want to live in their own homes; rises in violence; etc. As Peter Drucker argued, local government will be increasingly responsible for two aspects of social needs: charity -- helping the poor, the disabled, the helpless, the victims and second, services aimed at changing the community and at changing people. Prevention will become the watchword in shaping social policy in areas such as health, crime, pollution control, welfare, unemployment, and safety. Such preventative approaches will be applied at the local level, rather than the national level, based upon radically differing local conditions. In all these endeavors, however, government will be forced to change the way it operates. Government workers are the least productive of service workers and, given huge deficits, that situation has to change. As society moves away from mass culture and mass production, government will devolve toward the local and, simultaneously, evolve toward the regional and international.

State and local governments have grown significantly in funding and staff since the 1980s. On the expenditure side, in one important sense the states are already more prominent than the Federal government. The vast bulk of Federal expenditures (68 percent) in 1997 was devoted to Social Security/Medicare, defense spending, and net interest outlays. Correspondingly, much of what we normally associate with the term “government” in terms of services directly provided to the public at large by government employees, is under the purview of the states.

If we exclude Social Security, Medicare, net interest on the Federal debt, and defense from the total expenditures of Federal, state, and local governments in the U.S., 80% of what remains is administered by state and local governments. In addition, state governments finance most public investment (infrastructure, education, and training), and most infrastructure facilities “reside” in the states. (Sawicky, 1999).

The Federal deficit as of July 2000 was \$5,644,928,857,090.87. (see Table 21). This is a rather dramatic increase from September 1987 when it was \$2,350,276,890,953.00. While it is argued that Federal government has shown a budget surplus during the past few years, such “surpluses” consist entirely of Social Security’s temporary surpluses. Without borrowing the Social Security surplus, OMB does not project that balance will be reached within the budget’s five-year planning window.



**Table 21. United States Federal Deficits from 1987 Through 1999**

09/30/1999	\$5,656,270,901,615.43
09/30/1998	\$5,526,193,008,897.62
09/30/1997	\$5,413,146,011,397.34
09/30/1996	\$5,224,810,939,135.73
09/29/1995	\$4,973,982,900,709.39
09/30/1994	\$4,692,749,910,013.32
09/30/1993	\$4,411,488,883,139.38
09/30/1992	\$4,064,620,655,521.66
09/30/1991	\$3,665,303,351,697.03
09/28/1990	\$3,233,313,451,777.25
09/29/1989	\$2,857,430,960,187.32
09/30/1988	\$2,602,337,712,041.16
09/30/1987	\$2,350,276,890,953.08

Source: U.S. Bureau of the Public Debt. Federal Budget Deficit from 1987-1999.

For the year 2003, the OMB projects that the government's "on-budget" operating accounts will be \$63 billion in the red. OMB assumptions of surpluses into the future are completely dependent upon the high rates of growth in the economy experienced in recent years, oil prices remaining low and Congress exercising fiscal constraint (Concord Coalition, 1999).

The 105th Congress and President Clinton balanced the budget by freezing spending for Federal domestic discretionary programs. The freeze is stipulated in a fixed dollar "cap" which is not adjusted for inflation. The implication is that spending of this type must decrease in real terms and as a share of the economy. The extent of scheduled cuts in the 1997 budget deal was about \$65 billion, after adjusting for inflation. One corollary of these cuts is a projected decline in public investment on infrastructure, education and training, and research and development (GAO, 1997). The 1997 deal was not unique in this regard. Deficit politics and budget rules conspired throughout the 1980s to squeeze domestic discretionary spending, grants-in-aid (Kenyon, 1992), and public investment. Increases in Medicaid grants could only have been partial recompense, given the restrictions on the use of such funds.

The advances in devolution have been legislated under the umbrella of a relatively long economic recovery marked by record lows in unemployment. All revolutions should enjoy such fair weather. In less happy economic times, the new extent of decentralization in the U.S. public sector could cause some important pressure points to blow their gaskets, so to speak.

"Any combination of slower economic growth, increased federal spending or tax cuts could lead to deficits as far as the eye can see," Phillips said (Concord Coalition, 1999).

**Sub-proposition: Devolution of government will mean the desires of both state and local government will become more central to the operation of specific NPS sites in the NER.**

In states or cities where tourism development is a high priority of government, the NPS may be under more pressure to operate in ways that increase tourism. Local and state political, environmental, financial and other issues may more directly impact NPS operations.

**Sub-proposition: Devolution of government will produce more corruption in state and local politics, particularly within the NER.**

As state and local governments become more powerful and spend a larger portion of total government spending, they will likely become more corrupt. In many cases, this simply will reflect a history of state corruption in government. Many NER states and several cities, such as Boston, MA., Bridgeport CT, Jersey City, NJ and others have a history of political patronage and corruption. Unless state and local government becomes dramatically more professionalized, the new power and funding they are responsible for

may produce higher levels of corruption than what exists at the Federal level. This may mean NPS will be challenged to maintain the integrity of its operations to an even greater extent and may feel additional pressure from local and state level politicians and business people.

**Proposition: The Federal government will increasingly move toward multi-nation regional alliances to deal with a variety of environmental, economic, migration, defense, cultural and other issues.**

The Federal government is increasingly involved in organizations and agreements which are supranational. The North American Free Trade Agreement, for example, is an agreement to eliminate barriers to trade in, and facilitate the cross-border movement of, goods and services between the territories of the parties; promote conditions of fair competition in the free trade area; increase substantially investment opportunities in the territories of the Parties; provide adequate and effective protection and enforcement of intellectual property rights in each Party's territory; create effective procedures for the implementation and application of this Agreement, for its joint administration and for the resolution of disputes; and establish a framework for further trilateral, regional and multilateral cooperation to expand and enhance the benefits of this agreement.

The NPS in the NER is likely to be affected by such multi-national initiatives, from complying with international agreements concerning the environment or tourism to participating in cooperative agreements with other countries in regard to the management of national parks. Agreements with Canada will be particularly important to the NPS in the NER.

**Proposition: Differing levels of U.S. government—federal, state, county, and local—will increasingly interact, forming alliances, partnerships, and cooperative arrangements.**

Government agencies at all levels will show increased ability to solve problems and undertake joint action in using cooperative strategies which save both time and money. Both the devolution of government and the balkanization of the population mean that rigid federal policy initiatives make little sense. Environmental problems, transportation systems, economic conditions, lifestyle, political belief and many other aspects of life conform less and less to Federal, state, county or municipal boundaries.

Such changes will include cooperation among Federal and state level land management agencies, many of whom have histories of competition and antagonism. Such cooperation may exacerbate the "old guard—new guard" split within both NPS and other land managing agencies.

**Proposition: Within various agencies of government at all levels, "consolidation" will be a major theme.**

In many cases, government agencies concerned with a host of related but separate functions will be consolidated into units with more diffuse purposes. In recreation and park services, this has already begun to happen in states like California at the municipal government level. It has also begun to happen at the state level, as “community services” absorb recreation and parks as a separate state bureau or agencies with broad environmental mandates absorb agencies formally concerned with “parks.” Where “recreation and parks” do survive as a separate government entity at all levels of government, they will be more closely allied with either “tourism,” “economic development,” or “health.”

The bureaucratic line between “outdoor recreation” and “tourism” will be increasingly permeable, as will the line between “outdoor recreation” and “environmental protection or management.” It is possible that, within the NER, land managing agencies will cross train employees, jointly manage sites, develop maintenance plans jointly, purchase equipment together and even jointly employ staff.

**Proposition: Government workers will have to become more efficient.**

Federal government workers will need to be substantially reorganized, retrained and retired. Government is the biggest employer of service workers, yet they have the lowest productivity (Drucker, 1993). “In every single developed country, governments have reached the limits of their ability to tax and their ability to borrow. They have reached these limits during boom times when, according to modern economic theory, they should have built up sizable surpluses. The fiscal state has spent itself into impotence” (Drucker, 1993, p. 133). Government has, by and large, not shown itself to be very good at “doing” things. (The Department of Defense, in 1994, spent as much on travel billing and procedures as on the actual travel.) Government can set the rules or standards; it can provide, but it doesn’t provide direct services as well as other forms of organization. Part of the reason for this is that the traditional “productivity by command” approach doesn’t work very well. “In knowledge and service work, partnership with the responsible worker is the only way to improve productivity. Nothing else works” (Drucker, p. 92). Government organizations must become learning and teaching organizations that allow and insist that employees increase the productivity of knowledge about what they are doing. It will also involve considerably more outsourcing, getting rid of almost all management layers, re engineering in ways which will result in layoffs of employees, and more reliance on “third sector” organizations.

## Environment

What environmental issues will increase in importance in regard to outdoor recreation, visits to NPS sites and the management of the environment?

**Proposition: Climate will become a more important factor in outdoor recreation activity, lessening predictability of outdoor events, reshaping outdoor dress, behavior and duration of activity, and altering attitudes toward being outdoors. While such changes will be incremental during the 2000-2020 period, they will be pronounced.**

**Proposition: Extreme weather events may be the most important consequence of global warming on NPS operations in the NER.**

**Proposition: Awareness of environmental problems and issues will increase exponentially during the next twenty years, reshaping public expectations about how both government and the corporate sector should function.**

Although the Northeast contains some of the largest metropolitan areas in the country, the region is still dominated by forest (Table 22). Forests cover approximately 60% of the total land area, and in New England alone, the coverage is 80% (DeGraaf et al., 1989). Forest is most common in Maine (80%). New York has the greatest area of forested land with approximately 7.2 million hectares.

Forested area increased slightly (less than 5%) or remained stable during the period from 1965 to 1999 and is expected to decrease approximately 3% in the Northeast (west to the Mississippi River) in the next 50 years. Losses of forested land in the 1980's were attributed to cropland conversions, but losses after 1990 are mainly due to urban expansion and reservoir construction (Flather and Hoekstra, 1989).

**Proposition: Climate will become a more important factor in outdoor recreation activity, lessening predictability of outdoor events, reshaping outdoor dress, behavior and duration of activity, and altering attitudes toward being outdoors. While such changes will be incremental during the 2000-2020 period, they will be pronounced.**

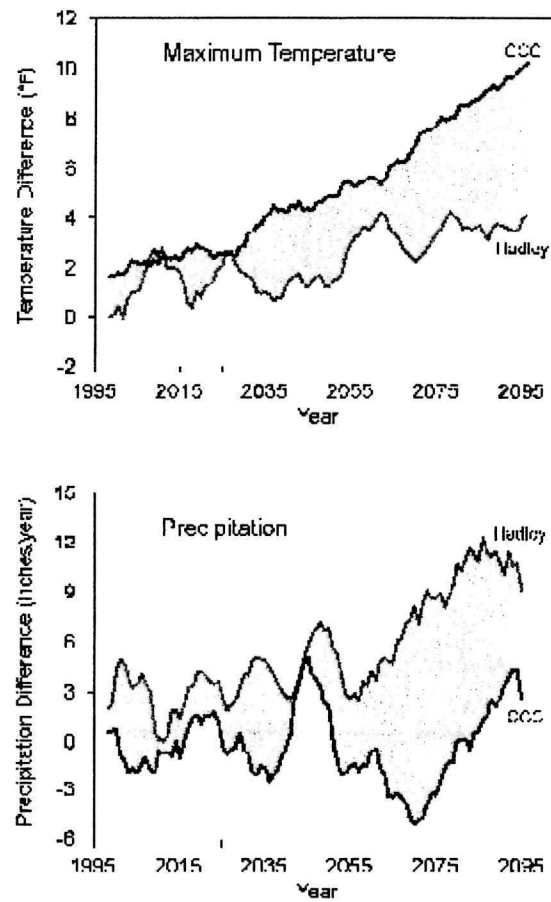
A combination of factors will make outdoor recreation activity more influenced by climate. There is complete certainty that stratospheric ozone depletion will increase the amount of harmful ultraviolet radiation reaching the surface, while there is high certainty that global warming will increase average temperature and raise sea level. It is less certain, but still likely, that extreme weather and climate events (e.g., intense rain and snowstorms, floods, and droughts) will increase. It is also possible that precipitation will increase in the region (Fisher et al., 2000).

**Table 22. Land-use statistics (in thousands of hectares) by state in the Northeastern United States (U.S. Forest Service, 1980-1981, unpublished data).**

State	In hectares (a metric unit of measurement which equals 2.471 acres)		Total*
	Forestland	Crop/pastureland	
Maine	6,875.0	284.8	7,748.8
Vermont	1,775.0	346.5	2,318.2
New Hampshire	1,948.0	68.6	2,248.2
Massachusetts	1,259.8	103.9	1,956.1
Connecticut	713.3	87.9	1,217.9
Rhode Island	158.2	11.0	263.7
New York	7,227.0	2,627.0	11,810.5
New Jersey	784.0	340.2	1,867.0
Delaware	152.3	234.6	483.1
Pennsylvania	6,640.6	2,296.9	11,222.0
Maryland	1,055.9	846.9	2,459.2
Ohio	3,071.9	4,939.8	10,238.2
West Virginia	4,726.6	895.3	6,029.7
Total	36,387.6	13,083.4	59,862.6


















\* Numbers do not sum because these categories represent only two of many land-use categories.

**Figure 15. Predicted Temperature and Precipitation Change: 1995-2035**



Source: Hadley and CCC model differences in predicted temperature and precipitation from the observed 1960-1989 base period, for the Mid Atlantic Region.

Table 23: Climate Change by Region—Mid-Atlantic Region

Table E1, Summary of MAR Impacts	Negative Impact	Positive Impact
<b>Most Certain</b>		
• <i>Agricultural production</i>		
• <i>Coastal zones</i>		
• <i>Temperature-related health issues (urban heat stress)</i>		
<b>Moderately Certain</b>		
• <i>Fishery production</i>		
• <i>Temperature-related health issues (coastal stress)</i>		
<b>Uncertain</b>		
• <i>Biodiversity</i>		
• <i>Fresh water quality</i>		
• <i>Fresh water availability</i>		
• <i>Ecological functioning</i>		
• <i>Vectors and water-borne disease health status</i>		
• <i>Environmental effects from agriculture</i>		



These effects will be magnified as a higher percentage of people live in urban areas and as the population's average age increases. For instance, heat and heat waves are projected to increase in severity and frequency with increasing global mean temperatures. Studies of heat waves in urban areas have shown an association between increases in mortality and increases in heat, measured by maximum or minimum temperature, heat index (a measure of temperature and humidity), or air-mass conditions. The 5-day Chicago heat wave of 1995, in which maximum temperatures in Chicago ranged from 93 to 104°F, increased the number of deaths 85% over the number recorded during the same period of the preceding year. At least 700 excess deaths (deaths beyond those expected for that period in that population) were recorded, most of which were directly attributed to heat.

Exposure to extreme and prolonged heat is associated with heat cramps, heat syncope (fainting), heat exhaustion, and heat stroke. These health effects appear to be related to temperatures above those to which the population is accustomed. Models of weather-mortality relationships indicate that populations in northeastern and Midwestern U.S. Cities may experience the greatest number of heat-related illnesses and deaths in response to changes in summer temperature, and that the most sensitive regions are those where extremely high temperatures occur infrequently or irregularly. For example, Chicago, Philadelphia, and Cincinnati have recently experienced a heat wave that resulted in an increased number of heat-related deaths. Physiologic and behavioral adaptations among vulnerable populations may reduce morbidity and mortality due to heat. Although long-term physiologic adaptation to heat events has not been documented, adaptation appears to occur as the summer season progresses; heat waves early in the summer often result in more deaths than subsequent heat waves or than those occurring later in the summer. Heat waves are episodic, and although populations may adapt to gradual temperature increases, physiologic adaptation for extreme heat events is unlikely.

Within heat-sensitive regions, populations in urban areas are the most vulnerable to adverse heat-related health outcomes. The heat index and heat-related mortality rates are higher in the urban core than in surrounding areas. Urban areas retain heat throughout the nighttime more efficiently than do outlying suburban and rural areas. The absence of nighttime relief from heat for urban inhabitants may be a factor in excessive heat-related deaths.

The size of U.S. cities and the proportion of U.S. residents living in them are projected to increase; therefore, the population at risk for heat-related illnesses and death may also increase. High-risk sub-populations include people who live in the top floors of apartment buildings in cities and who lack access to air-conditioned environments (either at home or elsewhere). The elderly, young children, the poor, and people who are bedridden or on medications that affect the body's thermoregulatory ability are particularly vulnerable to the effects of extreme heat.

The most significant direct health effects identified by the Metropolitan East Coast (MEC) Assessment which are likely to be associated with a warming and more variable climate is an increase in summer-season heat stress morbidity and mortality, particularly

among the elderly poor. Indirectly, climate change in the MEC region could contribute to at least three classes of adverse health outcomes: incidence of certain vector-borne diseases may rise; waterborne disease organisms may become more prevalent; and formation of photochemical air pollutants may be enhanced. In the short term, impacts of climate change on ground-level ozone concentrations are not likely to be a major public health concern in the MEC Region. By the year 2100, the impacts become more significant, especially for asthma (e.g., one scenario projects a 6.5 percent rise in New York asthma admissions). It is likely that the health effects of climate change will not be distributed equally across the MEC region's inhabitants, both spatially and socio-economically.

The warming climate is increasing the degree-days of cooling required in metropolitan areas, intensifying peak summer electricity demands. The principal industry response is to build more power plants in the region to meet the need for electric air conditioning. Alternative adaptations, thus as those discussed below, are not yet widespread.

These climate changes will also cause loss of wetlands, eliminating essential habitat for birds, terrapins, fish and invertebrates. Wetlands serve as a protective barrier against coastal flooding. This valuable function may be lost as sea level rises, increasing the impacts of climate change. Wetlands filter nutrients and inorganic materials, reducing the impacts of coastal pollution. This valuable service may be lost in many low-lying NER areas as sea level rises. Marsh loss will be moderate during the 2020s and potentially extreme by the 2080s when sea level rise projections outpace almost all known accretion rates.

Adaptations associated with planning and construction include:

1. Planning for the use of land through land use planning, environmental planning, and capital programming to ensure the location of new structures and relocation of existing structures outside of impact areas associated with sea level rise, acquiring property to prevent or guide development in hazard areas.
2. Redesigning structures to avoid impacts, including the removal of traditional flood retaining structures, Retrofitting existing and redesigning new structures with barriers, higher elevations, and other forms of protection against the inundation of water and the extremes associated with heat and wind.
3. Using operational procedures and controls for infrastructure services and facilities to reduce or avoid population exposure during hazard events.
4. Adaptations directly targeted to vulnerable populations will include:

Educating the public about adaptations and behaviors, including infrastructure and land usage patterns, that will reduce vulnerability

Improving communication mechanisms such as warning systems

Moving people and businesses away from vulnerable areas through incentives, relocations, and, in extreme cases, evacuations, providing emergency response and disaster assistance for reconstruction

These situations will require a number of responses from organizations managing outdoor recreation activity. Increasing shaded areas, easier access to water, monitoring people onsite more closely, air conditioning and insulating buildings and related steps may need to be taken to minimize the negative effects associated with such changes.

The previously discussed situations mean numerous significant changes for the operation of the NPS in the NER. Onsite visitation will be shaped by warmer weather, perhaps resulting in more visitation early in the morning or after dark when temperatures are less extreme. Increasing ultraviolet light penetrating the atmosphere in combination with an older population mean that skin cancer will be a greater threat. Providing shade, supplying sunscreen, encouraging visitors to wear hats and to otherwise cover their bodies while onsite will become more critical. Scheduling events outside of the periods of peak ultraviolet light penetration (late morning and early to mid afternoon) will be more important. Outdoor visitation may begin earlier in the year and extend later due to higher average temperatures. Interpretive programs will need to educate visitors about issues associated with global warming.

Additionally, NPS in the NER will need to plan, acquire, develop, maintain and retrofit areas and facilities with greater concern for more extreme and unpredictable weather, for higher temperatures and for the increasing dangers of exposure to ultraviolet light.

**Proposition: Extreme weather events may be the most important consequence of global warming on NPS operations in the NER.**

Perhaps the greatest issue in climate change is the increasing likelihood of extreme weather. In metropolitan New York City, for instance, infrastructure, which consists of the engineered systems that provide transportation, energy, communication, water, and solid and liquid waste disposal, could be seriously damaged. Many components of the transportation systems are at elevations of only 6 to 20 feet (2 to 7m) above current sea level, exposing them to storm surges that have been modeled to reach heights in excess of 20 feet (7m) for worst-case storm tracks. The projected sea level rise of 1.5 ft (50 cm) during the next century will increase the frequency of coastal flooding by factors of 2 to 10 by the year 2100, with a mean factor of about 3.

Aggregate losses from single large storm events (not just due to coastal flooding, but including wind and other damages) may range from \$1 billion to more than \$100 billion in today's dollars. Such single-storm losses account for between 0.1% and more than 10% of the NER's yearly economic output. Nevertheless, these losses would be sufficiently infrequent so that when annualized, they would amount to tens to hundreds of

millions of dollars per year. It would appear that annualized losses from coastal storms would be small enough to be absorbed readily by the 1-trillion dollar economy of the region. However, actual losses do not occur annualized and are not spread over the entire region. Rather, the losses occur at points in time and space. When they occur, insurers, insured and non-insured experience severe economic stress. For example, Hurricane Andrew—which did not hit Miami directly—caused \$28 billion in direct damages, resulted in the failure of three insurance companies, and precipitated a major reorganization of U.S. disaster relief and insurance (Pielke and Peilke 1997). In addition, many of the costs of coastal storms are not accounted for, affecting disadvantaged socioeconomic groups, including women, children, elderly, and minorities, the most (The H. John Heinz III Center for Science, Economics and the Environment, 2000). If the frequency of severe storms increases by factors of 2 to 10 due to global warming and if accelerating sea level rise exacerbates the impacts of these storms, mitigating actions will have to be taken, the sooner the better.

Innovative coping and adaptation strategies may include modern engineering solutions, regulatory measures, taxation and/or financial or insurance discounting (Kunreuther and Roth 1998), and—perhaps most effectively—innovative land use, combined with buyouts and relocations (Burby 1998). The region is already revamping its basic infrastructure at costs approaching \$100 billion per decade. Perhaps the most cost-effective way to harden the infrastructure against future coastal storm losses would be to include technical standards and protective features that take note of these increased damage potentials in the ongoing rebuilding of the infrastructure. Still, the best mitigation is to avoid placing new or refurbished assets at low elevations. This would require an innovative land use plan and new engineering codes that place all critical components at elevations higher than currently required. Although some regulations are in place that account for future changes in the coastal environment, enforcement is weak (e.g., Platt 1999). Enforcement must be toughened.

For the NPS in the NER, these issues will mean a greater need for developing contingency plans for weather emergencies, educating users, retrofitting buildings, and monitoring weather more closely.

**Proposition: Awareness of environmental problems and issues will increase exponentially during the next twenty years, reshaping public expectations about how both government and the corporate sector should function.**

Triggered by highly visible climate disasters and an increasingly informed public, all organizations, public, private, non-profit and corporate will be pressured by the public, increasingly powerful “green” politicians and special interest groups, to conduct their affairs in ways which are more environmentally friendly.

## **Economic Conditions and Employment**

What projections exist concerning the economic well-being of citizens and of government within the Northeast Region and within the U.S.? What economic issues will become more salient and what implication does the previous have for visitation to and management of NPS sites in the Northeast region?

**Proposition: Work is of an increasingly contingent nature. The notion that workers work during daylight hours during weekdays and have weekends off makes increasingly little sense.**

**Proposition: The U.S. is moving toward a networked economy**

**Proposition: Among the more important economic drivers in adding value to both products and services will be the experiential component.**

**Proposition: Work is of an increasingly contingent nature. The notion that workers work during daylight hours during weekdays and have weekends off makes increasingly little sense.**

In the Northeast, as in the rest of the U.S. and, indeed, every modern nation, paid work is spreading out, being done by a higher portion of the population, who are more likely to work part-time, and being done during all hours of the day and night on both weekdays and the weekend.

As Table 24 illustrates, the number of workers in many states will increase faster than the population. In states such as West Virginia and Pennsylvania, in spite of almost no projected population increase, the number of workers will rise substantially. For the NPS in the NER, this trend means that visitors will become more diverse in terms of when they visit and for how long. The absence of standard work schedules will mean that, apart from a few mass events such as the 4<sup>th</sup> of July celebration, visitation patterns will diversify. The demand for night visitation may increase. Visitation during weekdays may increase, sometimes during early morning or mid-evening hours. Park opening and closing times will need to be rethought, as will security issues surrounding the diversification of opening hours. Where unions are involved, this trend will produce friction.

**Table 24. Projections by Total Employment (Thousands)**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	166657.02	177620.32	188290.79	199304.97	210630.20	222228.79
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	2097.97	2155.61	2224.03	2305.24	2397.89	2501.85
<b>Delaware</b>	485.80	509.33	533.56	558.76	584.55	610.85
<b>Maine</b>	782.35	819.26	857.19	897.08	938.26	980.59
<b>Maryland</b>	3134.27	3355.73	3564.57	3780.39	4002.61	4230.79
<b>Massachusetts</b>	4099.02	4252.74	4423.05	4612.67	4816.31	5032.37
<b>New Hampshire</b>	773.62	823.19	874.41	927.01	980.40	1034.46
<b>New Jersey</b>	4689.20	4884.33	5090.17	5314.17	5552.46	5803.45
<b>New York</b>	10308.71	10558.72	10852.62	11195.47	11572.58	11979.00
<b>Pennsylvania</b>	7005.43	7291.48	7578.38	7886.63	8212.04	8553.49
<b>Rhode Island</b>	575.82	595.41	617.12	639.99	663.85	688.76
<b>Vermont</b>	404.97	427.66	448.75	470.75	493.82	518.00
<b>Virginia</b>	4413.62	4733.66	5036.50	5346.81	5666.11	5995.56
<b>West Virginia</b>	911.56	964.63	1017.86	1074.22	1133.12	1194.33

**Proposition: The U.S. is moving toward a networked economy.**

As the U.S. moves toward an economy which is networked by computers, the NPS in the NER will change how it operates in numerous ways. The characteristics of a networked economy, as described by Kelly (1996, p. 200-201) include:

- distributed cores—the boundaries of a company blur to obscurity. Many tasks are jobbed out.
- adaptive technologies—If you are not in real time you are dead. A Company's information base must change in real time.
- flex manufacturing—smaller number of items can be produced in smaller time periods with smaller equipment.
- mass customization—individually customized products produced on a mass scale.
- industrial ecology—closed loop, no waste, zero pollution manufacturing
- global accounting—even small businesses become global in perspective
- coevolved customers—customers are trained and educated by the company, and then the company is trained and educated by the customer.
- knowledge based, networked data—networked data makes any job faster, better easier. The issue becomes not so much how to do a job but what job do you do?
- free bandwidth—you can send anyone anything at anytime. Selecting what not to connect to is the key.
- increasing returns—adding customers to a networked system increases the value of a company faster than the number of customers added to it.
- digital money—digital cash replaces batch made paper money. All accounts become real time.

While these characteristics might seem to apply primarily to corporations which provide goods and services, they hold many implications for the NPS in the NER. Let's review them once more, with examples of how they may be implemented by the NPS in the NER:

- distributed cores—the boundaries of a company blur to obscurity. Many tasks are jobbed out. Where the NPS in the NER exists will become more diverse and uncertain. It may have an increased virtual presence in China, Mexico,



Canada, Cuba and elsewhere as well as in other parts of the U.S. The interests of the organization will transcend place.

- adaptive technologies—If you are not in real time you are dead. A company's information base must change in real time. Attendance, environmental conditions, staff performance, visitor satisfaction, etc., will increasingly be monitored in real time and changes made almost instantly based on such assessment. Annual attendance reports and environmental reports may have less meaning as they are constantly monitored.
- flex manufacturing—smaller number of items can be produced in smaller time periods with smaller equipment. Will some interpretive programs be created in smaller and smaller batches for just in time delivery for more customized groups of visitors (and non-visitors)? Will some NPS sites be created “temporally” through temporary zoning in response to changing needs and interests of subgroups of the public? Will customized audio tours be created and recreated in response to differing interests and lifestyles of specific groups of visitors?
- mass customization—individually customized products produced on a mass scale. All aspects of the NPS in the NER which pertain to visitors will be customized at a mass level. If you wish to visit a site with someone who has Alzheimer's disease, customized plans for your visit will be developed, if you don't speak English, don't eat meat, can't walk, are a Civil War re-enactor or a Master Gardener or have five children with you, visitation will be increasingly customized to meet your needs and interests.
- industrial ecology—closed loop, no waste, zero pollution manufacturing. The NPS will increasingly seek to function as a zero pollution organization, showing environmental leadership in how it uses fuel, electricity, how it recycles waste. It may enter into agreements with commercial and private, nonprofit organizations to recycle and re-use waste, co-generate energy, or supply minimum polluting mass transit on or off site.
- global accounting—even small businesses become global in perspective. The revenue generation of the NPS in the NER will become more international. Visitor counts may be subdivided into national and international. State level tourist promotion in other countries may increasingly feature NPS sites in the NER.
- coevolved customers—customers are trained and educated by the company, and then the company is trained and educated by the customer. The NPS will increasingly seek to “train” visitors in terms of how they should visit sites. In turn, visitors will “train” NPS staff in terms of what they seek and the meaning of visitation to them.



- knowledge based, networked data—networked data makes any job faster, better easier. The issue becomes not so much how to do a job but what job do you do? The biggest issue for NPS in the NER will be what task should be undertaken. The potential tasks that could be undertaken will increase to infinity.
- free bandwidth—you can send anyone anything at anytime. Selecting what not to connect to is the key. How to cut down communication will become a major issue. How to avoid communication will become increasingly critical. Support for staff avoiding communication will be a critical variable in determining how staff responds to an infinite amount of communication.
- increasing returns—adding customers to a networked system increases the value of a company faster than the number of customers added to it. Visitors to the NS in the NER will increasingly be communicated with as a network. Such communication will add value faster than the number of visitors added.
- digital money—digital cash replaces batch made paper money. All accounts become real time. The NPS in the NER will increasingly operate in a cashless system, perhaps issuing its own currency for visitors.

**Proposition: The experiential component will be among the more important economic drivers in adding value to both products and services.**

An increasingly important part of the new economy is the offering of experiences:

When a person buys a service, he purchases a set of intangible activities carried out on his behalf. But when he buys an experience, he pays to spend time enjoying a series of memorable events that a company stages—as in a theatrical play—to engage himself in a personal way. (Pine and Gilmore, 1999, p. 2)

Such experiences are as distinct from services as services are from products. The emergence of an experience economy may progress as follows:

In the emerging experience economy, the experiential component of a product or service is increasingly the basis of profit. The offering of experience occurs whenever an organization uses services as the stage and goods as the props to engage an individual. Buyers of experiences—guests—value what the organization reveals over the duration of time; and they keep memories afterward. “Just as people have cut back on goods to spend more money on services, now they also scrutinize the time and money they spend on services to make way for the more memorable—and more highly valued—experiences” (Pine and Gilmore, p.12).

**Table 25. The Experience Economy**

<b>Economic Offering</b>	<b>Commodities</b>	<b>Goods</b>	<b>Services</b>	<b>Experiences</b>
Economy	Agrarian	Industrial	Service	Experience
Economic Function	Extract	Make	Deliver	Stage
Nature of Offering	Fungible	Tangible	Intangible	Memorable
Key Attribute	Natural	Standardized	Customized	Personal
Method of Supply	Stored in bulk	Inventoried	Delivered	Revealed
Seller	Trader	Manufacturer	Provider	Stager
Buyer	Market	User	Client	Guest
Factors of	Characteristics	Features	Benefits	Sensations

Source: Pine and Gilmore—The Experience Economy, 1999, p. 6.

Experiences are not synonymous with entertainment but rather with engaging the guest. While many experiences entertainment, experiences may also be educational, escapist or esthetic in nature.

For the NPS in the NER, individual sites are the commodities, the built environment is the goods, and the activities of rangers and other staff are the services (although they could be a bigger part of the experience). Increasingly, however, the value to the guest comes from the experience. Such experiences, whether educational, escapist, entertainment or esthetic, will be central to agency success. The role of the ranger is critical in such experiences. Rather than training rangers to respond to visitors in uniform ways, rangers will increasingly need to respond to guests in unique ways, which add experiential value to the visit. While the ranger uniform is an important icon, which may increasingly be reproduced both mechanically and socially, the behavior of rangers with guests needs to become increasingly individualized.

Compared to other regions, the NPS in the NER is more dependent upon staff helping supply experiences since sites are smaller and less differentiated from their surroundings. The guest visit must increasingly be understood as an experience and the role of staff as providing memorable experiences. This issue is particularly important in the NER, which has more urban sites than other regions. NER staff is, increasingly, not so much managers and protectors of property as facilitators of memorable experience. The issue will be less of managing people and natural resources than as managing “meaning.” What does this site mean? What is worth doing, seeing, hearing, tasting, touching, smelling, feeling and ultimately remembering?

This will require changes in the training and hiring of NPS staff in the NER, recognition that park rangers are “actors,” and recognition that, increasingly, the production of memorable experiences is critical to the NPS mission in the NER.

## **Organizational Response to Change**

What organizational strategies have been developed to cope with both continuous and discontinuous change? How will organizational culture within the NPS Northeast region be changed by previously identified trends? What organizational strategies are implied for NPS Northeast Region.

**Proposition: Management is changing its meaning and function.**

**Proposition: The success of the NPS in the NER during the next twenty years will depend on the extent to which it can become more “agile.”**

**Sub-Proposition: NPS Sites in the NER will be uneven in their ability to cope with, and adapt to, change.**

**Proposition: The NPS in the NER must increasingly cooperate with competitors.**

**Proposition: In the management of specific NPS sites, NPS staff must figure out what they are good at and “outsource” everything else.**

**Proposition: Re-conceptualizing the management of NPS in the NER will require a change in management strategy toward benefits-based management.**

**Proposition: Decision-making in the NPS will no longer be a function of risk assessment. Instead, decisions will be a function of alternatives' assessment which examines a range of options embracing social, environmental, economic, scientific and political perspectives (O'Brien, 2000).**

**Proposition: Park ranger symbols successfully embody numerous traits of critical concern to tourists, i.e., safety, security, and honesty. Capitalizing on the positive value of ranger images has been seriously neglected.**

**Proposition: The successful NPS site in the NER will treat people appropriately, not equally.**

**Proposition: The successful NPS site in the NER will customize services, information and products.**

**Proposition: The successful NPS site in the NER will re-think pricing, timing and platforms.**

**Proposition: Federal agencies responsible for the preservation of natural, historical and cultural, and recreational sites will increasingly seek to use a variety of diverse methods to acquire and protect zoning as a tool for achieving their goals.**

**Proposition: During the next decade, the NPS in the NER will experiment with ways to ration access to sites that are approaching carrying capacity.**

**Proposition: During the next decade, the NPS in the NER will operate in ways which recognize the increasing urban character of their sites and their visitor base. Such changes will result in the NPS in the NER being planned and managed in ways which more closely resemble botanical gardens, museums, environmental centers, arboretums, commercial theme parks, and municipal and state parks.**

**Proposition: Management is changing its meaning and function.**

While “management” may have meant “someone who is responsible for the work of subordinates” immediately after World War II, that meaning changed in the early 1950s to “someone who is responsible for the performance of people.” Today, however, according to Peter Drucker, it means one who “is responsible for the application and performance of knowledge” (p. 44). “Land, labor and capital are important chiefly as restraints. Without them, even knowledge cannot produce; even management cannot perform. But where there is effective management, that is, application of knowledge to knowledge, we can always obtain the other resources” (p. 45).

Managers must also manage for change, which means the organization in question de-stabilizes. “The task of management in the knowledge-based organization is not to make everybody a boss. It is to make everybody a contributor” (p. 109). Thus, employees must increasingly be convinced that what they are doing makes sense and is worthwhile. While those who do unskilled labor may still be treated as “subordinates,” increasingly such jobs are being done by machines. For most organizations which do “work,” the issue will be determining and obtaining the knowledge needed to do the job and then continuing to change as the requirements of the organization change. Ben Franklin said that time was money but today knowledge and cooperation are money. Managers will have to deal with this shift.

**Proposition: The success of the NPS in the NER during the next twenty years will depend on the extent to which it can become more “agile.”**

As mass culture declines and the rate of change increases, organizations which provide services in the public sector are being challenged in fundamental ways. In mass society, with mass production, providing “mass” services were appropriate. The next step in this process was to individualize such services providing hundreds of individualized activities, programs and services that put the responsibility of finding out about all of them on the “customer.” The agile organization, however, is one which enters a continuous dialogue with its customers to deal with their changing wants and needs. . . what customers will increasingly value in a company is its ability to create, and to continue creating, mutual beneficial relationships with them” (Goldman, Nagel and Preiss, 1995). At the people level, the agile competition is characterized by the development of a skilled, knowledgeable and innovative work force. At the management level it represents a shift from the command and control philosophy to one of leadership,

motivation, support and trust. “An agile workforce is composed of people who are knowledgeable, informed, flexible and empowered. People who are expected to think about what they are doing, are authorized to display initiative, and are supported by management to become innovative about what they do and how they do it” (Goldman, Nagel and Preiss, 1995, p. 108).

For organizations such as NPS, this means a change in philosophy from continued learning as an afterthought to continued learning as an expectation of every employee which is planned for in job descriptions, assignments and in the reward system. It also means that: (1) expertise, initiative and authority are distributed as widely as possible within the organization, (2) decision-making is accelerated by replacing rigid, multilevel, functionally divided organizational structures with ones which have a flexible focus on routinely providing access to the information, skills and knowledge that are the ultimate organizational assets, (3) support of multiple, concurrent highly flexible organizational structures, and (4) leadership, motivation and trust replace the command and control model of organizations.

The agile organization is also different from others in that it actively seeks cooperation with other organizations, which might previously have been thought of as competitors. Such cooperation may take the form of partnerships, joint ventures, and collaborations of every kind. Some of these efforts are aimed at establishing an economy of scale by merging capabilities in order to avoid the costs of adding capacity. Less typical of leisure services are consortiums, whereby all organizations do some things in common, such as jointly sponsoring employee training or purchasing equipment. Such consortiums will likely become more common and may be organized around themes such as interest in a given leisure activity, such as skiing, a given population, such as people in wheelchairs, or a given objective, such as increasing tourism in a geographic region. The future of leisure service organizations is wrapped up in such collaborative efforts.

The secret of success for an organization will be to succeed in working with its clients or customers in ways which allow the client to help the organization help the client. Traditional professionalism sometimes gets in the way of this.

The critical question, which those in a leisure organization must ask, is what does the organization enable their clients or customers to do (Preiss, Goldman and Nagel, 1996). As was discussed earlier, for some organizations which manage parks, one answer may be “reduce stress.” When that question has been answered, the employees may better understand they are involved in a health service. This question is very much related to the concept of benefits-based management (Driver, Brown and Peterson, 1991) discussed earlier, which some recreation, park and leisure services are seeking to implement. That is, the agile leisure service is delivering, first and foremost, a benefit (which is value as identified by the client) rather than a fixed set of services, products or information.

Organizations that provide leisure services must become dynamic and dynamic systems behave in fundamentally different ways from static ones. Management methods

tend to be based on static behavior and as an organization becomes more dynamic and interlinked, these static methods don't apply to the new reality. (Preiss, Goldman and Nagel, 1996).

The internal organization of these companies encourages an adaptive, entrepreneurial attitude among staff who recognize that the company's success is tied to their ability to support their clients. They are interactive and international as is the new culture of the internet." p. 4. What has changed for the NPS and other government organizations is the amount of information needed to operate with agility, the mix and number of other organizations with which it must interact, the speed with which it must act and react, the technology which allows it to do so, and total volume of communication necessary for it to master if it is to succeed. These changes are of fundamental importance.

The NPSS will have to become more agile and the NER more agile than other regions. Recently the NPS was described as follows:

### **Company Snapshot Excerpt**

#### **Dedication**

National Park Service employees are distinguished by their "dedication" and their "family-like devotion" to one another. The people that work there are "exceptional" and of course, "the scenery, setting, and outdoor activities are fantastic." Says one melodramatic contact: "I love the work and I expect to be involved with the NPS until my eyes close for the last time." Historically, "a ranger was the do-all and be-all of the parks." However, insiders report that "over the past few decades, the work has become more specialized." Thus, "a vast majority of Park Service jobs require BA degrees and advanced education."

#### **Uniforms and red tape**

Most employees are required to wear uniforms, but say they don't really mind—"it comes with the territory . . .

#### **The Stats**

Employer Type: Government

No. of offices: 8 (United States)

#### **Uppers**

Additional pay for "odd hours"

Flexible workdays

Generous vacation policy

Opportunities to work in nature

- Downers
- Few advancement opportunities
- Low pay
- Many locations in isolated, rural settings
- Excessive bureaucracy

- Departments
- Administration
- Design & Construction
- Cultural Resources
- Historical Interpretation
- Maintenance
- Protection
- Publications
- Ranger Services
- Resource Management
- Trade & Craft

**Sub-Proposition: NPS Sites in the NER will be uneven in their ability to cope with, and adapt to, change.**

For a variety of reasons, whether defined as physical, social, structural, or organizational, the ability to cope with change in the NER will increasingly reflect adaptable, flexible management styles. Treating individuals in isolation from broader social and environmental processes, such as increased population density and increased frequency of extreme weather events, ignores the reality that composite effect may be greater than the sum of the individual parts. Some sites in the NER will be able to adapt to change rapidly, others will not. The frequency with which adaptation to change is required will become a contested issue in the NER. For some sites, adaptation to change will be evolutionary, for others it will be volatile and hard to predict. For example, if Cape Cod National Seashore in Massachusetts is increasingly hit by extreme weather events, should sites which are relatively immune to natural disasters be party to the cost?

**Proposition: The NPS in the NER must increasingly cooperate with competitors.**

There are more win-win situations than win-lose situations in terms of the NPS in the NER. This is particularly true at sites which are highly urban. The number of consortiums, cooperative agreements, joint ventures, and other forms of cooperation with "competitors" which can be developed are almost infinite. What are important are imagination, communication and the will to do it.

**Proposition: In the management of specific NPS sites, NPS staff must figure out what they are good at and "outsource" everything else.**

Like other leisure service agencies, managers of individual sites of the NPS in the



NER must figure out core competencies and outsource the rest. Should this site train its own lifeguards? Prepare food? Cut grass? Provide onsite medical care? Trying to do what you don't do well is always a disadvantage. Identify what you don't or can't do well and outsource it.

**Proposition: Re-conceptualizing the management of NPS in the NER will require a change in management strategy toward benefits-based management.**

Benefits-based management, as identified by Lee and Driver (1992), is based on the ideas that (1) the reason public recreation opportunities are provided is because people benefit from them, and (2) management will be most responsive, efficient and effective when it explicitly targets specific types of benefit opportunities that will be provided at designated locations. This is done by providing activity and associated setting opportunities defined in terms of the beneficial experiences and other responses that can be realized from using these opportunities. (p. 27)

This approach to management supplants activity-based management and experience-based management. Activity-based management was primarily supply-oriented with attention given to attributes of a recreation setting required to produce different types of activities. Management objectives were concerned with number of activity opportunities with little concern for quality. Experience-based management, "...the concept of product or management output is expanded to include not only the activity opportunity but also the specific types of experience opportunities produced" (Lee and Driver, 1992). Although experiences were not defined as beneficial, this was an advancement since managers could specify types of experience opportunities (e.g., solitude, fitness) to be targeted as a product of management. This approach is reflected in the Recreation Opportunity Spectrum system (Driver et al., 1987) where specifically targeted types of experience opportunities are provided with each spectrum-defined management zone designated on the ground.

Benefits-based management focuses on what is obtained from amenity resource opportunities in terms of consequences that maintain or improve the lives of individuals and groups of individuals, and then designates and provides opportunities to facilitate realization of these benefits. The basic purpose is to provide an array of benefit opportunities among which users can choose (Lee and Driver, 1992).

**Proposition: Decision-making in the NPS will no longer be a function of risk assessment. Instead, decisions will be a function of alternatives' assessment which examines a range of options embracing social, environmental, economic, scientific and political perspectives (O'Brien, 2000).**

Although National Parks have done a remarkable job balancing their multiple roles in society, they will increasingly come under pressure because of social, cultural, and environmental changes in the NER over the next twenty years. National Parks will no longer be able to "grow" out of their problems – economic or otherwise. For tourism, what really matters is long-term viability in the face of increasing demand and moving

the economic process along without adequate consideration of alternatives may be short sighted and of limited long term value. Therefore, the business side of tourism will increasingly need to share center stage with the social, cultural, and environmental aspects of tourism. Holistic strategies, and long term mechanisms and policy instruments will replace, linear, short-term perspectives as the preferred means to achieve sustainable objectives. According to O'Brien (2000), the issue is increasingly not a matter of *whether* humans cause damage, but *how much* damage we cause and how best to minimize that damage by considering a wide range of alternatives. She argues that the real question is not simply how fast the transition to more sustainable forms of social, cultural and environmental management will proceed -- but more importantly -- how well the adaptations deal with continuous, and often unplanned, change. National Park staff will recognize that change is a continuous process and consequently adaptation to, and training for, that change must be continuous.

“As environmental problems such as global warming make clear that individuals cannot do what they want simply because it is meaningful at an individual level, limitations to wants will be established. People will be less able to assert their individual wills in terms of consumption, use of “nature”, and desire to travel when it harms groups of humans and the rest of the living world” (Godbey, 2000, p. 39).

**Proposition: Park ranger symbols successfully embody numerous traits of critical concern to tourists, i.e., safety, security, and honesty. Capitalizing on the positive value of ranger images has been seriously neglected.**

Image is a form of mental shorthand. It results from the interaction of values, beliefs, and sensory experiences. Successful images are emotive and held in long term memory (Zeich, 1998). Just as flowers symbolize meaning beyond their intrinsic value, park rangers *already have* a powerful, positive image. Companies spend millions of dollars to attain this type of image. For example, when people think of motor cycles, they think of Harley-Davidson, or when Disney is mentioned, Mickey Mouse springs to mind. Because of effective advertising, their products and images are internationally associated with an experience. Indeed, in their discussion of Harley-Davidson, Pine & Gilmore (1999) remark “how many other company logos do you find tattooed on individual’s bodies?” A spokesperson for Disney Attractions, the image master, made the following point about the importance of sensory and emotive interaction “we will be high tech and high touch, but we think there will always be a future for hugging characters.” Therefore, when a positive image exists similar to the one currently enjoyed by national parks, image enhancement and promotion does not have to be expensive. Alternatively, for many a simple logo of a ranger with a recognizable backdrop specific to the NER, such as Ellis Island would enhance region-specific meaning. For many park visitors, the opportunity to engage with a park ranger in a meaningful way is of fundamental importance to image enhancement.

**Proposition: The successful NPS site in the NER will treat people appropriately, not equally.**

In the agile organization, being trustworthy and behaving predictably is critical. Those in the organization are no longer merely offering a fixed opportunity; they are engaged in a continuous effort to solve the problems identified by their customers or clients. Trust is therefore all-important and a significant factor in competitive capability. ‘Products and services are changed from being a goal in themselves to being a means to establish close, long-term interactive customer relationships’ (Preiss, Goldman and Nagel, 1996).

The idea of trust does not mean, however, that “fair” treatment is equal treatment. To treat people fairly is to treat each one appropriately. Clients will have unique needs in a diverse, decentralizing society and leisure services will have multiple strategies to deal with the diverse problems identified by different subgroups of their clients. In a mass society, treating everyone equally might have been thought of as “fair,” but today, treating individuals appropriately is far different. It may be appropriate to have a brochure translated into Spanish for visitors at one NPS site but not another. The food served in the snack bar may be quite different from another, based on the differing needs of the individuals who use it.

One reason for treating all clients or customers the same is that the organization in question doesn’t know much about them. Thus, many pharmaceutical companies manufacture medicines in the form of pills of standard size since the maker of the pill does not know if the customer weighs 75 pounds or 300 pounds. If they did, the appropriate dose of many medicines would be different. Restaurants serve salads with walnuts in them because they don’t know that a given customer is allergic to nuts. If they did, they would not treat all salad customers the same; they would treat them appropriately.

**Proposition: The successful NPS site in the NER will customize services, information and products.**

One of the most important qualities of an agile organization is its ability to customize products and services. Each client or customer can be treated as a unique individual (appropriately). For leisure services, where people vary greatly not only in the degree to which they are specialized in the activity or experience in question, and in which their motives and satisfactions for participation vary tremendously, customization is a critical variable. To a great extent, however, customization has been avoided. Thus, there is sometimes a “senior citizen” program for people 65 and over with no recognition of the great diversity among clients within that increasingly large age group. Brochures are sent to every resident of a community containing the same information by an urban recreation and park department rather than customizing the brochure to reflect the composition of the household it is being mailed to, the known leisure interests of the client based on previous interaction with the agency, the neighborhood in which the client lives, etc.

One factor that gets in the way of such customizing, in addition to lack of use of existing informational technology, is the recreation and park planning processes which assume that: 1. all clients must be treated “equally,” 2. certain facilities, such as neighborhood parks, are “generic” entities whose characteristics and features can be prescribed in advance or are made up of component parts which are identical, or that 3. a leisure service, such as a tour of the Sydney Opera House, is a fixed commodity. While this way of thinking makes it easier for the organization to understand its mission, it is a way of thinking which dooms the organization to failure in a world in which “mass leisure” is disappearing, along with mass society.

One type of customizing may occur when a given leisure service or product has reached maturity. A product or service may go through a life cycle until it reaches maturity and then begin a process of decline. At the stage of maturity the product or service in question may fragment, or be fragmented, into many customized versions. Municipal summer playground programs, for instance, have been around since early this century. Many such programs have remained relatively standardized for decades and attendance in many such programs dropped off. At that stage in the life cycle of playground programs, the opportunity for “customizing” such programs exists. A playground program might be built around the expressed needs of individuals in an urban neighborhood who wanted a program which featured learning more about the English language or gardening, or integrating adult day care with the playground program, or stressing competitive sport for girls and boys in sex-segregated situations. Much the same process happens or can happen with mature tourist destinations, sport leagues or nature centers. Some tourist sites, which have reached maturity, fragment into a number of secondary attractions.

Fragmenting mature leisure services, of course, is another example of treating clients or customers appropriately rather than equally. A fragmented leisure service may, itself, go through a life cycle and differentiate again at its maturity.

**Proposition: The successful NPS site in the NER will re-think pricing, timing and platforms.**

Other important aspects of agility include the idea that prices for services should not be fixed but based on how much it enriches the individual customer, the idea that reducing time involved for the consumer is critical and the idea that a given product or service can serve as a platform for interacting with the client over a long period of time to supply other services, information or maintenance of products.

The concept of a fixed price for a fixed service no longer makes sense. It is a parallel concept to treating everyone equally, but not appropriately. Pricing depends, increasingly, on how much it enriches the customer. Thus, an outdoor recreation “team building” program may be worth much more to members of a small company trying to develop a sense of cohesion than members of a stable, working class neighborhood. How much a given leisure service “enriches” a client or group of clients must be decided in

their terms, not the sponsoring organization's. Getting from a resort hotel to the airport may be worth \$50 to a busy group of business executives but only \$10 to college students on spring break. Solitude in a park may be worth a lot to a hyper-tense working mother but little to a farmer.

One of the biggest issues in becoming more agile is the ability to reduce or eliminate the time involved in services which when such time spent by the client doesn't add value to the service. As we have seen previously, the extent to which people feel rushed has increased dramatically. A leisure service can add a competitive advantage to its services by reducing the time it takes to register, sign in or wait in line. Time spent paying a parking fee, waiting to get on the golf course, waiting for personal instruction from the scuba diving instructor add no value to the experience and, usually, but not always, detract value.

Finally, agility assumes that a given service or product supplied to customers or clients can serve as a "platform" from which the organization can possibly enter into a long-term relation with them. Doing this is aided by a modern system of order fulfillment or registration that allows the company to see every interaction it has had with the client or customer. In many leisure service organizations, this is not possible. A better understanding of how the client has used the services of the origination in the past may be used to recruit volunteers, send information for "frequent" or "preferred" users, or otherwise form a basis to find out more about the interests and problems of the individual.

The new service economy to which most leisure services belong will be increasingly based on communication and the use of information to add value to services. Work will be done by teams, which come together for highly specific purposes and break up when the purpose is achieved. Advances in communication and informational technologies will play a key role in shaping how leisure services operate.

At the same time, many leisure services will have to find ways to balance the new technology with people's need for the familiar, sense of place, community, contact with nature and respect for the past. Many aspects of leisure services cannot be substituted for with technology. Many tourist experiences, more than anything else, are people watching people. Many successful therapeutic recreation interventions involve a demonstration of caring and acceptance, which involves repeated personal interaction. The best part of a park experience may be listening to the wind in trees while walking on a forest trail. Putting paint on a canvas involves touch and smell as well as vision. Camping may involve cooking over an open fire or the sound of unknown animals after dark.

Some of the changes a leisure service makes in becoming more agile will un-complicate the life of a client; getting rid of delays, paperwork, and providing more highly targeted information to him or her rather than reams of information and lots of waiting.



These aspects of leisure cannot be substituted. The challenge for those who manage leisure services will be to integrate the new technology into their services without changing what is magic about the leisure experience; to recognize the revolutionary changes going on in the world without uncritically giving in to them.

**Proposition: During the next decade, the NPS in the NER will experiment with ways to ration access to sites that are approaching carrying capacity.**

Limiting access to sites, which have approached carrying capacity, will become a more central issue in the next few decades. Sites such as Delaware Water Gap will likely experience increasing visitation levels from the growing Megalopolis within two hours drive. The success of such rationing will depend, to a great extent, on public awareness and understanding of such efforts. This will further increase the need of the NPS in the NER to find avenues to communicate with the public, increasing the likelihood of use of radio, television and web-based communication with the public.

**Proposition: Federal agencies responsible for the preservation of natural, historical and cultural, and recreational sites will increasingly seek to use a variety of diverse methods to acquire and protect zoning as a tool for achieving their goals.**

While the NPS in the NER will continue to work from regional policies and directives, the means used to carry out such policies and directives will become even more diverse. Such means may increasingly include: joint planning or management with municipal, county, state or other federal government agencies; more extensive attempts to use zoning to achieve NPS objectives; more extensive relations with numerous organizations concerned with tourism in the market, private non-profit and public sectors; more highly targeted fund raising ventures; more involvement in advertising and public relations; and more partnering with a wide variety of organizations. Such changes have implication for every aspect of the NPS in the NER.

**Proposition: During the next decade, the NPS in the NER will operate in ways that recognize the increasing urban character of their sites and their visitor base. Such changes will result in the NPS in the NER being planned and managed in ways which more closely resemble botanical gardens, museums, environmental centers, arboretums, commercial theme parks, and municipal and state parks.**

Numerous trends indicate that the NER will change to management styles and methods of operation which are more congruent with cultural sites managed in urban areas. The management of NPS sites in the NER will more closely mirror those of urban museums, arboretums, botanical gardens, urban parks, theme parks and art galleries. Such trends include the increasing population densities of the NER with attendant urbanization, the devolution of political power to state and government levels and the increasing role of the acquisition of memorable experiences in shaping the leisure behavior of the public. People management, pleasing the public, voluntary learning, food and beverages, and organizational agility will become more central.

The NPS in the NER may not yet be prepared to meet this challenge. NPS sites in the NER play a comparatively small role in the protection of the natural environment. The vast majority of NPS sites in the NER are “cultural” and “educational,” not “natural.” This recognition is critical to future success. While all NPS sites in the NER have some role in environmental well being, the effect on the cultural well-being of the public, the quality of leisure experience of the public, the education of the public, the historical heritage and environmental awareness, and the economic well being of the area surrounding the site are more critical. .

The NPS in the NER is unique among NPS regions and must act on an understanding of that uniqueness.

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## Appendices

### Appendix 1a-r

**Appendix 1a. Projections of US Population and Individual Northeastern States by Age (Thousands) Under 5 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	18859.56	18979.80	19839.57	20973.57	21747.61	22229.69
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	208.26	204.11	205.79	208.33	209.91	212.25
<b>Delaware</b>	49.21	50.23	52.34	54.63	55.79	57.26
<b>Maine</b>	66.73	67.47	69.79	71.81	72.56	72.57
<b>Maryland</b>	340.82	346.42	361.27	376.21	391.78	407.72
<b>Massachusetts</b>	388.80	386.06	397.25	408.21	412.83	422.83
<b>New Hampshire</b>	72.54	74.15	77.69	80.93	82.73	84.91
<b>New Jersey</b>	536.24	529.41	539.45	555.18	569.95	580.68
<b>New York</b>	1217.33	1185.11	1197.41	1219.68	1223.64	1225.72
<b>Pennsylvania</b>	701.10	690.71	709.18	731.79	732.83	734.24
<b>Rhode Island</b>	61.42	61.04	62.86	64.82	64.41	65.03
<b>Vermont</b>	32.04	32.40	33.73	34.94	34.87	35.32
<b>Virginia</b>	444.54	453.27	479.04	507.52	527.65	544.19
<b>West Virginia</b>	94.02	90.27	92.92	97.53	97.04	94.27

Source: Woods and Poole, 2000

**Appendix 1b. Projections of US Population and Individual Northeastern States by Age (Thousands) 5 to 9 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	19816.22	19227.54	19370.26	20252.44	21390.78	22171.98
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	221.21	208.04	204.87	207.40	209.88	211.05
<b>Delaware</b>	50.49	49.63	50.99	53.40	55.93	57.25
<b>Maine</b>	74.00	67.63	68.74	71.28	73.36	74.25
<b>Maryland</b>	367.82	356.48	364.25	380.41	395.85	411.71
<b>Massachusetts</b>	410.28	386.96	385.13	397.50	408.71	412.85
<b>New Hampshire</b>	79.30	73.98	75.84	79.48	82.61	84.21
<b>New Jersey</b>	578.47	542.26	537.79	549.53	565.13	579.64
<b>New York</b>	1311.17	1199.61	1172.98	1190.23	1213.47	1218.42
<b>Pennsylvania</b>	783.48	715.43	706.74	726.82	748.91	749.23
<b>Rhode Island</b>	67.31	62.01	61.76	63.70	65.57	64.95
<b>Vermont</b>	36.37	32.40	32.95	34.46	35.79	35.79
<b>Virginia</b>	463.87	453.57	463.06	489.69	518.64	538.90
<b>West Virginia</b>	109.07	94.76	91.10	94.13	99.14	99.22

Source: Woods and Poole, 2000



**Appendix 1c. Projections of US Population and Individual Northeastern States by Age (Thousands) 10 to 14 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	19908.26	20648.23	20065.09	20233.26	21141.77	22313.88
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	233.93	225.62	213.36	211.19	213.86	216.02
<b>Delaware</b>	50.37	51.04	50.42	52.05	54.66	57.32
<b>Maine</b>	89.07	77.67	71.29	72.70	75.45	77.75
<b>Maryland</b>	376.75	381.13	371.60	380.51	397.14	412.58
<b>Massachusetts</b>	426.90	418.04	395.90	395.39	408.50	419.38
<b>New Hampshire</b>	91.92	83.29	78	80.02	83.68	86.71
<b>New Jersey</b>	575.49	598.68	564.70	562.40	574.17	589.63
<b>New York</b>	1270.49	1323.50	1216.73	1195.99	1215.02	1239.35
<b>Pennsylvania</b>	846.03	816.81	748.03	740.61	760.60	782.61
<b>Rhode Island</b>	69.99	69.50	64.14	64.01	65.86	67.51
<b>Vermont</b>	43.09	37.87	33.94	34.70	36.37	37.84
<b>Virginia</b>	470.19	477.86	468.16	478.79	506.64	536.33
<b>West Virginia</b>	115.21	116.26	100.93	97.24	100.69	106.43

Source: Woods and Poole, 2000

**Appendix 1d. Projections of US Population and Individual Northeastern States by Age (Thousands) 15 to 19 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	19920.17	21096.88	21882.35	21280.16	21443.09	22376.44
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	211.94	236.82	229.60	218.15	216.03	218.09
<b>Delaware</b>	50.58	52.42	53.31	52.72	54.44	57.04
<b>Maine</b>	92.32	93.38	81.69	75.30	76.88	79.88
<b>Maryland</b>	353.59	390.15	395.72	386.91	395.01	410.38
<b>Massachusetts</b>	398.82	443.67	436.70	414.33	413.71	426.10
<b>New Hampshire</b>	87.36	95.79	86.90	81.64	83.63	87.21
<b>New Jersey</b>	525.55	588.37	612.93	580.22	576.73	586.49
<b>New York</b>	1193.62	1296.60	1355.22	1250.13	1228.69	1246.63
<b>Pennsylvania</b>	843.72	886.55	857.21	786.65	777.59	796.89
<b>Rhode Island</b>	67.67	74.41	74.16	68.55	68.31	69.90
<b>Vermont</b>	45.08	45.91	40.64	36.65	37.60	39.48
<b>Virginia</b>	478.21	510.13	518.96	508.82	519.62	548.27
<b>West Virginia</b>	129.60	123.17	124.28	108.42	104.98	109.11

Source: Woods and Poole, 2000

**Appendix 1e. Projections of US Population and Individual Northeastern States by Age (Thousands) 20 to 24 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	18524.61	20245.25	21429.98	22171.85	21573.06	21729.15
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	184.26	205.25	230.01	222.51	212.13	209.84
<b>Delaware</b>	49.74	53.98	56.10	57.05	56.62	58.41
<b>Maine</b>	77.69	85.88	86.96	75.96	70.30	71.89
<b>Maryland</b>	316.83	360.92	397.02	402.12	391.56	397.15
<b>Massachusetts</b>	364.05	411.14	455.94	447.86	425.29	422.84
<b>New Hampshire</b>	68.37	83.40	92.22	83.29	78.21	80.08
<b>New Jersey</b>	480.15	507.89	567.86	589.20	558.91	554.51
<b>New York</b>	1148.60	1190.23	1291.08	1346.50	1243.74	1220.08
<b>Pennsylvania</b>	726.03	804.10	844.35	813.52	746.37	736.10
<b>Rhode Island</b>	59.70	69.54	76.67	75.45	69.64	68.92
<b>Vermont</b>	37.31	43.73	44.70	39.60	35.95	36.94
<b>Virginia</b>	484.77	531.95	567.78	576.96	566.46	576.97
<b>West Virginia</b>	127.78	119.99	114.25	115.41	101.61	99.11

Source: Woods and Poole, 2000

**Appendix 1f. Projections of US Population and Individual Northeastern States by Age (Thousands) 25 to 29 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	17808.06	18144.91	19794.23	20193.14	21622.74	21043.57
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	189.15	177.14	197.19	220.52	213.23	203.07
<b>Delaware</b>	50.63	50.55	54.78	56.89	57.77	57.28
<b>Maine</b>	75.17	73.52	81.39	82.54	72.16	66.82
<b>Maryland</b>	326.78	327.13	373.35	410.38	414.86	403.14
<b>Massachusetts</b>	401.44	355.93	401.38	445.06	436.94	414.26
<b>New Hampshire</b>	74.28	69.91	85.27	94.07	84.88	79.48
<b>New Jersey</b>	479.79	472.25	501.15	558.78	579.74	553.92
<b>New York</b>	1159.30	1111.89	1150.00	1245.38	1299.41	1201.68
<b>Pennsylvania</b>	708.28	669.12	741.17	777.89	749.83	688.60
<b>Rhode Island</b>	63.59	55.34	64.15	70.29	68.93	63.19
<b>Vermont</b>	36.66	34.52	40.70	41.75	37.00	33.55
<b>Virginia</b>	485.04	484.72	530.43	564.51	574.03	564.36
<b>West Virginia</b>	117.07	112.91	106.13	101.13	102.60	90.95

Source: Woods and Poole, 2000

**Appendix 1g. Projections of US Population and Individual Northeastern States by Age (Thousands) 30 to 34 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	19536.72	18269.40	18592.06	20247.31	21345.75	22053.44
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	245.15	196.29	183.75	204.12	227.18	219.28
<b>Delaware</b>	60.57	53.30	53.01	57.21	59.24	60.04
<b>Maine</b>	86.08	80.71	78.90	87.31	88.40	77.38
<b>Maryland</b>	411.37	353.02	352.24	400.39	437.82	440.57
<b>Massachusetts</b>	502.48	399.55	354.36	399.88	444.27	435.74
<b>New Hampshire</b>	97.20	83.93	78.79	95.33	104.05	93.36
<b>New Jersey</b>	588.27	507.92	501.09	531.41	588.43	609.94
<b>New York</b>	1368.14	1157.63	1111.57	1149.91	1244.30	1298.76
<b>Pennsylvania</b>	826.59	724.03	683.83	758.04	793.53	765.02
<b>Rhode Island</b>	76.80	63.10	54.86	63.61	69.44	68.15
<b>Vermont</b>	44.22	38.76	36.47	43.11	44.19	39.32
<b>Virginia</b>	542.79	501.10	500.32	545.22	578.72	588.15
<b>West Virginia</b>	111.04	117.05	112.90	106.47	101.84	104.31

Source: Woods and Poole, 2000

**Appendix 1h. Projections of US Population and Individual Northeastern States by Age (Thousands) 35 to 39 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	22240.89	19850.29	18574.70	18898.54	20550.65	21651.81
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	287.43	246.92	198.31	186.16	206.05	228.72
<b>Delaware</b>	66.66	62.85	55.37	55.05	59.30	61.31
<b>Maine</b>	106.87	92.40	86.71	84.85	93.65	94.78
<b>Maryland</b>	492.77	425.04	364.97	363.65	412.33	450.13
<b>Massachusetts</b>	538.67	492.70	392.37	348.43	392.88	436.45
<b>New Hampshire</b>	115.19	103.66	89.26	83.98	100.97	109.58
<b>New Jersey</b>	717.31	601.77	521.32	515.28	544.56	600.40
<b>New York</b>	1520.24	1336.69	1133.85	1091.96	1129.34	1223.10
<b>Pennsylvania</b>	934.86	848.85	744.55	703.89	778.36	814.07
<b>Rhode Island</b>	81.73	77.16	63.37	55.24	63.88	69.53
<b>Vermont</b>	49.98	47.57	41.66	39.37	46.29	47.44
<b>Virginia</b>	609.46	553.03	510.77	510.30	554.58	588.09
<b>West Virginia</b>	123.06	115.04	121.36	117.20	110.85	106.59

Source: Woods and Poole, 2000

**Appendix 1i. Projections of US Population and Individual Northeastern States by Age (Thousands) 40 to 44 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	22588.77	22468.36	200078.08	18809.68	19152.82	20811.31
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	288.61	285.88	246.70	198.92	186.77	205.99
<b>Delaware</b>	65.73	68.10	64.29	56.73	56.40	60.61
<b>Maine</b>	111.51	111.02	96.39	90.65	88.89	98.16
<b>Maryland</b>	469.44	500.84	433.49	372.19	370.83	419.73
<b>Massachusetts</b>	522.17	532.03	487.68	389.06	345.74	388.78
<b>New Hampshire</b>	111.88	116.32	105.28	90.70	85.66	102.78
<b>New Jersey</b>	718.48	722.88	608.80	529.53	523.59	551.63
<b>New York</b>	1488.24	1483.66	1309.49	1116.08	1077.52	1114.07
<b>Pennsylvania</b>	1005.77	948.47	864.03	758.41	717.36	792.61
<b>Rhode Island</b>	82.54	80.73	76.50	62.89	54.91	63.35
<b>Vermont</b>	54.24	52.17	49.82	43.69	41.48	48.67
<b>Virginia</b>	594.58	615.98	559.57	516.90	517.23	560.72
<b>West Virginia</b>	143.85	127.66	119.56	126.41	122.65	116.51

Source: Woods and Poole, 2000

**Appendix 1j. Projections of US Population and Individual Northeastern States by Age (Thousands) 45 to 49 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	19875.08	22064.26	21960.99	19667.97	18445.80	18780.91
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	241.51	274.95	273.62	237.62	191.66	179.66
<b>Delaware</b>	54.38	64.75	67.13	63.51	56.12	55.71
<b>Maine</b>	100.04	109.95	110.11	96.18	90.68	89.16
<b>Maryland</b>	390.70	454.86	487.07	423.26	363.46	361.30
<b>Massachusetts</b>	449.71	499.32	509.48	468.84	374.26	331.73
<b>New Hampshire</b>	90.07	105.81	110.81	100.95	87.22	82.54
<b>New Jersey</b>	603.89	692.95	699.39	591.74	514.87	508.44
<b>New York</b>	1308.08	1413.33	1412.85	1253.94	1070.47	1033.51
<b>Pennsylvania</b>	901.56	982.10	929.28	849.45	745.26	704.34
<b>Rhode Island</b>	69.97	78.37	76.98	73.38	60.36	52.65
<b>Vermont</b>	50.17	53.97	52.20	50.13	44.12	41.94
<b>Virginia</b>	509.08	575.47	597.13	544.25	503.54	503.97
<b>West Virginia</b>	144.08	143.33	127.42	119.87	127.43	124.20

Source: Woods and Poole, 2000



**Appendix 1k. Projections of US Population and Individual Northeastern States by Age (Thousands) 50 to 54 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	17256.93	19559.23	21729.34	21658.02	19424.18	18234.47
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	212.52	226.50	259.66	260.29	226.79	182.94
<b>Delaware</b>	46.88	53.55	63.87	66.44	63.02	55.66
<b>Maine</b>	88.05	99.43	109.96	110.73	97.04	91.75
<b>Maryland</b>	337.91	373.65	437.33	470.12	409.36	351.56
<b>Massachusetts</b>	396.93	428.30	476.75	488.45	450.62	358.90
<b>New Hampshire</b>	76.71	85.48	101.29	106.69	97.63	84.47
<b>New Jersey</b>	533.10	576.02	663.63	672.52	569.87	496.02
<b>New York</b>	1171.29	1249.09	1353.65	1359.47	1209.89	1033.78
<b>Pennsylvania</b>	782.34	882.17	964.41	915.77	838.40	735.17
<b>Rhode Island</b>	59.95	66.11	74.41	73.48	70.23	57.70
<b>Vermont</b>	42.86	49.85	53.98	52.56	50.71	44.72
<b>Virginia</b>	452.58	492.85	558.10	580.86	531.02	491.59
<b>West Virginia</b>	133.26	147.16	146.50	130.70	123.57	131.93

Source: Woods and Poole, 2000

**Appendix 11. Projections of US Population and Individual Northeastern States by Age (Thousands) 55 to 59 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	13321.90	16819.47	19099.94	21255.91	21221.34	19060.60
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	168.79	196.27	210.78	243.44	245.09	213.87
<b>Delaware</b>	36.33	45.70	52.38	62.71	65.45	62.18
<b>Maine</b>	64.45	87.17	99.07	110.14	111.32	97.93
<b>Maryland</b>	254.82	314.95	350.55	412.93	446.07	389.41
<b>Massachusetts</b>	301.02	374.38	405.35	453.30	465.61	429.66
<b>New Hampshire</b>	55.12	72.32	81.23	96.85	102.47	94.09
<b>New Jersey</b>	421.73	500.61	543.53	629.38	639.27	542.55
<b>New York</b>	924.54	1099.54	1176.60	1282.10	1291.81	1152.71
<b>Pennsylvania</b>	607.73	755.31	855.76	939.78	894.16	820.50
<b>Rhode Island</b>	45.45	56.12	62.22	7048	69.78	66.77
<b>Vermont</b>	30.86	41.92	49.13	53.61	52.49	50.92
<b>Virginia</b>	345.52	431.50	470.92	534.88	559.10	512.41
<b>West Virginia</b>	102.68	134.81	149.16	149.20	133.82	127.34

Source: Woods and Poole, 2000

**Appendix 1m. Projections of US Population and Individual Northeastern States by Age (Thousands) 60 to 64 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	10674.92	12837.20	16258.60	18496.28	20628.35	20647.28
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	124.28	152.12	178.53	193.14	224.24	226.80
<b>Delaware</b>	28.59	34.86	44.03	50.62	60.78	63.65
<b>Maine</b>	50.05	62.42	85.16	97.29	108.66	110.45
<b>Maryland</b>	187.35	230.94	287.76	322.16	381.70	414.78
<b>Massachusetts</b>	224.94	277.40	346.99	377.47	423.84	436.35
<b>New Hampshire</b>	39.88	50.51	66.96	75.71	90.77	96.55
<b>New Jersey</b>	323.58	389.07	465.14	507.52	589.40	600.69
<b>New York</b>	734.11	847.53	1013.19	1090.00	1192.69	1207.22
<b>Pennsylvania</b>	502.72	582.91	728.54	827.82	910.95	869.59
<b>Rhode Island</b>	35.03	41.97	52.15	58.14	66.10	65.59
<b>Vermont</b>	22.77	29.90	40.94	48.27	53.00	52.23
<b>Virginia</b>	260.73	321.77	403.53	442.11	504.91	530.36
<b>West Virginia</b>	91.54	103.88	136.56	151.61	152.49	137.75

Source: Woods and Poole, 2000

**Appendix In. Projections of US Population and Individual Northeastern States by Age (Thousands) 65 to 69 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	9440.90	10074.47	12165.02	15459.04	17636.36	19724.95
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	114.81	112.69	138.59	163.19	176.98	205.38
<b>Delaware</b>	27.84	27.73	33.97	43.06	49.69	59.79
<b>Maine</b>	47.71	48.28	60.80	83.40	95.75	107.44
<b>Maryland</b>	165.25	173.51	215.63	269.82	303.26	360.67
<b>Massachusetts</b>	213.70	210.36	260.58	327.00	356.83	400.80
<b>New Hampshire</b>	38.62	38.53	49.23	65.61	74.41	89.46
<b>New Jersey</b>	288.89	292.56	353.83	424.70	464.45	539.95
<b>New York</b>	639.26	646.46	748.83	899.12	970.74	1064.87
<b>Pennsylvania</b>	472.01	468.35	546.15	685.80	780.93	860.87
<b>Rhode Island</b>	34.84	33.37	40.21	50.17	56.09	63.76
<b>Vermont</b>	20.06	21.56	28.57	39.39	46.68	51.53
<b>Virginia</b>	225.20	245.28	304.04	382.99	421.52	483.10
<b>West Virginia</b>	76.08	84.49	96.21	127.55	142.19	143.96

Source: Woods and Poole, 2000

**Appendix 1o. Projections of US Population and Individual Northeastern States by Age (Thousands) 70 to 74 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	8751.98	8367.46	8991.68	10927.37	13956.00	15982.95
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	112.80	101.36	100.04	123.61	145.63	157.44
<b>Delaware</b>	25.84	24.58	24.66	30.39	38.69	44.66
<b>Maine</b>	44.30	43.12	44.12	56.05	77.40	89.39
<b>Maryland</b>	153.01	145.44	154.06	192.46	241.08	270.93
<b>Massachusetts</b>	208.29	188.92	186.90	232.82	293.14	319.65
<b>New Hampshire</b>	36.40	34.95	35.25	45.35	60.62	68.93
<b>New Jersey</b>	277.08	249.80	255.23	310.81	374.17	409.30
<b>New York</b>	605.74	540.50	548.76	639.97	772.36	834.85
<b>Pennsylvania</b>	481.01	417.05	417.27	490.01	617.35	704.52
<b>Rhode Island</b>	37.41	31.26	30.11	36.48	45.61	50.87
<b>Vermont</b>	18.51	18.11	19.70	26.35	36.61	43.70
<b>Virginia</b>	199.31	197.27	216.67	270.39	341.70	376.68
<b>West Virginia</b>	71.51	65.89	73.70	84.71	113.27	127.36

Source: Woods and Poole, 2000

**Appendix 1p. Projections of US Population and Individual Northeastern States by Age (Thousands) 75 to 79 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	7434.03	7425.20	7169.02	7773.98	9522.10	12265.69
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	102.37	97.67	88.75	88.38	109.48	129.24
<b>Delaware</b>	20.93	21.52	20.69	20.96	26.01	33.32
<b>Maine</b>	37.00	37.96	37.50	38.78	49.70	69.35
<b>Maryland</b>	130.84	129.46	124.54	133.11	167.10	209.99
<b>Massachusetts</b>	187.34	177.95	162.85	162.38	203.31	257.11
<b>New Hampshire</b>	30.01	31.34	30.46	31.05	40.22	54.09
<b>New Jersey</b>	240.07	230.19	209.87	216.64	265.22	320.94
<b>New York</b>	507.35	495.53	445.99	456.30	535.02	649.32
<b>Pennsylvania</b>	419.90	406.75	356.76	360.45	425.84	540.37
<b>Rhode Island</b>	34.91	32.44	27.36	26.56	32.31	40.50
<b>Vermont</b>	15.23	15.90	15.79	17.41	23.52	33.06
<b>Virginia</b>	166.19	166.83	166.69	184.85	232.57	295.69
<b>West Virginia</b>	58.42	58.69	54.74	61.95	72.02	97.60

Source: Woods and Poole, 2000

**Appendix 1q. Projections of US Population and Individual Northeastern States by Age (Thousands) 80 to 84 years**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	4922.61	5541.18	5606.89	5482.51	6027.12	7474.97
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	71.53	76.83	74.24	68.15	68.59	85.36
<b>Delaware</b>	13.02	15.18	15.75	15.25	15.67	19.61
<b>Maine</b>	25.00	28.52	29.79	29.85	31.33	40.72
<b>Maryland</b>	82.54	97.37	97.57	94.76	102.52	129.75
<b>Massachusetts</b>	129.04	141.17	135.59	125.34	126.35	159.47
<b>New Hampshire</b>	20.58	23.44	24.89	24.42	25.27	33.06
<b>New Jersey</b>	159.13	174.10	168.87	155.67	162.83	201.21
<b>New York</b>	340.17	366.02	361.86	329.46	340.86	403.26
<b>Pennsylvania</b>	282.89	308.45	303.07	269.26	275.53	329.39
<b>Rhode Island</b>	23.93	26.59	24.98	21.27	20.89	25.60
<b>Vermont</b>	10.24	11.54	12.25	12.35	13.87	18.99
<b>Virginia</b>	105.34	122.78	124.93	126.46	142.42	181.37
<b>West Virginia</b>	38.37	42.24	43.00	40.82	47.05	55.60

Source: Woods and Poole, 2000

**Appendix 1r. Projections of US Population and Individual Northeastern States by Age (Thousands) 85 Years And Over**

	2000	2005	2010	2015	2020	2025
<b>UNITED STATES</b>	4324.13	4989.41	5798.04	6362.28	6671.90	7317.60
<b>NORTHEAST UNITED STATES</b>						
<b>Connecticut</b>	65.71	75.82	87.74	95.23	97.89	104.45
<b>Delaware</b>	10.20	11.66	13.42	14.59	15.16	16.41
<b>Maine</b>	23.16	25.97	29.33	31.08	21.29	32.96
<b>Maryland</b>	68.44	80.69	95.81	107.82	115.95	129.63
<b>Massachusetts</b>	118.38	130.81	144.95	150.70	148.78	152.82
<b>New Hampshire</b>	18.70	21.68	25.33	27.75	28.84	31.29
<b>New Jersey</b>	137.21	158.52	184.22	201.60	209.82	227.23
<b>New York</b>	315.27	348.98	389.18	412.65	420.28	446.60
<b>Pennsylvania</b>	235.77	270.56	312.04	338.99	350.90	379.69
<b>Rhode Island</b>	21.37	24.45	28.03	30.10	30.62	32.37
<b>Vermont</b>	9.88	11.15	12.67	13.52	13.73	14.64
<b>Virginia</b>	87.50	101.87	119.47	132.96	141.72	157.66
<b>West Virginia</b>	32.81	36.80	41.39	43.71	43.97	46.41

Source: Woods and Poole, 2000



## Appendix 2a-x

### APPENDIX 2a. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for cross-country skiing by region and decade

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Cross Country Skiing								
Days	North	35.70	0.92	0.90	0.91	0.93	0.98	1.10
	National	49.00	0.94	0.94	0.96	1.00	1.06	1.18
Trips	North	23.90	1.02	1.06	1.13	1.22	1.33	1.49
	National	33.50	1.02	1.05	1.12	1.21	1.30	1.44
Participation	North	4.40	1.03	1.15	1.23	1.49	1.67	1.91
	National	6.50	1.04	1.18	1.26	1.54	1.73	1.95

Source: Bowker, English, & Cordell, 1999

By 2050, participation in cross country skiing in the North (including the Northeast) is expected to increase by 91%. The number of annual days an individual will spend in cross country skiing is estimated to increase by 10% and the total number of annual trips an individual will take for the primary reason of participating in cross country skiing is expected to increase by 49%.

**Appendix 2b. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for Downhill skiing by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Downhill Skiing								
Days	North	67.20	1.00	1.09	1.21	1.36	1.55	1.86
	National	126.50	1.03	1.22	1.31	1.51	1.75	2.10
Trips	North	40.90	1.03	1.12	1.28	1.48	1.53	2.15
	National	78.90	1.06	1.18	1.36	1.58	1.85	2.22
Participation	North	8.40	1.00	1.09	1.16	1.36	1.54	1.82
	National	16.80	1.03	1.13	1.22	1.43	1.63	1.93

Source: Bowker, English, & Cordell, 1999

By 2050, participation in downhill skiing in the North (including the northeast) is expected to increase by 82%. The number of annual days an individual will spend in downhill skiing is estimated to increase by 86% and the total number of annual trips an individual will take for the primary reason of participating in downhill skiing is expected to increase by 115%. Climate change could alter this prediction by shortening the skiing season—likely in most places. However, because of the isolated extreme weather events certain locales may receive substantially more snow than average in a given yearly cycle.

**Appendix 2c. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for snowmobiling by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Snowmobiling								
Days	North	51.10	1.00	1.18	1.42	1.68	1.92	2.21
	National	65.80	1.00	1.14	1.32	1.53	1.74	1.99
Trips	North	28.10	1.00	1.15	1.34	1.54	1.75	2.06
	National	38.60	1.02	1.16	1.35	1.56	1.77	2.10
Participation	North	4.90	0.98	1.00	1.05	1.08	1.13	1.22
	National	7.10	1.00	1.04	1.09	1.18	1.27	1.40

Source: Bowker, English, & Cordell, 1999

Participation in snowmobiling in the North (including the Northeast) is expected to increase by 22% during the next 50 years. The number of annual days an individual will spend in snowmobiling is estimated to increase by 121% and the total number of annual trips an individual will take for the primary reason of participating in snowmobiling is expected to increase by 106%. Again, climate change could temper such projections in previously mentioned ways.

**Appendix 2d. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for canoeing by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Canoeing								
Days	North	44.70	1.00	1.14	1.33	1.51	1.64	1.78
	National	74.60	1.02	1.14	1.28	1.43	1.57	1.73
Trips	North	25.50	0.98	0.93	0.90	0.89	0.89	0.90
	National	49.30	1.02	1.07	1.14	1.22	1.29	1.29
Participation	North	8.00	1.00	1.06	1.13	1.24	1.33	1.48
	National	14.10	1.02	1.08	1.15	1.24	1.33	1.46

Source: Bowker, English, & Cordell, 1999

By 2050, participation in canoeing in the North (including the Northeast) is expected to increase by 48%. The number of annual days an individual will spend in canoeing is estimated to increase by 78% and the total number of annual trips an individual will take for the primary reason of participating in canoeing is expected to decrease by 10%. Climate change might extend the season for canoeing.

**Appendix 2e. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for motorboating by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Motorboating								
Days	North	292.30	1.00	1.03	1.07	1.11	1.15	1.20
	National	699.90	1.01	1.07	1.14	1.23	1.32	1.45
Trips	North	208.50	1.02	0.99	1.01	1.04	1.06	1.06
	National	480.40	1.05	1.08	1.16	1.26	1.36	1.48
Participation	North	22.00	1.01	1.06	1.13	1.21	1.29	1.40
	National	47.00	1.03	1.11	1.21	1.31	1.42	1.55

Source: Bowker, English, & Cordell, 1999

By 2050, participation in motorboating in the North (including the Northeast) is expected to increase by 40%. The number of annual days an individual will spend in motorboating is estimated to increase by 20% and the total number of annual trips an individual will take for the primary reason of participating in motorboating is expected to increase by 6%. Again, climate change could temper these projections.

**Appendix 2f. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for non-pool swimming by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Non-pool swimming								
Days	North	578.60	1.00	1.05	1.12	1.19	1.26	1.37
	National	1241.40	1.00	1.05	1.12	1.20	1.28	1.40
Trips	North	385.40	1.00	1.01	1.06	1.11	1.15	1.22
	National	837.90	1.01	1.04	1.09	1.14	1.19	1.25
Participation	North	38.40	1.01	1.08	1.16	1.28	1.37	1.51
	National	78.10	1.03	1.12	1.21	1.33	1.45	1.58

Source: Bowker, English, & Cordell, 1999

By 2050, participation in non-pool swimming in the North (including the Northeast) is expected to increase by 51%. The number of annual days an individual will spend in non-pool swimming is estimated to increase by 37% and the total number of annual trips an individual will take for the primary reason of participating in non-pool swimming is expected to increase by 22%. It is likely that the non-pool swimming season will be somewhat extended by higher average temperatures during the next twenty years.

**Appendix 2g. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for rafting/floating by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Rafting/Floating Days	North	35.00	0.99	1.02	1.08	1.16	1.26	1.43
	National	77.30	1.01	1.08	1.17	1.27	1.39	1.55
Trips	North	27.50	0.97	0.90	0.88	0.86	0.86	0.80
	National	61.50	1.01	1.03	1.10	1.17	1.23	1.30
Participation	North	6.90	0.97	0.94	1.01	0.93	0.94	1.00
	National	15.20	1.00	1.02	1.07	1.09	1.15	1.26

Source: Bowker, English, & Cordell, 1999

Participation in rafting/floating in the North (including the Northeast) is expected to remain unchanged during the next five decades. The number of annual days an individual will spend in rafting/floating is estimated to increase by 43% and the total number of annual trips an individual will take for the primary reason of participating in rafting/floating is expected to decrease by 20%. Here again, the season may be extended due to warmer weather.

**Appendix 2h. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for visiting a beach or waterside by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Visiting a Beach or Waterside								
Days	North	1319.70	1.01	1.07	1.15	1.22	1.28	1.36
	National	3187.90	1.03	1.10	1.17	1.25	1.47	1.59
Trips	North	673.50	1.00	1.01	1.05	1.08	1.11	1.17
	National	1667.10	1.03	1.10	1.17	1.25	1.31	1.42
Participation	North	57.70	1.01	1.09	1.17	1.28	1.35	1.45
	National	124.40	1.05	1.15	1.24	1.38	1.49	1.61

Source: Bowker, English, & Cordell, 1999

Participation in visiting a beach or waterside in the North (including the Northeast) is expected to increase by 45% by 2050. The number of annual days an individual will spend in visiting a beach or waterside is estimated to increase by 36% and the total number of annual trips an individual will take for the primary reason of participating in visiting a beach or waterside is expected to increase by 17%. In terms of beach visitation, climate change could have numerous unpredictable effects, from the erosion of beach fronts due to extreme weather, to an extension of the season, to extreme heat which might actually cause declines in beach visits.



**Appendix 2i. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for fishing by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Fishing								
Days	North	451.00	1.00	1.05	1.11	1.15	1.16	1.15
	National	1135.40	1.02	1.09	1.17	1.23	1.26	1.27
Trips	North	367.50	0.99	0.99	1.01	1.01	0.97	0.95
	National	919.50	1.03	1.05	1.10	1.12	1.14	1.13
Participation	North	25.60	1.00	1.05	1.12	1.17	1.21	1.27
	National	57.90	1.03	1.09	1.17	1.23	1.29	1.36

Source: Bowker, English, & Cordell, 1999

Participation in fishing in the North (including the Northeast) is expected to increase by 27% by 2050. The number of annual days an individual will spend in fishing is estimated to increase by 15% and the total number of annual trips an individual will take for the primary reason of participating in fishing is expected to decrease by 5%. Climate warming may decrease the availability of some kinds of fish, such as trout. Extreme weather events may cause salt water to enter previously fresh water areas with numerous consequences for fishing.

**Appendix 2j. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for hunting by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Hunting								
Days	North	193.70	0.98	1.01	1.05	1.09	1.10	1.12
	National	416.30	0.96	0.97	0.99	1.00	0.99	0.98
Trips	North	140.40	1.01	1.04	1.10	1.16	1.18	1.22
	National	305.50	1.02	0.99	1.03	1.05	1.05	1.06
Participation	North	8.40	0.98	0.97	0.98	0.98	0.98	0.99
	National	18.60	0.97	0.93	0.91	0.89	0.88	0.89

Source: Bowker, English, & Cordell, 1999

By 2050, participation in hunting in the North (including the Northeast) is expected to decrease by 1%. The number of annual days an individual will spend in hunting is estimated to increase by 12% and the total number of annual trips an individual will take for the primary reason of participating in hunting is expected to increase by 22%.

**Appendix 2k. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for nonconsumptive wildlife activities by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Nonconsumptive Wildlife Activities								
Days	North	3319.30	1.04	1.22	1.44	1.63	1.72	1.76
	National	7057.10	1.07	1.27	1.51	1.73	1.88	1.97
Trips	North	1154.40	0.96	1.02	1.09	1.09	1.02	0.90
	National	2277.10	1.00	1.07	1.15	1.18	1.15	1.08
Participation	North	56.00	1.01	1.10	1.21	1.30	1.35	1.40
	National	116.70	1.04	1.16	1.29	1.41	1.51	1.61

Source: Bowker, English, & Cordell, 1999

Participation in nonconsumptive wildlife activities (including various forms of wildlife viewing such as birdwatching and wildlife photography) in the North (including the Northeast) is expected to increase by 40% over the next five decades. The number of annual days an individual will spend in nonconsumptive wildlife activities is estimated to increase by 76% and the total number of annual trips an individual will take for the primary reason of participating in nonconsumptive wildlife activities is expected to decrease by 10%. The season for such activity could be extended due to warmer temperatures.

**Appendix 21. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for backpacking by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Backpacking								
Days	North	53.90	0.98	0.95	0.96	0.98	1.00	1.08
	National	129.70	1.00	1.08	1.15	1.23	1.32	1.36
Trips	North	35.20	0.98	0.95	0.96	0.98	1.00	1.08
	National	79.20	1.02	1.03	1.08	1.14	1.20	1.30
Participants	North	6.00	0.96	0.93	0.99	0.91	0.91	0.94
	National	15.20	1.00	1.04	1.11	1.12	1.18	1.26

Source: Bowker, English, & Cordell, 1999

By 2050, participation in backpacking in the North (including the Northeast) is expected to decrease by 6%. The number of annual days an individual will spend in backpacking is estimated to increase by 8% and the total number of annual trips an individual will take for the primary reason of participating in backpacking is also expected to increase by 8%. Here again, warming average temperatures could extend the season for backpacking.

**Appendix 2m. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for hiking by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Hiking								
Days	North	330.30	0.99	1.04	1.11	1.17	1.19	1.23
	National	804.70	1.03	1.14	1.24	1.34	1.43	1.51
Trips	North	240.60	0.98	0.97	1.01	1.02	1.01	1.00
	National	557.70	1.04	1.12	1.23	1.33	1.39	1.52
Participation	North	20.60	0.99	1.04	1.11	1.19	1.24	1.31
	National	47.80	1.03	1.13	1.23	1.34	1.45	1.57

Source: Bowker, English, & Cordell, 1999

Participation in hiking in the North (including the Northeast) is expected to increase by 31% by 2050. The number of annual days an individual will spend in hiking is estimated to increase by 23% and the total number of annual trips an individual will take for the primary reason of participating in hiking is expected to remain unchanged. These projections could underestimate hiking increase due to temperature increase.

**Appendix 2n. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for horseback riding by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Horseback Riding								
Days	North	108.50	1.03	1.14	1.30	1.48	1.70	2.03
	National	336.30	1.00	1.10	1.22	1.35	1.49	1.69
Trips	North	68.70	1.02	1.10	1.22	1.33	1.39	1.47
	National	185.10	1.01	1.14	1.29	1.46	1.60	1.77
Participation	North	5.60	1.00	1.07	1.18	1.28	1.39	1.54
	National	14.30	1.02	1.12	1.23	1.35	1.49	1.66

Source: Bowker, English, & Cordell, 1999

Participation in horseback riding in the North (including the Northeast) is expected to increase by 54% during the next five decades. The number of annual days an individual will spend in horseback riding is estimated to increase by 103% and the total number of annual trips an individual will take for the primary reason of participating in horseback riding is expected to increase by 47%.

**Appendix 2o. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for off-road driving by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Off-Road Driving								
Days	North	308.30	0.94	0.87	0.82	0.76	0.70	0.66
	National	685.50	0.99	0.99	0.99	1.00	1.03	1.07
Trips	North	211.40	0.92	0.79	0.69	0.60	0.52	0.45
	National	522.60	0.98	0.91	0.86	0.82	0.82	0.78
Participation	North	11.20	0.99	0.99	1.06	1.03	1.04	1.09
	National	27.90	1.00	1.02	1.05	1.06	1.10	1.16

Source: Bowker, English, & Cordell, 1999

By 2050, participation in off-road driving in the North (including the Northeast) is expected to increase by 9%. The number of annual days an individual will spend in off-road driving is estimated to decrease by 34% and the total number of annual trips an individual will take for the primary reason of participating in off-road driving is expected to decrease by 55%.

**Appendix 2p. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for primitive camping by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Primitive Camping								
Days	North	86.30	0.95	0.93	0.91	0.87	0.81	0.75
	National	258.60	1.00	1.05	1.11	1.17	1.21	1.24
Trips	North	47.50	0.96	0.92	0.91	0.87	0.81	0.75
	National	146.60	1.01	1.01	1.03	1.04	1.05	1.00
Participation	North	10.90	0.96	0.92	0.98	0.87	0.84	0.84
	National	28.00	1.00	1.01	1.04	1.05	1.07	1.10

Source: Bowker, English, & Cordell, 1999

Participation in primitive camping in the North (including the Northeast) is expected to decrease by 16% by 2050. The number of annual days an individual will spend in primitive camping is estimated to decrease by 25% and the total number of annual trips an individual will take for the primary reason of participating in primitive camping is also expected to decrease by 25%. The camping season might be increased due to global warming, thus increasing participation more than is predicted in these projections.



**Appendix 2q. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for rock climbing by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Rock Climbing								
Days	North	13.50	0.98	1.00	1.06	1.12	1.20	1.34
	National	37.70	1.01	1.07	1.15	1.24	1.39	1.60
Trips	North	10.90	0.96	0.87	0.83	0.79	0.77	0.78
	National	34.00	1.02	1.00	1.03	1.09	1.19	1.38
Participation	North	3.00	0.96	0.91	0.97	0.86	0.85	0.87
	National	7.50	1.03	1.10	1.21	1.26	1.36	1.50

Source: Bowker, English, & Cordell, 1999

Participation in rock climbing in the North (including the Northeast) is expected to decrease by 13% by 2050. The number of annual days an individual will spend in rock climbing is estimated to increase by 34% and the total number of annual trips an individual will take for the primary reason of participating in rock climbing is expected to decrease by 22%. The season for rock climbing could be extended by global warming.

**Appendix 2r. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for biking by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Biking								
Days	North	1055.20	1.01	1.09	1.19	1.29	1.40	1.55
	National	2237.00	1.04	1.14	1.25	1.36	1.49	1.66
Trips	North	656.20	1.03	1.17	1.35	1.52	1.67	1.85
	National	1386.80	1.08	1.24	1.45	1.67	1.90	2.16
Participation	North	27.90	1.01	1.10	1.17	1.33	1.43	1.58
	National	57.40	1.04	1.15	1.28	1.41	1.54	1.70

Source: Bowker, English, & Cordell, 1999

By 2050, participation in biking in the North (including the Northeast) is expected to increase by 58%. The number of annual days an individual will spend in biking is estimated to increase by 55% and the total number of annual trips an individual will take for the primary reason of participating in biking is expected to increase by 85%.

**Appendix 2s. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for developed camping by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Developed Camping								
Days	North	195.00	1.00	1.09	1.19	1.27	1.31	1.32
	National	442.40	1.04	1.19	1.36	1.53	1.68	1.83
Trips	North	88.50	0.99	1.06	1.16	1.24	1.28	1.34
	National	209.60	1.03	1.15	1.30	1.46	1.62	1.80
Participation	North	18.00	0.98	1.11	1.04	1.06	1.07	1.09
	National	41.50	1.02	1.12	1.19	1.30	1.39	1.49

Source: Bowker, English, & Cordell, 1999

By 2050, participation in developed camping is expected to increase by 9%. The number of annual days an individual will spend in developed camping is estimated to increase by 32% and the total number of annual trips an individual will take for the primary reason of participating in developed camping is expected to increase by 34%.

**Appendix 2t. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for family gathering by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Family Gathering								
Days	North	500.80	1.01	1.07	1.15	1.21	1.27	1.34
	National	1084.50	1.04	1.13	1.23	1.32	1.42	1.54
Trips	North	400.70	0.92	0.76	0.65	0.55	0.46	0.40
	National	855.60	0.98	0.89	0.83	0.79	0.79	0.75
Participation	North	58.10	1.02	1.09	1.16	1.26	1.33	1.41
	National	123.80	1.04	1.14	1.24	1.36	1.46	1.57

Source: Bowker, English, & Cordell, 1999

By 2050, participation in family gathering in the North (including the Northeast) is expected to increase by 41%. The number of annual days an individual will spend in family gathering is estimated to increase by 34% and the total number of annual trips an individual will take for the primary reason of participating in family gathering is expected to decrease by 60%.

**Appendix 2u. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for picnicking by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Picnicking								
Days	North	500.80	1.00	1.07	1.16	1.22	1.24	1.23
	National	1084.50	1.03	1.14	1.26	1.35	1.42	1.49
Trips	North	400.70	0.91	0.72	0.58	0.48	0.40	0.30
	National	855.60	0.94	0.79	0.70	0.63	0.59	0.55
Participation	North	47.00	1.01	1.08	1.15	1.25	1.29	1.35
	National	98.30	1.04	1.14	1.25	1.37	1.45	1.54

Source: Bowker, English, & Cordell, 1999

Participation in picnicking in the North (including the Northeast) is expected to increase by 35% by 2050. The number of annual days an individual will spend in picnicking is estimated to increase by 23% and the total number of annual trips an individual will take for the primary reason of participating in picnicking is expected to decrease by 70%. Again, picnicking in the NER could take place during a longer season due to global warming.

**Appendix 2v. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for sightseeing by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Sightseeing Days	North	904.80	1.04	1.27	1.38	1.55	1.68	1.80
	National	2036.30	1.06	1.27	1.43	1.63	1.81	1.98
Trips	North	511.20	1.03	1.14	1.29	1.43	1.48	1.62
	National	1209.50	1.06	1.20	1.43	1.63	1.72	1.98
Participation	North	52.30	1.02	1.11	1.23	1.33	1.41	1.50
	National	113.40	1.05	1.18	1.32	1.47	1.59	1.71

Source: Bowker, English, & Cordell, 1999

Participation in sightseeing in the North (including the Northeast) is expected to increase by 50% by the middle of the 21st Century. The number of annual days an individual will spend in sightseeing is estimated to increase by 80% and the total number of annual trips an individual will take for the primary reason of participating in sightseeing is expected to increase by 62%.

**Appendix 2w. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for visiting historic places by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Visiting Historic Places								
Days	North	203.20	1.03	1.20	1.42	1.60	1.71	1.79
	National	482.40	1.07	1.26	1.48	1.71	1.93	2.16
Participation	North	40.80	1.02	1.13	1.20	1.38	1.47	1.59
	National	88.40	1.06	1.19	1.32	1.49	1.63	1.76

Source: Bowker, English, & Cordell, 1999

Participation in visiting historic places in the North (including the Northeast) is expected to increase by 59% by 2050. The number of annual days an individual will spend in visiting historic places is estimated to increase by 79%. Projections on the total number of annual trips an individual will take for the primary reason of participating in visiting historic places is currently unavailable.

**Appendix 2x. 1995 Baseline estimates in millions and 2000-2050 projected indices of change in days, trips, and participants for walking by region and decade**

Unit	Region	Baseline Estimate 1995	Projection Index					
			2000	2010	2020	2030	2040	2050
Walking								
Days	North	6568.70	1.04	1.14	1.27	1.37	1.44	1.52
	National	14381.40	1.06	1.17	1.29	1.40	1.50	1.58
Participation	North	62.60	1.01	1.07	1.15	1.22	1.27	1.33
	National	133.70	1.03	1.12	1.21	1.30	1.39	1.46

Source: Bowker, English, & Cordell, 1999

Participation in walking in the North (including the Northeast) is expected to increase by 33% by 2050. The number of annual days an individual will spend in walking is estimated to increase by 52%. Projections on the total number of annual trips an individual will take for the primary reason of participating in walking is currently unavailable.



### Appendix 3. Calculation Procedure for Table 20.

1. Operating Budgets Source: [www2.nature.nps.gov/stats](http://www2.nature.nps.gov/stats)
2. Total Visits Source: [www.nps.gov/parks.html](http://www.nps.gov/parks.html)
3. At each of the 11 selected sites, Annual Operating Budget (Cost) for the site was divided by Total Visits (Visits)<sup>1</sup> for the site. The resulting figure was Operating Cost per Visit (Cost/Visit) e.g.

- Martin Van Buren National Historic Site
- Operating Budget in 1999 - \$755,000
- Total Number of Visits in 1999 - 21,045
- Operating Cost per Visit - \$35.00

<sup>1</sup> Both Recreation and Non Recreation visits are included, based on the assumption that all visits incur costs

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<sup>1</sup> Both Recreation and Non Recreation visits are included, based on the assumption that all visits incur costs

## About the Authors

Geoffrey Godbey is Professor of Leisure Studies in the College of Health and Human Development at The Pennsylvania State University. The author of eight books and over 100 articles concerning leisure, work, time use, tourism, and the future, he is the past President of the Academy of Leisure Sciences and the Society of Park and Recreation Educators. Godbey has written for a wide variety of academic journals and has given over 100 presentations in eighteen countries concerning the relation of trends to recreation and leisure behavior. He has conducted research on constraints to leisure participation, the future use of forests for recreation, older people's use of local recreation and park services, the impact of ethnic change on outdoor recreation, relations between health and use of leisure, and the impact of changing demographics on use of free time and time use. In the spring of 1997, Godbey was on sabbatical at Lehigh University's Agility Forum, a think tank devoted to reshaping organizations to cope with discontinuous change. He is currently at work on a book about the coming mass customization of life. His books have been translated into Chinese, Korean, and Spanish. Godbey currently serves as an advisor to the government study team on Economic Development and the Leisure Industries in the People's Republic of China.

Gordon F. De Jong is Distinguished Professor of Sociology and Demography and Director of the Graduate Program in Demography at Penn State University. He is former editor of *DEMOGRAPHY*, the official journal of the Population Association of America and is Chair-elect of the Population Section of the American Sociological Association. Over his academic career De Jong has published three books, over 100 professional articles and reviews, 50 public policy documents and reports to sponsors, and awarded 21 external research and training grants and contracts. He has conducted funded research projects in eight countries and held visiting research and teaching positions at the East-West Population Institute (U.S. State Dept.) and the Netherlands Graduate School of Research in Demography.

Vinod Sasidharan is an Assistant Professor in Recreation, Parks, and Tourism at San Diego State University, USA. He obtained his Ph.D. degree in Leisure Studies from The Pennsylvania State University, USA in 2001 and his Masters degree in Tourism Policy and Management in 1995 from the University of Birmingham, UK. His primary research focus includes urban recreational resource planning and management and sustainability issues in tourism planning and management. He has published papers in the areas of recreation and tourism trends in response to global climatic change; urban wildlife and environmental values of ethnic minorities in urban park use; sustainable development of coastal and marine tourism resources; and tourism ecolabeling.

Originally from Scotland, Careen Mackay Yarnal is a second year Ph.D. student in the Leisure Studies Program at Penn State University. She has an M. A (with honors) in Geography from the University of Aberdeen and subsequently gained an M.Sc. in Geography from the University of Calgary with an emphasis on recreation and cartography. Although her interests are diverse, the broad underlying themes of her

dissertation at Penn State focus on the intersections of tourism, geography, sociology and the broader patterns and processes involved in why people travel for pleasure. In addition to nearing completion of her course work, including a minor on Geography, Careen is also involved in several research projects and related publications. The projects include: serious leisure, gender and volunteer fire fighters in Pennsylvania (research assistant); a marketing study for Centre County Visitor's Bureau (research assistant) and an analysis of the role of loyalty in group tour behavior (co-investigator). Careen received the Hintz Graduate Educational Enhancement Fellowship during both academic years 1999-2000 and 2000-2001. She also received the National Tourism Foundation Graduate Research Grant for the year 2001-2002. Careen will graduate in the spring of 2003 and intends to pursue her interest in tourism by remaining in academia.

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