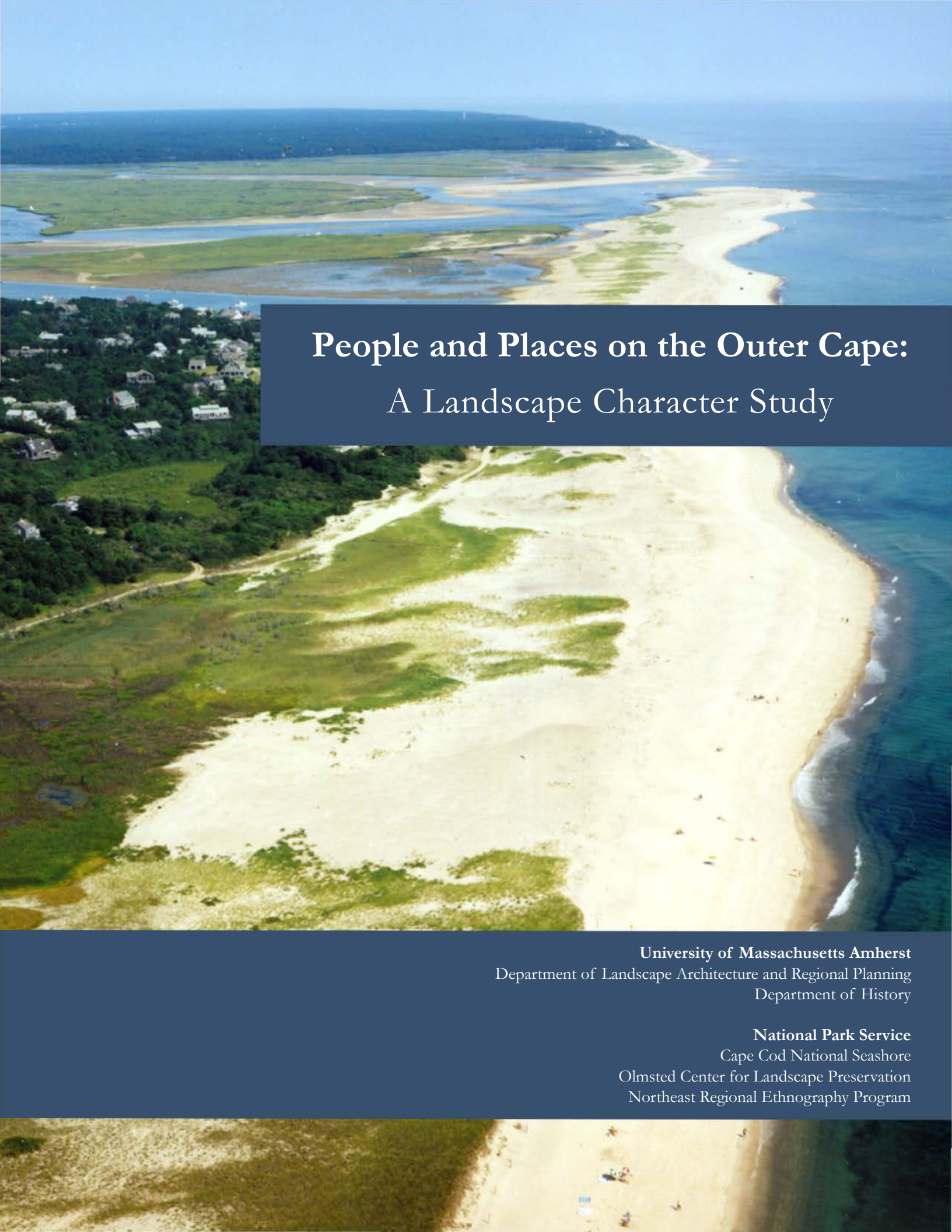

People and Places on the Outer Cape:
A Landscape Character Study

University of Massachusetts Amherst
Department of Landscape Architecture and Regional Planning
Department of History

National Park Service
Cape Cod National Seashore
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Cover photo: Bay Beach, Outer Cape, 2003. (Copyright: PANDION)

Principal Investigator

Jack Ahern, Head, Department of Landscape Architecture and Regional Planning (LARP), University of Massachusetts

Co-Investigators

David Glassberg, Chairman, UMass History Department
Elisabeth Hamin, Assistant Professor, UMass LARP
Ethan Carr, Assistant Professor, UMass LARP

Principal Authors

Mary Lee York, UMass LARP
Sandra C. Krein, UMass History Department
Mark Wamsley, UMass LARP

Guest Studio Co-instructor

André Boutequlia Leitão

UMass Studio Participants

Ani Adair, Tetsuya Aikoh, Patricia Watkins Alesi, Joao P. Almeida, Emily E. Clarke, Patricia Laurice Ellsworth, Mary C. Everett, Christian D. Gabriel, Jian Huang, Maciej Konieczny, Donna B. Lilborn, Nidhi Madan, Christopher J. Miller, Emily L. Podolak, Andrea L. Proulx, Nathan G. Richardson, Anna Marie Ryan, Aaron F. Rutz, Lisa A. Sauer, Taweesak Sriwannawit, Peng Sun, Ahmed Mohamedsadek Tawakol, Sarah L. Tindall, Lauren M. Todd, Greg R. Tuzzolo, Nicole A. Vajda, Amanda J. Walker, Mark B. Wamsley, Jan P. Witke, Mary Lee York

National Park Service Participants

Cape Cod National Seashore

Maria Burks, Superintendent
William Burke, Cultural Resources Program Manager
Lauren McKean, Park Planner
Hope Morrill, Curator
Sue Moynihan, Chief of Interpretation and Cultural Resources Management

Olmsted Center for Landscape Preservation

Robert Page, Director
Margie Coffin Brown, Historical Landscape Architect

Northeast Regional Office

John Maounis, Associate Regional Director for Cultural Resources, Northeast Region
Chuck Smythe, Senior Cultural Anthropologist, Northeast Region Ethnography
James O'Connell, Planner, Planning and Legislation
Paul Weinbaum, Regional Historian

Conservation Study Institute

Virginia Farley, Director of Leadership Programs

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Table of Contents

Preface 1

Methodology 3

Part I. Character, Current Trends, and History 7

Character 8
Current Trends in Development 10
Landscape History: Myth and Memory 15
The Cape Cod National Seashore 19
The Cape Cod Model 20
Public Hearings and Perception of Landscape Character 22
Citizen's Advisory Committee and Cape Cod Commission 26
National Park Service Studies and Plans 28

Part II. The Cultural Landscape: Landscape Headings 31

The Great Beach 35
Waterways 47
Town Centers and Harbors 57
Farms and Forests 69
Getting Around 87
Homes on the Outer Cape 95

Part III. Cape Conversations 111

Excerpts from a series of conversations held in Wellfleet and Provincetown

Part IV. Conclusions and Challenges 117

Challenges 118
Planning and Zoning Tools and Techniques 125
Alternative Future Scenarios 129

Endnotes 137

List of Figures 151

Bibliography 159

Interviews 167

Figure 1: Corn Hill, Truro, MA, 2003. (Photo: UMass)

This is the kind of place where place, and threats to place, are a big story.

Brent Harold, *Wellfleet and the World*, 2003[1]

Preface

When Congress established the Cape Cod National Seashore in 1961, it acted to preserve a nationally significant and unique American landscape: the beaches, dunes, bluffs, forests, ponds and wetlands of the Outer Cape.[2] But the legislation also recognized that the meaning and significance of that landscape could never be truly preserved without also helping to maintain the special way of life of the people who live there. From the outset, federal efforts to preserve the Outer Cape have recognized that the landscape and its people are inseparable in the sense that culture and landscape have mutually influenced one another for thousands of years. This study has been produced by the University of Massachusetts, Amherst, as part of the National Park Service mandate to understand, document, and analyze the complex interactions of people and places on the Outer Cape, both historically and today. The purpose of this study is to provide National Park Service and local government officials, as well as other organizations and all residents of the Outer Cape, an improved basis for making the decisions that ultimately will decide the fate of the landscape character valued by us all.

The 1998 *General Management Plan* for the Cape Cod National Seashore recognizes that the variety of Cape Cod's landscape resources, and the many ways in which people experience, use, and care for these resources, are the basis of the appeal and unique character of the Outer Cape.[3] This research explores the complex issue of landscape character, how it is related to the ways of life of the Outer Cape, and how an understanding of landscape character can be used to inform future planning, design, and management decisions. Understanding landscape character means defining its contributing characteristics and features, including such vital elements as vegetation, physiography, cultural landscapes, and historic sites and structures.

Figure 2: Two women walking on beach. (Courtesy: CCNS/NPS)

But the character of the Outer Cape also includes experiences that are harder to measure or document. Many residents and visitors have referred to a sense of peace, even a feeling of relative isolation, as an essential part of the landscape's character. Certainly this characteristic has been hard to maintain as the resident and tourist populations have grown. In general, using and enjoying the landscape, while assuring that its essential character is retained for future generations, has always been a significant challenge for the residents and property owners, as well as town, county, state and federal government officials. Other elements of landscape character are just as difficult to precisely enumerate or analyze. The inherent contrast, for example, between unchanging and awesome features (beach and ocean), juxtaposed with fragile and mutable elements (shifting dunes, endangered heathlands, fragile habitats) also epitomizes the Outer Cape. While the landscape on one hand seems eternal, on the other it is in constant flux. Both the cultural and natural history of the Cape feature dramatic change, from storms that can alter shorelines in a day, to the waves of tourists that transform Cape communities every summer. Providing insights on how interactions of people and places have shaped change in the landscape-and therefore also defining what has remained unchanged-are the essential goals of this

study. Understanding change on the Outer Cape can be a means of preserving its valued character, within the context of vital, growing communities and continued natural processes and landscape change.

The history of Cape Cod shows that the landscape has been anything but stable, particularly over the last 300 years. In the early seventeenth century Europeans colonized the region, displacing native residents even while adopting and extending their subsistence farming and fishing practices. European settlement had dramatic impacts, the most obvious being the removal of much of the existing forest cover and an expansion of agriculture and fishing to support larger populations. By the early nineteenth century farmers and fishermen began exporting goods, including cod and cranberries, to relatively distant markets, a shift in resource economics with extensive implications for the landscape. Tourism began to flourish as well in the nineteenth century, at least on the Upper Cape and elsewhere on Massachusetts shores. The Outer Cape remained at first more a place that belonged to the people who lived and worked there. Tourism certainly arrived, but mostly later, and mostly in automobiles and on improved highways. This trend began during the interwar period, but after World War II mass tourism completely altered the economic and social basis of local life. The dramatic changes of the 1940s and 1950s led many to despair that the character of the Outer Cape was in fact being lost. Agricultural activities and the maritime economy, which had shaped many features of the towns and countryside of the Cape, were in drastic decline. The new economy (and for many the new way of life) was based on weekend and seasonal tourism. The concern over this change-and all that it implied for the landscape-directly motivated the creation of the Cape Cod National Seashore in 1961.

The economics of tourism still shapes the landscape of the Outer Cape, although it is currently being overtaken by another source of change: the redevelopment of properties for year-round residences. The redevelopment of existing homes and cottages, whether to enlarge them, make them suitable for year-round use, or both, and the redevelopment of commercial properties to serve the larger, permanent population, are replacing new development (on previously undeveloped land) as a major perceived threat to the character of the Outer Cape. There is relatively little land that is either undeveloped or unprotected on the Outer Cape; only about 10 percent of the Outer Cape remains available for new development. But there are many properties that may be profitably redeveloped, sometimes greatly increasing the size of buildings and radically altering their place in the landscape. Redevelopment often in turn requires a greater number of services, stores, infrastructure and utilities, including fresh water.

As the year-round population has grown, property values have increased, and a new generation of pressures on the landscape of Cape Cod has emerged. Residents and government officials have once again responded to seek ways to preserve the character of their region, and their ways of life. The creation of the Cape Cod Commission in 1990 created a new context for land use planning decisions, and reflected a continued resolve on the part of Cape Cod residents to actively monitor and protect the character of their remarkable home. The Cape Cod National Seashore, as well, has continued to develop diverse and vital partnerships with property owners and local governments and agencies that are the heart of the successful management of the park. The 1998 *General Management Plan* embodies these priorities; the research presented here is a direct response to the requirements identified during the public meetings of the *General Management Plan* process. This study is intended to support the stewardship of natural and cultural resources and, above all, to further and enhance cooperative planning and management partnerships with the towns and communities of the Outer Cape.

Methodology

Figure 4: Landscape character public meeting, Wellfleet Public Library, 2003. (Photo: UMass)

The University of Massachusetts, Amherst (UMass), the National Park Service (NPS), and the residents and officials of the Outer Cape who participated by sharing their time and insights all collaborated to produce this study. The effort was initiated by the Cape Cod National Seashore, the Olmsted Center for Landscape Preservation, and the NPS Northeastern Regional Ethnography Program. The research was conducted by faculty and students of the Department of Landscape Architecture and Regional Planning, and the Department of History, of the University of Massachusetts.

The team of professors and students began by consulting with NPS staff to determine an appropriate scope and methodology. In preparation for the project, staff of the Cape Cod National Seashore contacted a range of town officials and residents in order to clarify key issues that should be addressed. Many highly engaged and knowledgeable people have been active in seeking solutions to the challenges on the Outer Cape for many years. Both UMass professors and students, and NPS staff received significant information from residents of the Outer Cape, as well as officials from the six towns and the Cape Cod Commission. We consulted many previous planning publications as part of our research, and many of those involved in earlier studies have personally participated in this project.

Part I, Character, Current Trends, and History, provides an overall context in which the other observations and conclusions of this study are made. This section summarizes some of the current, regional trends and issues that are affecting the Outer Cape, and it also provides a brief landscape history of the region, much of which is related in more depth by James O'Connell in his recent book, *Becoming Cape Cod*. In this overview, we emphasize certain trends and historical events, such as the rise of tourism and the creation of the Cape Cod National Seashore, which were of particular significance in shaping the region's landscape. This section also includes a thorough discussion of the literature and meanings of "character," particularly those that have been important in developing our own working definition of this elusive term. For our purposes, landscape character derives from cultural features and particular ways of life, as well as geology, topography, vegetation, and other physical features. Character com-

Figure 3: Artistic view, Wellfleet, MA, 2003. (Photo: UMass)

bines both patterns of human activity, and the physical patterns of the places that have been shaped by those activities. In turn, the landscape has also helped shape the ways of life of people living there. Character is closely related to "sense of place." We concluded that a location often is described as having a sense of place when people feel that it has had a role in the creation of their memories, and therefore in the establishment of identity, whether for individuals or for a group. Definitions of character and place are inseparable from the creative dynamics of memory, which makes it essential to begin this study with an overview of the role of memory and historical narrative in our analysis of the perceived character of the region.

It was also essential for everyone involved in this project to understand that although the Outer Cape has been valued for its history and character since at least Thoreau's day, relationships between people and places continue to actively shape the landscape. The residents of the Outer Cape today lead lives that are still influenced by, and in turn influence, the landscape around them. The present condition of the landscape-and the potential changes to it that may occur in the future-were our particular concern in this study.

Our description of the existing landscape character of the Outer Cape is presented in Part II, Landscape Headings. This section documents and analyzes features and characteristics of the existing cultural landscape of the Outer Cape. The material for this analysis was produced during two graduate studios (courses) at the UMass Department of Landscape Architecture and Regional Planning, as well as through a series of public meetings, or Cape Conversations, conducted by the University of Massachusetts History Department.

To produce the Landscape Headings, we combined work from several disciplines, specifically landscape architecture, regional planning, and public history. For landscape architects, the documentation of physical landscape features and characteristics-such as spatial organization, circulation, vegetation, topography, and structures-is of particular interest. Using drawings, photographs, historic maps and views, this approach was structured by the NPS *Guide to Cultural Landscape Reports* published in 1998. Some of the drawings and analysis done by the students are reproduced here. In a landscape planning studio, another group of students employed computerized data and analysis techniques of Geographic Information Systems (GIS) to understand the structure and disposition of the Outer Cape landscape, at a broader, regional scale. Finally, Professor David Glassberg and Research Assistant Sandra Krein employed the techniques of public history to better document many of the less tangible aspects of "character," through conversations with residents who explained in their own words what that term meant to them, and which aspects of life on the Outer Cape contributed to that sense.

The Landscape Headings depict representative sites on the Outer Cape, selected to capture the essence of the natural and cultural interactions in the landscape. We were able to draw on a large body of existing research to make these selections. A preliminary "cultural landscape inventory" of the Cape Cod National Seashore was recently completed by the NPS, for example. A National Register District has been designated in Wellfleet, and a number of other inventories, districts, and designations of historic sites and structures have been done throughout Cape Cod. Working from existing research as our starting point, we also consulted planning reports completed by the Cape Cod Commission, Barnstable County, and other entities to better understand the range of management issues and "threats" that have been described by those concerned by a perceived change in the landscape's character. We also relied on suggestions from Cape Cod National Seashore staff, as well as residents of the Outer Cape who were consulted in a series of phone interviews.

The Landscape Headings therefore describe a range of physical landscape types, from the Great Beach itself, to the commercial strip of Route 6. But the Headings are also intended to describe the range of public uses of these landscapes, since these activities are essential aspects of character. The Headings are examples, or models, that illustrate more general aspects of regional landscape character. There are obviously many special and contributing places that are not described here, specifically. But the Headings describe in more detail at least some of the landscapes that are typical, and sometimes emblematic, of life on the Outer Cape. By making specific observations in this way, we avoid remaining in the realm of generalities in our documentation of character. The Headings also highlight landscape management issues, from the natural succession of vegetation, to the shared use of popular beach access points. This study is also intended to contribute to the development of strategies for planning and management by the six towns, and so our Headings also address some specific land management concerns.

The series of Cape Conversations held on the Outer Cape in June and July of 2003 are summarized in Part III. The Cape Conversations were motivated by the idea that landscape values and perceptions are often articulated in groups, particularly through conversations among residents. To stimulate these conversations, we invited local residents to view contemporary and historical photographs, and listened to and recorded the comments and dialogue that emerged. The Cape Conversations were only one part of the overall effort to involve Outer Cape residents in this study, but they proved to be a productive one. Quotes from these conversations are highlighted throughout this document.

Throughout this study we proceeded on the assumption that a better understanding of the cultural and natural processes that formed the landscape, and the changes experienced especially in recent decades, would provide a stronger basis for residents and managers to make decisions affecting the region. This in no way suggests any intention or attempt to "freeze" the landscape, or somehow reduce active and vital communities to museums. Not only would such attempts fail, they are contrary to the published policies of the Cape Cod National Seashore and of the Secretary of the Interior's standards for the treatment of cultural landscapes. Change in the landscape must occur, and appropriate change can address current needs, and also enhance valued ways of life and regional economies. Policies should accommodate these changes in the ways that are supportive of the ecology and character of the existing landscape and the activities of its people. The challenge of maintaining the character of the Outer Cape in the context of inevitable change is as much political as technical. Landscape change is incremental, and therefore often unnoticed as such, at least as it is happening. It is difficult to appreciate landscape change when it happens gradually over years and is dispersed across the region. But the cumulative effects of seemingly minor changes can over time transform the quality of life and character of a place.

In Part IV Conclusions and Challenges, we present a set of ideas that we believe would contribute to the stewardship of the cultural landscape. These ideas are presented as a menu from which the six towns, private property owners, other stakeholders, and the NPS may be able to select strategies that are feasible and effective for their particular situation. We also present three future scenarios, intended to explore alternative strategies for accommodating future population and development growth, while maintaining the Outer Cape's unique qualities and character. Our work has been intended to find ways to encourage citizens to see their landscape and its changes over time, to empower local communities in their planning, zoning, and site reviews, and to improve partnership in the stewardship of the Outer Cape. Our conclusions and recommendations are offered in this spirit.

PART I

Character, Current Trends, and History

The Cape Cod peninsula extends from the southeastern corner of Massachusetts eastward and northward into the Atlantic Ocean. A great hook set in the sea, Cape Cod's distinct landform resulted from the last major glaciation to cover New England, which in its retreat dragged and deposited gravel and sand into a rocky ridge that today rises only barely above sea level. Exposed to the full force of the open ocean, this malleable foundation of Cape Cod has been shaped by storm and sea into its current configuration.

The towns of Chatham, Orleans, Eastham, Wellfleet, Truro and Provincetown, together make up the peninsula of the Outer Cape, which extends in a narrow spit northwards from the rest of Cape Cod. Here the surf relentlessly pounds the east facing shore, where the Great Beach stretches for forty remarkable miles, completely unimpeded. There is a palpable sense, here, of the land ending and succumbing to the wildness of the open sea.

Human activities have also been formative in shaping the Outer Cape landscape. The region is not just a destination spot for visitors, but also a place where people have made their living on the land and from the sea for thousands of years. These ways of life have helped shape the landscape, giving it distinctive form and influencing its unique character.

The extraordinary natural and cultural histories of the Outer Cape together constitute one of the most significant cultural landscape heritages in the United States. Glorified in the works of writers and artists, the Outer Cape has long been recognized by many diverse individuals and groups as a special place. Already in the seventeenth century the Province Lands received early forms of

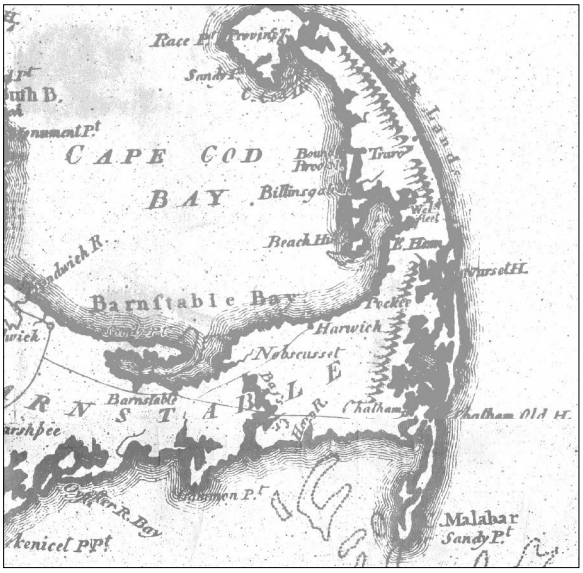


Figure 5: Cape Cod, 1795. (Courtesy: Wellfleet Public Library)

landscape protection (perhaps the earliest in North America), and many important preservation efforts have been pioneered here since then. In 1961 Congress established the Cape Cod National Seashore, covering 43,570 acres of unique and fragile land in the six towns of Barnstable County that make up the Outer Cape. The Seashore was a completely new kind of national park, conceived as a mosaic of private and public interests and properties; it was also the first instance of Congress directly acquiring land for the creation of a new federal reservation. Since then, the National Park Service has sponsored many different research and inventory projects in order to develop improved understandings of the unique character of the Outer Cape, with the goal of assuring that character would not erode and be lost. These efforts have been matched by local and regional groups, including the Cape Cod Commission, the Audubon Society, the Trust for Public Land, and the Compact of Cape Cod Conservation Trusts who have supported resource stewardship and the preservation of the character of the Outer Cape.

But what exactly is the special and unique "character" of the Outer Cape? What elements comprise that character, how can they be documented and analyzed, and how can that analysis inform future planning, design, and management decisions?

I find that the character is more identified as being a sense of place, a love of place that I don't find in the rest of New England or Massachusetts. The lower Cape [Outer Cape] is an exemplar of what people think about. They don't think about downtown Hyannis. They think about the National Seashore. They think about the dunes. They think about those kinds of things.

Bill Doherty, Cape Conversations, 2003.[4]

Character

Landscape "character" may be difficult to define, but it clearly includes physiographic structure of the land, patterns of vegetation, spatial experiences and sequences, and the means of moving through the landscape. Landscape character derives from cultural features and particular ways of life, as well as geology and topography; it combines patterns of human activity and the physical patterns of the places that are shaped by those activities, or conversely that have shaped them.

Landscape character is often used interchangeably with other common (and just as difficult to define) terms, such as "sense of place" and "community character." Many writers and researchers representing several academic disciplines have defined methods

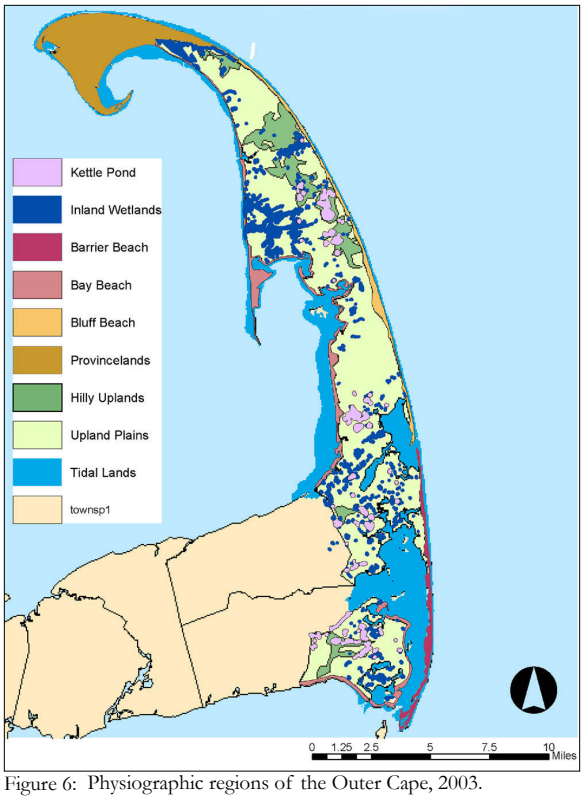


Figure 6: Physiographic regions of the Outer Cape, 2003. (Source: UMass/MassGIS)

for describing and analyzing the character of landscapes, usually with the ultimate goal of in some way "preserving" them.[5] Attempts to articulate the idea of landscape character often begin by focusing on the discrete physical elements of a place, highlighting such concrete aspects as natural features, as well as the scale, style, and arrangement of buildings and other structures. While such fundamental elements are essential components of any particular landscape, together they do not comprise a complete sense of place.[6] Physical features must also be considered in light of the patterns of life that are tied to them, and sometimes are responsible for producing them. The physical landscape must be linked, in other words, to the people that experience it, live in it, and shape it, and who filter their experience through their own personal experience, and through more broadly held social and political values.[7] Landscape character and place identity are intimately tied to both individuals and their sense of community, and to the basic human need not only for a relation-

ship with the physical world, but for community and social interaction.

The uses and activities that occur in a particular place can even overshadow physical landscape features in creating meaning: some researchers suggest it is the "substance" not the "style" of a place that matters most for creating meaning and character.[8] Others have attempted to define landscape character by assessing the "landscape values" held by those who experience those landscapes.[9] People experience and enjoy places and landscapes differently based not only on personal differences in memory and experience, but also to some extent on their culture, occupation, age and class. Tourists value landscapes differently than locals, and locals may experience landscapes differently based on their occupation.[10] Still other researchers have stressed that landscapes with a distinct sense of place and a unique character are "authentic," meaning that they include not only special physical features and patterns of living, but also an unpredictable, or "organic," element of surprise.[11] In general, perhaps it can be concluded that a location often is considered to have a "sense of place" when people can view it as having a role in the creation of their memories, and therefore of their identity as individuals, and as a group.

When speaking about the distinctive character of the Outer Cape, a number of writers on the subject begin by listing the particular physical aspects that exist there. As stated in the Cape Cod Commission's 1998 Community Vision:

> *Cape Cod is a special place, unique in both its natural environment and historic character. It has a rich, diverse landscape that includes compact historic villages connected by a network of wetlands, ponds forest and open space. It is a place of abundant nature, surrounded by and connected to the sea. It is a place with distinctive architecture, combining traditional forms*

The 'real' Cape Cod stakes its claim to authenticity by seeking to preserve the sense of place, by protecting beaches and salt marshes and preserving historic houses, windmills and picturesque fishing piers. Resort development has never overwhelmed the region's distinct character, accreting incrementally in the Cape's villages over the past 125 years. The locally owned, small-business economic base, with fewer national chains than elsewhere, helps maintain the region's small-town quality. The year-round community, with many retirees and commuters dedicated to the Cape, resists the relentlessly contrived feel that goes with vacationlands designed for transients. 'Tourist traps' do not set the tone…

Despite all the intention that under girds the authentic, Cape Cod tourism experiences depend upon a basic sense of place. It is essential to the marketing appeal, but in the final analysis, a place's authenticity is not utilitarian but grounded in the connection between the physical setting and people's emotional response to it.

James O'Connell, *Becoming Cape Cod: Creating a Seaside Resort.*[12]

and materials in a variety of different styles.[13]

But the sense of place on the Outer Cape is more than the sum of its extraordinary physical parts; it includes essential and intangible experiences. In the 1930s the photographer Samuel Chamberlain, for example, found "the veritable appeal of the Cape" to be in fleeting images, such as "the silhouettes of clam diggers at sunset, the flash of a lighthouse, the glimpse of a white doorway, [and] the turquoise splendor of an inland lake."[14] More recently writer Paul Theroux describes the Cape's allure by observing, "Anyone who grows tired of Cape Cod needs his head examined, because for purely homely summer fun there is nowhere in the world that I know that can touch it…. A perfect summer is a dream of childhood: idleness, and ice cream, and heat."[15] Indeed, a large and diverse literature exists devoted to describing the perhaps indescribable aspects of the character of the Outer Cape.

Such celebrated (if intangible) qualities are often attributed to the "authenticity" of the Outer Cape. The experience of the Outer Cape's special character stands in contrast to the manufactured feel of many other seaside resorts in the United States. But authenticity does not exist by happenstance; paradoxically or not, it is often carefully cultivated and nurtured by local businesses and residents alike. The delicate balance between promoting character, and preserving it, is hard to achieve.[16]

Current Trends in Development

The special character described by so many Outer Cape residents and visitors can change in some cases with startling rapidity. During the construction boom of the last two decades, towns have lost businesses to strip commercial developments, and agricultural land has been converted to residential subdivisions. In some cases services at the heart of community life-such as post offices, schools, and grocery stores-have moved out of town centers to peripheral locations. The redevelopment of existing residential and commercial properties can also result in far larger and more visually apparent buildings. The creation of the Cape Cod National Seashore in 1961 effectively ended new private development on the land acquired for the park; but over 600 private residential properties were left within park boundaries, subject only to local zoning restrictions.[17] When once modest Cape cottages are redeveloped into large mansions, they can dominate the landscape and change the character of a scene dramatically. The rapid growth of the year-round population and the associated increase in new residential and commercial land uses has resulted in more crowded roads and streets, pressures on water supplies, and many other changes.

A survey conducted by the Cape Cod Commission in 1995 highlighted the concerns of residents. Respondents ranked the following items as very important to their choice of living on the Cape: air and water quality, safety from crime, proximity to the coast, rural character, and small-town life. The survey also revealed concerns about threats to the

	Population Increase since 1950	% Population Increase since 1950	% Population under 18	% Population 65 & Over	Median Age
Eastham	4,593	534.0%	17.7%	26.0%	47.6
Orleans	4,582	260.0%	13.8%	36.0%	55.0
Chatham	4,168	169.0%	13.3%	34.0%	53.9
Wellfleet	1,626	144.8%	25.7%	21.7%	47.0
Truro	1,426	215.7%	17.4%	17.0%	45.7
Provincetown	-364	-9.6%	8.0%	17.8%	45.4
MA	1,658,583	35.40%	25.7%	13.5%	36.5

Table 1: Population Growth, 1950-2000.
(Source: US Census and Massachusetts Institute for Social and Economic Research (MISER), 2003)

It wasn't a problem until probably three years ago, when house prices went so high. Now, when you can't get a house for three hundred thousand, you think about…the average income for a family on the Cape might be fifty, sixty thousand. There's no way you can start out with a three hundred thousand dollar house…. it's a drastic problem. It's happened so fast that there hasn't been enough reaction time. And we're…running out of land as well, which is causing prices to be higher and less land to create a solution…. All of a sudden people are realizing we're out of land.

Frank Szedlak, Jr., Cape Conversation, 2003.[18]

character of their region. Respondents listed population growth, high taxes, traffic problems, groundwater contamination, pollution of coastal waters, and loss of open space as the most pressing issues facing the Cape at that time.[19]

Table 1 shows the significant population growth on the Outer Cape since 1950, a period during which the six towns in the region have grown an average of 219 percent, six times the rate of Massachusetts as a whole. This disparity has resulted in large part from the influx of retirees who build or convert vacation homes for year-round residence.[20] While one in seven Massachusetts residents in 2000 was 65 or older, on the Outer Cape it is one in four. The Cape's population boom has drawn the attention of local and state planning officials, and helped lead to the creation of the Cape Cod Commission in 1990. In 1997, at the Cape Cod 2020 Conference, the Cape Cod Commission projected that the Outer Cape would reach "build out" within twenty years, meaning a population between 275,000 and 290,000 residents.[21] This conference also indicated that the pressure of increasing population levels would only intensify due to a flood of "baby boomer" retirees, and as technological advances allow more people to work from home. The negative effects of this growth on affordable housing, traffic, and water quality issues will become even more challenging.

As the population has risen and developable land has become scarcer, the values of Outer Cape homes have increased at astounding rates. Average home prices on the entire Cape nearly doubled between 1997 and 2002. According to the Office of Federal Housing, in 2002 the Barnstable-Yarmouth section of Cape Cod topped the nation with an over ninety percent growth in prices over the previous five years. The trend showed no signs of slowing, with Barnstable-Yarmouth reporting a fifteen percent annual price increase in 2002.[22]

Barnstable-Yarmouth, MA	93.6
San Luis Obispo-Atascadero, CA	87.2
Santa Barbara-Santa Maria- Lompoc, CA	86
San Diego, CA	82.4
Nassau-Suffolk, NY	80.3
Brockton, MA	78
Yolo, CA	72.5
Orange County, CA	69.5
Ventura, CA	64.8
Monmouth-Ocean, NJ	60.9

Table 2: U.S. Counties with the Highest Rates of Median Home Sales Price Appreciation (1997-2002).[23]

One obvious result of rapidly rising real estate prices is that young families and lower income people are precluded from buying houses on the Outer Cape. The dearth of lower cost housing limits the number of workers available to staff local businesses, and it skews the demographics of Outer Cape towns in favor of wealthier, and often older, residents who are able to afford the real estate. Affordable housing has been repeatedly raised as an issue of concern. The lack of affordable housing affects the character of Outer Cape in basic ways by limiting the range of income and ages among the people who live there.

The redevelopment of existing homes and businesses has become a major trend on the Outer Cape in recent years, one that has again concerned a range of residents and officials. When small cottages are torn down and replaced with much larger houses-sometimes with little regard for effects on the surrounding landscape-the results can be distressing. When older properties are redeveloped, driveways of broken shells or packed sand are often replaced with black asphalt; rustic wooden fence posts are supplanted by formal gates. Commercial redevelopment, most notably along Route 6, can transform more modest motels and restaurants of the 1950s and 1960s into imposing establishments, set further back from the road to make room for extensive parking lots that front on the road. Within National Seashore boundaries, zoning ordinances (which vary considerably from town to town) are the only restriction on the extent to which private property owners can increase the size of their houses.

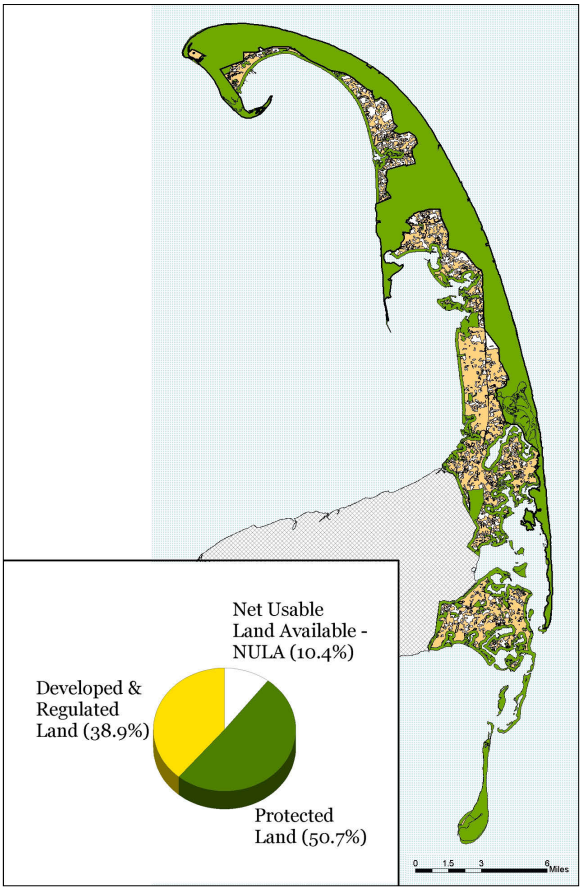


Figure 7: Net Usable Land Area (NULA) on the Outer Cape today. (Source: UMass/MassGis)

The Outer Cape's coastal towns and harbors are also changing. Working marinas and commercial boatyards are being replaced by upscale restaurants, condominiums, and even offices. Similarly, an increased demand for moorings for recreational boats has crowded out commercial dock space. These conversions sometimes sacrifice the last remaining activities of the maritime economy and displace the last traditional working waterfronts.[24] Although many people come to the Outer Cape expecting an experience evocative of maritime ways of life, they are increasingly unable to see evidence of that way of life, since maritime industries continue to diminish. As more and more people make the Outer Cape their year-round home, it is difficult for fishermen and shell fishermen to afford housing, compete for space with recreational boats, and avoid nuisance complaints against some of their activities and equipment.

If all this were not enough, the fisheries themselves are in decline: depleted fishing stocks have progressively made fishing an insecure industry. The codfish, sadly, is no longer plentiful off Cape Cod. Increased industrial fishing, in part, helped deplete Cape Cod fishing drastically by the 1990s. In response the federal government has cut off access to many fishing banks and put caps

Figure 8: Photographic simulation of housing redevelopment, Eastham, MA, 2003. (Source: UMass)

on the total number of days at sea allotted to individuals. Suggestions of newer, more restrictive regulations have been met with mixed response from the remaining commercial fishermen.[25] The shellfishing industry remains viable in selected areas on the Outer Cape. Contemporary shellfishing relies mainly on aquaculture, or the growing of clams and oysters in licensed beds in shallow water near shore. The development of aquaculture has generated a conflict with some Cape residents who object to the visual impact of the shellfish beds that become visible on tidal mudflats at low tide.

Loss of habitat is also taking a toll on Outer Cape wildlife. Between 1971 and 1990, twenty-four percent of the forested land on all of Cape Cod was lost to residential and commercial development. While most of this forest loss occurred on the Upper Cape, there have been a significant loss on the Outer Cape as well. An additional 15,000 upland acres have been developed on Cape Cod since then, further fragmenting forest habitat. Fragmented habitats tend to favor generalist species such as squirrels, skunks, and raccoons

Figure 9: Housing construction, Truro, MA, 2003. (Photo: UMass)

that are able to tolerate human disturbance, while eliminating specialist species that are more sensitive to habitat change.[26]

Increasing the proportion of developed land not only eliminates habitat, but also often affects nearby ponds, wetlands, and vernal pools that may be disturbed by increased runoff or rising rates of groundwater withdrawal. Parts of Cape Cod's sole source aquifer have been contaminated by a combination of unsuitable uses, infiltration of harmful materials, and high development densities, while pollution has caused the closing of some shellfish beds along coastal waters.[27] The pumping demand on Outer Cape aquifers is greatest during the summer months. As this demand grows, towns must not only worry about protecting water quality, but also the quantity of water recharge to ensure they are withdrawing within safe yield parameters. Provincetown has no potable water sources within its borders, and must rely on an aquifer lying under Truro.[28] Increased building has also produced a larger number of septic systems, which can cause nitrogen overloading of coastal waters and result in eutrophication of some areas. This also contributes to recent increases in the numbers of beach closings due to bacterial contamination.[29] New sewer systems already in place in Provincetown and under consideration in Wellfleet will ameliorate this pollution problem to some extent, but the higher population densities that sewer systems allow promise to cause even greater increases in the Outer Cape's already skyrocketing population.

Figure 11: Aerial view, shellfishing beds, Wellfleet, MA, 2003. (Copyright: PANDION)

Figure 10: Land for sale, Truro, MA, 2003. (Photo: UMass)

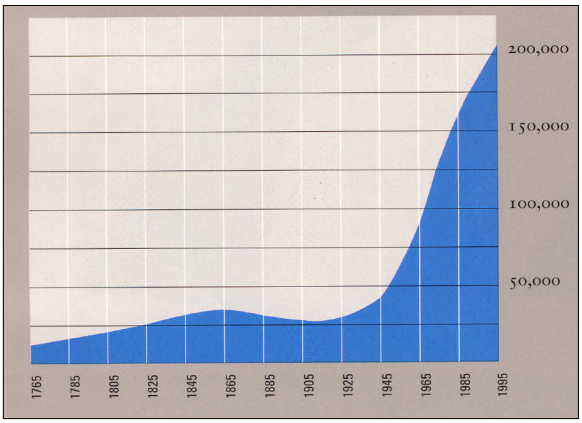


Figure 12: Cape Cod population change, 1950-1990. (Source: Thomas A. Stone, *Losing Cape Cod: Landscape Change over 40 Years*, Woods Hole Research Center, 1991)

Landscape History: Myth and Memory

Figure 13: Glacial retreat. (Source: UMass from Sterling & Lubell, *The Outer Lands*)

A review of historical events and trends that have shaped the landscape of the Outer Cape was used in this study to allow students to better understand which features and characteristics of the cultural landscape might be considered to possess particular historical integrity and significance.

The landscape history of the Outer Cape begins with the end of the last Ice Age, when the retreating Laurentine glacier laid the outwash plain foundation for the peninsula about 12,000 years ago.[30] The contemporary shape of the Cape Cod Peninsula was probably evident by about 3,500 years ago, as the outwash plains and moraines were submerged beneath rising sea levels.[31] Kettle ponds were formed by the deposition of glacial till around large ice blocks, leaving hollows later filled with groundwater. Large boulders, known as glacial erratics, were left scattered in the landscape. (Enoch Rock, the largest erratic found on the Outer Cape, is in Eastham.)[32] The beaches, marshes, dunes, and woods of the Outer Cape developed over the following thousands of years. Sands carried by wind and water eventually formed harbors and bays, and this process continues today as bars, spits, and peninsulas continue to shift.[33] Other natural disturbances, particularly hurricanes, also continue to affect the basic outlines of the land.[34]

Human influences on the Outer Cape landscape have also been continuous for thousands of years. A number of major turning points in the human history of the Outer Cape resulted in dramatic landscape changes over relatively short periods of time. Long before the arrival of the first Europeans, native peoples, most prominently clans associated with the Wampanoag, burned forests and

Figure 14: Provincetown fleet. (Courtesy: CCNS/NPS)

cleared land for hunting and agriculture, so that the landscape that the Pilgrims saw in 1620 already appeared somewhat open and unforested. The next great event was the arrival of Europeans in the seventeenth century, who brought livestock and built densely settled agricultural villages. The dramatic increase in the number of people and settlements further reduced the forest cover, until by the mid-nineteenth century only 40 percent of the landscape was wooded. By that time, whaling, fishing, and salt works supplemented local agriculture as the economic basis for Outer Cape towns. With the arrival of the railroad in the mid-nineteenth century came another great change in the cultural landscape as relatively diverse local agricultural and fishing economies shifted to serve regional markets with specialized products such as cod and cranberries.

The same railroad lines that transported cranberries and fish from the Outer Cape in the nineteenth century brought writers, artists, and summer tourists to the region, presaging the next major transformation of the region's economy. The increase in summer residents and shift to tourism as an economic base brought only subtle changes to the physical landscape at first; but the changes in landscape perception were enormous. Summer residents viewed the Outer Cape as a place for leisure rather than work, and for restorative scenery as a respite from urban industrial cities and modernity.

The draw of nature at Cape Cod has had a profound influence on visitors since

Figure 16: Swimmers, ca. 1920. (Courtesy: CCNS/NPS)

Henry David Thoreau's day. Visiting in October 1849, Thoreau wrote that "Notwithstanding the universal barrenness, and the contiguity of the desert, I never saw an autumnal landscape so beautifully painted as this was. It was like the richest rug imaginable spread over an uneven surface; no damask nor velvet, nor Tyrian dye or stuffs, nor the work of any loom, could ever match it."[35] The transcendent quality of the Cape landscape confronts visitors with a new awareness of nature, and natural processes. The inspiration and emotional response to these primal forces are as much a part of the character of the Cape as the sand and water that form the physical environment.

For the purposes of documenting and analyzing landscape character, no aspect of the long history of the Outer Cape is more essential to consider than the economic and conceptual transformation of the Outer Cape from a landscape shaped by resourced-based activities (mainly fishing and agriculture), to one shaped mainly by the activities of rec-

Figure 15: Cars at Nauset Light parking lot.
(Courtesy: Eastham Historical Society)

Figure 17: Clambake, Billingsgate Island, Wellfleet, MA, ca. 1915.
(Courtesy: CCNS/NPS)

reation and tourism by the early twentieth century. Tourists were searching not only for scenery and beaches, but also for an idealized version of a distinctive people and lifestyle that were fast being enshrined in popular imagination. "Character" became as important a commodity as whale oil or salted cod filets had once been.

The proliferation of the automobile in the interwar years facilitated the transformation of the Outer Cape into a popular tourist destination. As fishing and agriculture continued to decline (along with the number of year-round residents), small hotels and vacation homes brought life to the sagging economy.[36] Local economies shifted away from resource-oriented activities to the support of seasonal and weekend visitors, most of whom arrived by car. The construction and maintenance of second homes, motels and rental cottages, and the operation of retail businesses and restaurants soon became economic boons for Outer Cape communities. The landscape reflected this shift in the ways of life of residents of the Outer Cape. Fields and heathlands that had already begun to succumb to early successional species were further covered by forests. No longer as much a windswept place of open fields and unobstructed views to the ocean, the more forested landscape was characterized by increased sense

Figure 18: Ford and trailer, Wellfleet, MA, 1944.
(Courtesy: Bob Arnold, photo by Carey E. Melville)

Figure 19: Day's cottages, Truro, MA, 2003. (Photo: UMass)

of enclosure, broken by occasional dramatic views of the sea.[37]

The trend away from resource-based activities and towards an economy based on automotive tourism accelerated in the years after World War II. Postwar prosperity, the massive proliferation of automobiles, federally aided highway construction, and the "baby boom" all made Cape Cod an increasingly popular destination for family vacations.[38] Automobiles had already allowed for shorter-term vacations by the 1920s, signaling the end for the genteel, longer-term stays at beach resorts. The advent of paid vacations and forty-hour work weeks for the middle classes expanded the pool of potential tourists even further. In the eyes of the millions who now came to visit the Outer Cape, the land and sea that had been so intensively worked for centuries was an alluring and storied landscape, treasured more for its scenery and recreational opportunities than for products to be harvested. Even as tourists valued the traditional landscape of the Cape for its distinctive character, the ways of life that had produced that landscape were being replaced by new patterns of life and recreation. It was difficult for that older landscape to persist, even if it was valued for its "character," when the economic and social structures that produced it were disappearing.

By the early 1950s, tourism had become the region's major industry, eclipsing agriculture, fishing and manufacturing.[39] As the Outer Cape completed its transformation into a resort area valued for its quaint, maritime character, residents were increasingly likely to be employed in construction, retail, hotel, or other businesses that served tourists and second home owners. While motels and highways proliferated, grazing livestock no longer roamed in heathland areas, which therefore continued their succession into pine forest unabated. Fewer and fewer fishing boats dotted picturesque harbors, although recreational craft appeared in larger numbers. Mass automotive tourism had brought new life to the Outer Cape economy, and with it, a 50 percent increase in the Cape's population between 1950 and 1960.[40] Historian Charles H. W. Foster notes:

> *By the mid-twentieth century, the outer region of Cape Cod was a thriving, self-contained, political community composed of six highly independent towns. Its year-round population was twelve thousand, swelling at least fivefold during the summer months. Thanks to heavy reliance on the seasonal visitor and a minimal demand for year-round services, the communities were remarkably well off. Land was plentiful, (and) the demand for vacation properties was high and growing.*[41]

The sheer number of visitors and new residents after World War II required infrastructure far beyond what had been necessary to sustain earlier ways of life and population levels. Historian James O'Connell suggests that many postwar vacationers were less interested in steeping themselves in the historic lore of Cape Cod than in finding new opportunities for recreation and beach access. A building boom of modern houses, large motels, and garish commercial establishments threatened to overwhelm the quaint historic guest houses that had dotted the landscape in the 1920s and 1930s. With relatively cheap land available and a strong market for vacation homes, land speculation was rampant. Francis Burling of the *Cape Codder* recalled conversations with Selectmen Charles Mayo of Provincetown: "He would see cars stop along Route 6 and businessmen get out with briefcases and walk through the brush. He knew it was the kind of speculative activity such as he had seen happening in Florida."[42] Land was quickly subdivided, especially along the new Route 6 corridor.

Looking at the great changes taking place on the Outer Cape in the 1950s, some feared that the area's distinctive scenery, cultural heritage, and landscape could not survive the dramatic increase in tourism and asso-

ciated commercial development.[43] In 1955 a Massachusetts Department of Commerce analysis concluded what many familiar with the Cape already knew: the rampant development on Cape Cod was reaching emergency levels, and would ultimately threaten the newfound prosperity it sought to accommodate.[44]

The Cape Cod National Seashore

By the 1950s, changes to the way of life and landscape of the Outer Cape forced residents and concerned outsiders alike to take stock of what was unique about the region, and to decide what, if anything, should be done to protect its character. Discussions took place at different levels of government, and among a range of residents, advocates, and public officials. Out of these discussions emerged the Cape Cod National Seashore in 1961. The National Park Service proposal for a national seashore on the Outer Cape described the need in these terms:

> *[A] surging tide of modern progress has rolled over vast areas of our pristine coastal country, wiping out, one after another, the natural open spaces long cherished as an American birthright…This is happening to Cape Cod. Even now the still-unspoiled Great Beach is vanishing under buildings. It is time to set aside, preserve, and protect the last of the "old" Cape so that the inspiration of its surpassing beauty can be kept intact and handed down to future generations of Americans.*[45]

The establishment of Cape Cod National Seashore was a remarkable achievement, combining a bipartisan political effort with an unlikely combination of national and local forces. Plans for a national park on Cape Cod had been discussed as early as the 1930s, when the National Park Service conducted a preliminary investigation for designating an area from Duxbury to Provincetown as a national seashore, along the lines of the

Figure 20: President John F. Kennedy signing the Cape Cod National Seashore into Law, 1961. (Courtesy: CCNS/NPS)

Cape Hatteras National Seashore (North Carolina) which was authorized at that time.[46] After World War II, the Park Service continued its surveys and proposals for the nation's seashores and lakeshores, areas it considered particularly vital for accommodating the postwar boom in recreation and tourism. The results of a "Seashore Recreation Area Survey" in 1954 again brought the issue to the forefront. Published the following year as "Our Vanishing Shoreline," the Park Service reported that only 240 miles, or 6.5 percent, of the nation's shoreline was protected by Federal or State ownership for recreational purposes. Very little of this protected shoreline consisted of sand beaches. The report gave the Great Beach on Cape Cod a high priority for status as a new national seashore. The Outer Cape's huge potential for recreation (within driving distance for 50 million people), its relatively undeveloped state, and the great pressures and threats it faced, made it an obvious choice for any national plan to protect beaches for public recreation. The planners observed that it was one of the longest unin-

Figure 21: Cars at Coast Guard Beach, Eastham, MA, 1966. (Courtesy: CCNS/NPS)

terrupted and undeveloped stretches of ocean beach on the East Coast, and that the interior landscape was historically fascinating, featuring quaint villages and a unique character. While the geological features themselves were extraordinary, the history of the area was just as compelling and significant.[47]

The National Park Service's "Vanishing Shoreline" report in 1955 joined a number of local and statewide efforts that were already underway to curb the effects of development and growing tourism on the Outer Cape. Soon after the initial plans for a new national park became public in a news report in the Cape Codder on November 1, 1956, concern arose about the new park's boundaries, the possibility of restricted access for local residents, and the inclusion of prime hunting areas in the park. Some Massachusetts legislators received the idea of the park enthusiastically, realizing that the Commonwealth did not have the funds to acquire the land or develop park facilities. Others recognized that although a national park would create some restrictions on development, it also had the potential to assure a more sustained influx of tourists and tourist business. After the announcement, Massachusetts State Senator Everett Stone immediately began securing agreements to transfer state lands on the Outer Cape to the federal government in anticipation of the new park.[48]

Figure 22: Coast Guard Beach, Eastham, ca. 1965. (Courtesy: CCNS/NPS)

The Cape Cod Model

It took three years and a creative plan unprecedented in the history of American park development to bring the Cape Cod National Seashore to fruition. A bill introduced in 1957 by Massachusetts Congressman Philip J. Philbin providing for the establishment of a national park on Cape Cod failed, as did bills by Congressmen Thomas P. (Tip) O'Neill and Edward Boland. Finally in September 1959, Massachusetts Senators John F. Kennedy and Leverett Saltonstall, and the congressman from Cape Cod, Hastings Keith, introduced the framework for the successful proposal. The Saltonstall-Kennedy-Keith Bill, as it was named, owed its success to an innovative approach for park creation fitting the Cape's unique circumstances. While traditional national parks had been carved from sparsely populated land already in the public domain, most of the land on the Outer Cape Cod had long been densely populated and in private hands. A strong connection between local communities and the landscape existed that could be disrupted by the federal government assuming complete ownership and control. Instead, in what became known as the "Cape Cod Model," the National Park Service would establish well-defined park boundaries (an extremely complex task), but not acquire

all of the private land within those boundaries.

The Cape Cod Model entrusted town governments with controls on preservation and development. The federal power of condemnation to acquire property for public use was limited in favor of a provision requiring town governments to enact zoning ordinances that would maintain current usage for properties within the new park's boundaries. The legislation also allowed traditional hunting, fishing, and shellfishing within the park, and allowed towns to be compensated for lost property tax revenue. In yet another unprecedented arrangement, the bill established a Citizens Advisory Commission of local residents and officials to guide the park's creation and management. Congress eventually appropriated $15 million for the new park; the first time federal money was appropriated to directly acquire land for the creation of a national park. The 43,604-acre Cape Cod National Seashore stretched the entire length of the Outer Cape from Chatham to Provincetown, and protected much of the most extraordinary land left on the Cape from further development.[49]

The land within the Cape Cod National Seashore subsequently experienced a very different history of management from land outside park boundaries, which continued to develop in response to the Cape's booming real estate market. The park legislation instructed the National Park Service to preserve the land within the Seashore boundaries essentially as it was, stating that, "In order that the seashore shall be permanently preserved in its present state, no development or plan for the convenience of visitors shall be undertaken therein which would be incompatible with the preservation of the unique flora and fauna, or the physiographic conditions now prevailing, or with the preservation of…historic sites and structures." But the law also instructed the Park Service to "develop for appropriate public uses," lands that are, "especially adaptable for camping, swimming, boating, sailing, hunting, fishing, the appreciation of historic sites and structures and natural features of Cape Cod."[50]

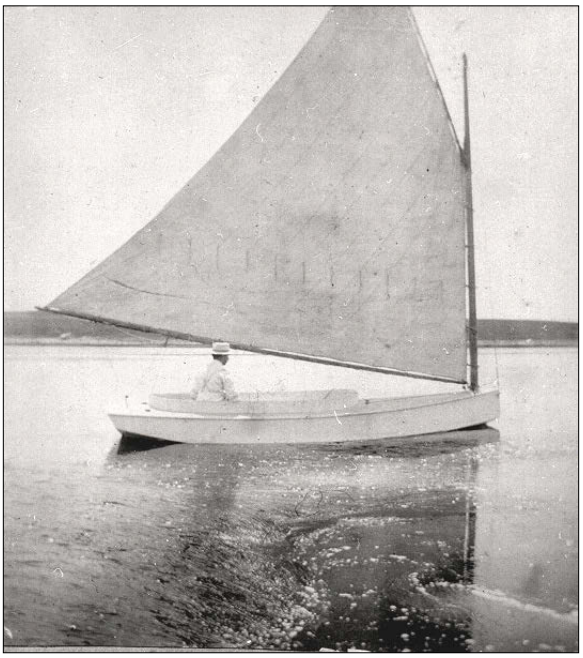


Figure 23: Man in catboat. (Courtesy: CCNS/NPS)

The challenges of meeting the sometimes conflicting mandates of the 1961 legislation were apparent from the outset. What made the Outer Cape unique was a product of cultural as well as natural forces. The area's character was intricately tied to the ways of life of local communities. When Senator Kennedy introduced the legislation establishing the park, he observed that Cape Cod was more heavily settled than other areas in the national park system, and Cape residents had "legitimate interests and sentiments" in the matter. Those communities were changing as fast as the Cape landscape itself. For the Outer Cape's towns, large numbers of tourists were the new economy, and the new reality of life. Many residents worried that a national park would ruin local economies by removing profitable land from development, or that it would clog roads and tax local services with even larger throngs of vacationers, many of whom would be "day-trippers" who would not spend money in motels or restaurants, but would use services and crowd beaches. Others saw Federal intervention as the only way to manage effectively the variety of resources under threat on the Outer Cape, including the physiographic and built land-

scapes of the region, and the ways of life that they supported.[51]

Figure 24: Thanksgiving dinner at Ed Knowles house, Eastham, MA, ca. 1920. (Courtesy: CCNS/NPS)

Figure 25: Captain Penniman with gun and birds, Eastham, MA. (Courtesy: CCNS/NPS)

Public Hearings and Perceptions of Landscape Character

What was the unique and vanishing character of the Outer Cape in the 1950s? What were contemporary perceptions of the landscape that the National Seashore was created to preserve? Between 1959 and 1961, the U.S. Senate held a series of four public hearings in Eastham and Washington, D.C., regarding the proposed Cape Cod National Seashore. The hearings were crucial in shaping the legislation for the seashore, determining aspects of the park's form and management. Transcripts from the hearings also offered a vital window into perceptions of the landscape character of Cape Cod at that time. The hearings allowed people to describe the character of the Outer Cape in their own words, providing their own visions of what might be preserved for the future. Their testimony revealed a longing for a time of close-knit, strong communities, when livelihoods were controlled locally, and people were tied to a sometimes harsh but beautiful land. They also revealed a tenacious desire to keep intact the remaining elements of what they perceived to be the "old Cape Cod."[52]

The image of the Outer Cape that emerges from the transcripts of these hearings rests firmly on the resource industries that that once supported its economy. Although fishing had been in decline for many decades by the 1950s, landscape remnants were visible and highly revered by both residents and outsiders. At the time the Seashore was proposed, George Palmer, the Associate Regional Director of the National Park Service, commented on the image of fishing on the Cape: "The view from the [Meeting House] hill was very typical of what a Hoosier from the Midwest thought Cape Cod looked like-the white Cape houses, some ships out in the ocean, and some boats in the harbor."[53] Similarly, officials from the town of Chatham argued against the town's inclusion in the national seashore, claiming Chatham was already doing a good job protecting its scenic value as "an unspoiled

little fishing village."[54] Prior to the public hearings, residents had already expressed concern that access to fishing and shellfishing activities would be limited by the existence of the park. The Park Service heard and understood these concerns, embodying them into the policy that the Cape Cod National Seashore would, "Protect and preserve the natural features and retain the life and atmosphere of the seafaring era and historic Cape Cod."[55]

But the creation of the national seashore was not the real threat to the Cape Cod fishing tradition; commercial fishing on the Cape had been diminishing since the end of the Civil War for economic reasons. While a new demand for fresh fish in supermarkets and restaurants, and the increasing popularity of shellfish, gave local fishing operations a reprieve from near certain extinction, the maritime tradition on Cape Cod had a tenuous hold on the landscape by the time the national seashore was created. Only Provincetown, Wellfleet and Chatham still had viable fishing fleets, and these were only shadows of what they once were.[56]

Tourists still saw many of the remnants of old Cape Cod fishing in the landscape. Lobster pots and fishing floats sat in yards, and boats drifted on their moorings. Lighthouses stood on bluffs, and tourists purchased seafood in restaurants with caricatures of "old salts" and pictures of salvaged wrecks hanging on the walls. Visitors perceived fishing as an important aspect of the region's distinctive character, a perception that had been nurtured by the local tourist industry since the 1920s.[57] To the visitor to the Outer Cape, it may have been difficult to tell that everything was not as it always had been. The abundant maritime images did not reflect the diminished place of fishing in the present economy of the region.

By contrast, remnants of historically the most important agricultural activities on the Cape, grazing and berry harvesting, had all but disappeared by the mid-twentieth century. Without them, the heathlands that lined the cliffs and secondary dunes along the Great Beach were being overgrown with forest trees. Commentators at the Senate hearings knew that an economy increasingly based on tourism was not likely to provide the active management required for the open, agricultural landscape of old Cape Cod to survive into the future.

In addition to bringing unwelcome changes to the physical landscape, those testifying at the hearings worried that the new national seashore might disrupt their strong traditions of community. Connected with the character of the Outer Cape, they described a sense of community based on interactions between people in the landscape. Senator Saltonstall recognized the connection between community and place, proposing, "The lower cape must also be viewed as a way of life, a culture which, though conditioned by its environment, finds its essence in the people who have lived and are living there."[58] At the start of the Senate hearings, a *Saturday Evening Post* editorial added, "The real charm of the Cape lies in the fact that it is a community, or, if the expression isn't too hackneyed, a way of life."[59]

It was not the long-time, year round residents struggling to make a living from tourism or those involved in resource based industries that were trying to preserve the Cape. Rather it was the heirs to a earlier generation of genteel tourists and summer residents who most bemoaned the changes brought by the growing number of vacationers in the 1950s. This group saw the Cape Cod National Seashore as a further threat to their exclusive hold on the land. William L. Payson of Orleans expressed his feelings this way, regarding his family's property on Pochet Island (which was to become part of the national seashore): "In 1886 my grandfather bought Pochet Island…. He, his four children and their descendents, five generations all told, have spent their vacations [there]…. The place means more to us and our children and our grandchildren than any other spot and we don't want to lose it."[60]

Figure 26: Sunset view of the ocean from Wellfleet bluffs, 2003. (Photo: UMass)

Those testifying at the Senate hearings used the preservation of nature argument to voice their opposition to increased visitation. As Joshua Nickerson of Barnstable bluntly asked, "What are the objectives of the Park Service? Is their major objective conservation or is their major objective to provide amusement areas for vast numbers of people who live in cities?"[61] Many residents attending the hearings saw a conflict between increased recreation and the Seashore's stated goal of preservation. National Park Service officials assured the public that preservation of the Outer Cape landscape would be a top priority, but it was clear that residents understood that the Park Service would be developing facilities for even larger numbers of tourists.

As in other national park areas, those who saw the landscape in primarily aesthetic terms, as a source of beauty and inspiration, wanted to protect their vision from more active recreational land uses. At the time of the hearings, Mrs. Albert C. Read of Eastham wrote to the National Park Service that the draw of Cape Cod was inextricably linked to the area's natural surroundings. "I earnestly urge that thought be given to some inspirational and aesthetic values of such a park," she wrote, "values other than the recreational ones derived from swimming and bathing along the ocean beaches." Victor F. Adams, Chairman of the Barnstable Board of Selectmen, felt that, "Only a few have the artistic temperament to fully appreciate the beauty of the sand dunes and the sea." He then added in reference to the national seashore, "dunes are no longer attractive when swarms of people are climbing over them."[62] The conflict between aesthetics and recreation, imbed-

ded in the Cape Cod National Seashore's founding, continues to affect management decisions in the park today.

Properly managed to preserve nature, a national seashore could be not only a refuge from the teeming masses, but also from modernity and materialism. After an impressive recounting of the various flora and fauna on the Cape and their attributes, Mrs. Read continued:

> *The very fact that millions of people seek our national parks for vacation only proves their need for the beauty, solitude, serenity, or religious significance which they find in unspoiled areas; a kind of soul satisfaction, enjoyment, and lack of tension, much needed in the materialistic and mechanized age in which we live today. Who can say what will become of art, music, poetry, and creative thinking of all kinds, when people go away to the seashore or country for aesthetic, inspirational, and restorative values, only to find such places destitute to them?* [63]

Looking at the land around Pilgrim Springs, a planning consultant working on the designation of the national seashore remarked:

> *I realized that since these (Pilgrim) springs were discovered, a phenomenal development took place all over this huge continent in world record time. Yet these sand dunes, marshes, and wooded hills along the Atlantic Ocean had remained just as the Creator and the elements fashioned them with incredible and inspiring beauty…. We allow some of our finest living pictures, that change from sunrise to sunset and all through the seasons, pictures from which our artists gather both inspiration and subjects, to remain brutally exposed to the profit-seeking assaults of 'modern progress'.*[64]

James DeNormandie, a state Representative from Lincoln, MA, was moved by similar sentiments when he proposed that:

> *Above all it seems to me that this [national] park must serve the people…as a place where they can come and enjoy the open country with their families, with their children, go home realizing after seeing the dunes and the beaches and the oceans that there is something more to be looked for in this age of scientific achievement than just material things.*[65]

The views and recollections of Cape Cod's "nature" at the Senate hearings were highly personal, evoking notions of spirituality, wonder, emotion, creativity and inspiration. Long a favorite of artists and writers, the physiographic, vegetative, and climatic elements that interacted to create Cape Cod formed a unique landscape, one that is powerful and intimidating, subtle and intimate.[66] Charles Eliot II of the Trustees of Reservations testified that "the small scale of the landscape features and the intimacy of the nature on lower Cape Cod (could be) easily destroyed by over-development or overuse."[67] These subtle and small scale features of the landscape were the ones often cited, portrayed and cherished by those familiar with them.

Figure 27: Park Ranger teaching surfcasting, 2003.
(Courtesy: CCNS/NPS)

Figure 28: Boardwalk, red maple forest, Fort Hill, MA. (Photo: UMass)

Citizen's Advisory Committee and Cape Cod Commission

In the forty years since the creation of the National Seashore, the National Park Service and its partners have tried to ensure that the special landscape qualities of the Outer Cape are not overwhelmed by dramatic increases in population and associated commercial development. After 1961 the Cape's population of permanent and seasonal residents continued to grow, and so did the number of weekend tourists and day trippers. The number of year-round residents quadrupled between 1960 and 2000, and the construction and real estate industries continue to grow as forces in the regional economy.[68] Land bordering the national seashore often was developed up to the park's boundaries. During the 1980s and 1990s, the Park Service and its partners have noted that the Outer Cape's special character remains subject to intense pressures and threats.

Among the Park Service's active partners has been the Citizen's Advisory Committee, created by the 1961 park legislation. From its inception, the committee has been involved in an ever-changing list of issues related to the management of the park, from policies regulating private residential development and commercial enterprises, to the location and design of visitor centers and camping facilities, to protecting the seashore from offshore oil and gas development.[69] The Advisory Committee also helped towns amend their zoning ordinances to comply with standards set by the federal government, in order to suspend the condemnation of private proper-

ties. Current issues include nude sunbathing, developing guidelines for the "improved properties" within seashore boundaries, and off-road vehicular access to beaches.[70] Charles Foster notes how the Cape Cod National Seashore Citizen Advisory Committee has served as a model for other National Park Advisory Committees, and how its existence provides a sense of citizen participation with the management of the park.[71]

Another important partner in the management of the Outer Cape over the past decade has been the Cape Cod Commission, a regional planning and regulatory organization overseeing all fifteen towns on Cape Cod.[72] The Commission issued its first Regional Policy Plan in 1990, and has updated it every five years. Each Plan seeks to find ways to allow future growth on the Cape without destroying the things that make Cape Cod such a special place.[73] As stated by the Commission:

> *It is a plan that recognizes the Cape as a fragile and beautiful place: a land of pine barren, kettle pond and sand dune; piping plover and gray seal; beach, salt marsh, and bay; village lane and stone wall. It is a Plan that seeks to protect habitat, in the awareness that Cape Cod is home to endangered species of global significance. It is a Plan to conserve a cultural landscape shaped slowly over 10,000 years of human habitation.*[74]

The Cape Cod Commission has the authority to approve or deny developments over a certain size, known as "Developments of Regional Impact," as well as the authority to regulate local management of places of regional significance, assess impact fees, and deny privileges to towns which fail to complete comprehensive plans.[75] It also supports the towns with funding and technical support as they develop their own local comprehensive plans. These plans usually reflect the policies and guidelines of the Commission's

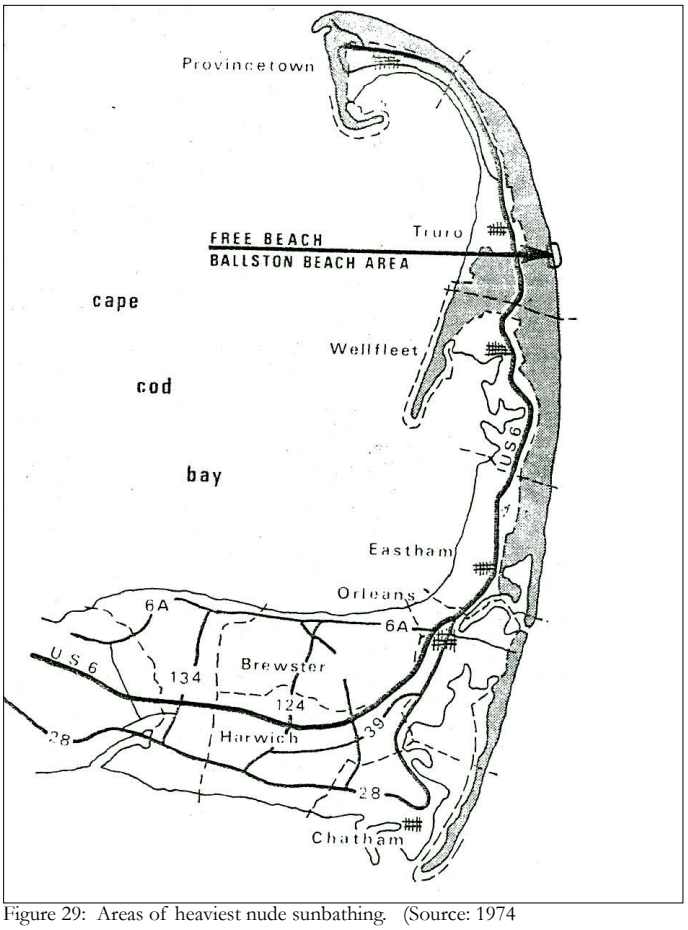


Figure 29: Areas of heaviest nude sunbathing. (Source: 1974 National Park Service study, *Management Alternatives Addressed to Nude Bathing and Related Concerns*.)

Regional Policy Plan, and address such topics as land use and growth management, natural resources, open space and recreation, historic preservation, community character, economic development, affordable housing, and community services and facilities.[76]

In response to a growing consensus that transportation concerns were affecting environmental, character and quality of life, the Cape Cod Commission worked with the U.S. Department of Transportation and the Cape Cod Regional Transit Authority to form the Cape Cod Transit Task Force, which developed a five-year plan addressing regional public transportation. The plan is intended to respond to growth pressures in a way that does not diminish Cape Cod's historic and natural character by reducing automobile dependency, mitigating seasonal traffic, and

incorporating smart growth and land use planning. The plan is intended to be part of a much longer range plan for transportation.[77]

In addition to the Citizens Advisory Committee and the Cape Cod Commission, the Cape Cod National Seashore is near many research institutions. From time to time, these institutions either independently or in partnership with the Park Service conduct studies pertinent to the management of the park. These studies range from planning studies, to cultural research, to highly technical oceanographic explorations, but all share in common their pertinence to the landscape character and ways of life of Outer Cape Cod.[78]

The National Park Service Studies and Plans

The National Park Service has itself commissioned numerous studies and reports in the effort to identify the special and unique character of the Outer Cape and to guide actions to better protect it. No national park operates without a general management plan. The first such document for the Cape Cod National Seashore titled, *Master Plan, Cape Cod National Seashore,* was prepared by the Park Service's Denver Service Center in cooperation with the park in 1970. This document was followed by many other planning documents intended to guide management and development.[79] In 1992 the Park Service produced a "Resource Management Plan" examining existing natural and cultural resources and documenting current management programs and needs.[80] In addition to listing numerous recommendations for natural resource-related projects, the document lists cultural resource "project statements," ranging from surveying historical archaeology to preparing a cultural land use study. Cape Cod National Seashore's Strategic Plan places the park in compliance with the Government Performance and Results Act of 1993 (GPRA).[81] The plan establishes quantifiable and measurable performance goals, allocates resources to accomplish them, and describes how to measure progress.

Recent studies on water quality, such as the 1993 report, *Water Quality Monitoring and Research Plans for Kettle Ponds, Cape Cod National Seashore*,[82] and a 1995 study titled *Baseline Water Quality Data Inventory and Analysis: Cape Cod National Seashore*,[83] provide valuable data to park managers. More recently the national seashore was selected to be part of a pilot ecological monitoring project for the national park system through the Natural Resource Inventory and Monitoring (I&M) Program. The program was established in selected national parks to help prevent the loss of valuable natural communities through the development of better monitoring programs that can be integrated with park planning and

management.[84]

The Park Service has also explored the cultural heritage of the region. The first major effort was a preliminary archaeological survey of the Outer Cape produced in 1980 by the agency with the goal of producing information on the "locations, abundance, characteristics and relative importance" of prehistoric and historic resources on the Outer Cape.[85] Although a comprehensive archaeological study of the entire park region has never been completed, the park has produced many other studies, documenting cultural heritage including a draft Cultural Landscape Inventory and Cultural Landscape Reports for the Truro Highlands Historic District and the Fort Hill area.[86] These reports provide historical information and analysis of special sites of cultural, historical, and ethnographic importance, and also help in the development of management plans for these areas. In 1998 the archeology branch of the Park Service in Lowell, Massachusetts published the *Historic Cultural Land Use Study of Lower Cape Cod: A Study of the Historical Archeology and History of the Cape Cod National Seashore and the Surrounding Region*.[87] This pilot project study was undertaken to build a structure for investigating historic archaeological resources in National Parks. The Park Service selected Cape Cod National Seashore for the pilot study because it contains a rich history and a wide variety of historic and archaeological assets. The study was intended to help determine the importance of individual sites with the goal of assessing their eligibility for listing in the National Register of Historic Places.

The new studies of Cape Cod culture and history inform the most recent General Management Plan for the Cape Cod National Seashore, completed in 1998. Perhaps no Park Service document better describes the need to extend protection efforts beyond natural resources and physical features to encompass the traditional and characteristic patterns of life that shape, and have been shaped, by the landscape.[88]

> *Cape Cod is a dynamic place where human and natural forces have interwoven to create a distinctive regional character. Cape Cod National Seashore was established to preserve vital elements of the Cape's character, including flora and fauna, physiographic conditions, historic sites and structures, cultural heritage, and other unique natural and cultural features. This character also includes a certain ambience that is subtler and harder to define but that provides both a sense of peace and relative isolation. A distinctive pattern of human activity has both shaped, and been shaped by, this special place. Management of the seashore is a delicate balance in which human needs of today and tomorrow must be addressed within the context of both preservation and tradition.*[89]

The plan also states the central mandates of the Cape Cod National Seashore:

> *1) Preserve the nationally significant and special cultural and natural features, distinctive patterns of human activity, and ambience that characterize the Outer Cape, along with the associated scenic, cultural, historic, scientific, and recreational values;*
> *2) Provide opportunities for current and future generations to experience, enjoy, and understand these features and values.*[90]

The landscape character, current trends in development, and history of the Outer Cape are inextricably intertwined. The greater the pressure for development and redevelopment in recent years, the more residents and visitors care about preserving the traces of the past which remain. The more the character of the Cape changes, the more concerned organizations seek to identify and protect its essence. The following section of the report examines prototypical landscapes

on the Outer Cape, each illustrating the presence of the past on the contemporary landscape and the particular interaction of nature and culture that have made the landscape of the Outer Cape over time.

PART II
The Cultural Landscape: Landscape Headings

Figure 30: Rock Harbor, Orleans, MA, 2003. (Photo: UMass)

This section is organized as a series of Landscape Headings, which are both categories and directions (in the nautical sense) of both places and activities that were identified as significant components of the cultural landscape of the Outer Cape. As described in the Introduction, an understanding of landscape character can be used to inform future planning, design, and management decisions. Individual landscapes and places were examined, researched, drawn, and photographed. Contributing landscape characteristics and features were described graphically and in writing. At a broad regional scale, GIS analysis provided context and conclusions not otherwise available. The activities and ways of life that have shaped these places, and continue to be at the heart of their significance to Outer Cape communities, were researched and described through public meetings, interviews, literature review and professional observations.

Six broad Landscape Headings were the result, and are intended to be representative of the way of life and the landscape of the Outer Cape. The Landscape Headings were conceived to capture and integrate the physical features of landscapes with the activities and values of the people that inhabit and use them. The Headings also are a means to describe some specific issues associated with the management of these landscapes, and, therefore, of the Outer Cape landscape as a whole. The premise of these Landscape Headings is that for landscape character to be maintained, that character must be adequately described, documented, and analyzed in terms of reaching an understanding of which aspects-tangible or intangible-of the cultural landscape are critical to the perpetuation of its character.

The Great Beach

"The Great Beach" is the inevitable and predominant experience that perhaps more than any other is an essential part of visiting or living on the Outer Cape. Always shifting and changing, the sands of the Great Beach make up the most dynamic of landscapes. Yet the opposition of open sea and flat strand are at the same time an immutable and eternal juxtaposition. In the nineteenth century the Great Beach was perceived more as a terrible threat to navigation than as a recreational resource. But as going to the beach increasingly became a recreational phenomenon in the twentieth century, the Great Beach was reinvented in the minds of its users as a place for adult relaxation, children's games, and above all vacations. While contentious issues persist, a remarkable and somewhat complex sharing exists in this landscape, balancing Off-Road Vehicles (ORV), surfcasting, piping plover birds, and what at times seems like most of the families and small children of New York and Boston.

Waterways

"Waterways" addresses the inland and bayside watery places of the Outer Cape. If the Great Beach has unparalleled drama, the harbors and wetlands of the Outer Cape are where most people have made their livings and their homes. Sea captains were said never to want an ocean view in their retirement homes, and sheltered kettle ponds are welcome, fresh water swimming holes for many ready for a break from the sun and salt of the beach. Harbors and rich tidal wetlands occur on the bayside, and towns such as Wellfleet and Provincetown grew up around them. Today fishing and recreational boating, historic towns, and fragile wetlands continue to characterize these places.

Figure 31: Bicyclists on trail, 2003. CCNS/NPS

Towns

"Towns" examines the role of densely built communities in life on the Outer Cape. This Heading looks at main streets, historic buildings, and the activities that animate and enliven these centers, such as shopping, entertainment, and myriad services provided by hundreds of small and large businesses. Town-centered development was characteristic of the Outer Cape (at least before World War II) with businesses and residences clustered together near major harbors. Automobiles and tourism changed both patterns of daily life and patterns of commercial development. Types of businesses changed as well; buildings that once served fishing and related industries are more likely today to be art galleries, restaurants, and retail stores. Civic buildings are less likely to play the same role in a community of mostly seasonal residents. But towns continue to be the center of much community and cultural life on the Outer Cape, and the downtowns of Provincetown, Wellfleet, and Chatham, in particular, are for many the very essence of community life in the region.

Farms and Forests

"Farms and Forests" describes the traditional land uses and setting that characterize the Outer Cape, including agriculture, deforestation, and reforestation. What once was a largely open, agricultural landscape of many distant views has become a mainly wooded and enclosed experience that only periodically

features dramatic vistas to the sea. Where they persist, agricultural landscapes on the Outer Cape are increasingly rare reminders of what once was a more typical pattern of meadows, sandy exposed soils, and heathlands. The more wooded landscape has also screened from view many of the vast number of residences that have been built during the later twentieth century.

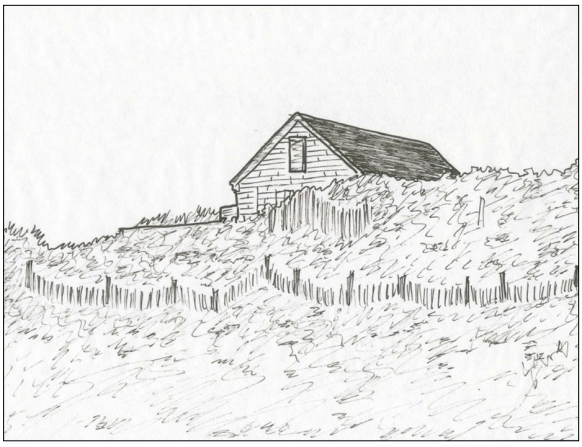


Figure 32: Beach Architecture, Truro, 2003. (Source: UMass)

Getting Around

"Getting Around" examines circulation systems including railroads, highways, traffic, and roadside development, as well sand roads and drives, bicycling, and other experiences of getting from here to there on the Outer Cape. How people circulate through the Outer Cape landscape influences their experience of it and their perception of character. Above all, Route 6, often choked with traffic and lined with roadside development, nevertheless represents the "front door" of the Outer Cape. It is probably the one Outer Cape landscape that every visitor and resident alike experiences on a daily basis. For better and for worse, the experiences offered by Route 6 need to be considered as part of the character of the region.

Homes

"Homes" examines different eras of settlement, historical house types, and other aspects of residential patterns and life that contribute so much to the character of the Outer Cape. Modest Cape Cod summer cottages, historic architecture of the town centers, the clustering of houses along pamets, or hollows, are all examples of residential settlement types and patterns. The culmination of the automotive resort economy influenced such patterns profoundly. The communities of Wellfleet's Ocean View Drive are examined as a particularly characteristic and well-preserved example of tourist cottage development of the period.

And there's places on the Cape even in the summer if you want to walk far enough you can be where there's no one around.
Frank Szedlak, Jr., Cape Conversations, 2003.[91]

The Great Beach

Figure 33: Aerial view, Great Beach, 2003. (Copyright: PANDION)

From Nauset Beach, to the cliffs of Truro, to the Province Land dunes, the isolated and wild landscape of the Great Beach has always fascinated resident and visitor alike. While the beach regularly experiences radical physical change, it retains an eternal beauty and awesome simplicity. This is a sublime landscape of minimal composition-ocean, beach, bluff, dune-that extends undeveloped for forty miles, as it has through many centuries.

The experience of the Great Beach progresses through a series of distinct, physiographic sections, as barrier islands give way to bluffs, which break down into dunes. One of the longest uninterrupted beaches on the Atlantic coast, the Great Beach was the primary reason for the creation of the Cape Cod National Seashore. Heavily used, the Great Beach is shared by many groups in a remarkable series of arrangements between towns, the National Park Service, user groups, and the millions of individuals who visit every summer. As beach recreation has become increasingly important to Outer Cape visitors and residents over the last fifty years, the Great Beach has strengthened its hold on the public imagination as a foundation of the character of the region.

Topography

There are several distinct landforms that give particular sections of the beach their own topographic character: barrier beach, bluffs, and dunes. In Chatham and Orleans, the land meets the sea in a barrier beach known as Nauset Beach. The spit is a long narrow strip of sand with low dunes. The present topography is of relatively recent origin. Earlier in the twentieth century Nauset Spit had its own bluffs, but they have since been washed away by hurricanes and storms, especially those in 1938 and 1978.[93]

When our children were small we would climb Mount Ararat and slide down...on empty boxes and things. Now you're not allowed to go there at all. And it used to be crowded.

Ruth Sprague, Cape Conversations, 2003.[92]

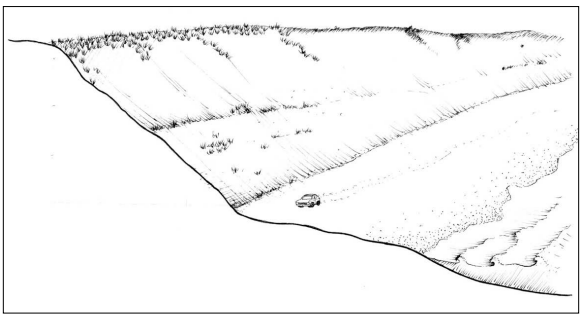


Figure 34: Cliffs along Great Beach, 2003. (Source:UMass)

Figure 35: Beach grass, Great Beach, 2003. (Photo: UMass)

Figure 36: Cliffs on Great Beach, 2003. (Photo: UMass)

Further north, bluffs on the landward side flank the beach. Cahoon Hollow Beach in Wellfleet, for example, features forty to seventy-foot bluffs, which are typically sparsely vegetated at the top, with steep sand slopes leading down to the beach. Erosion often occurs when waves undercut the base of bluffs. The cliffs of Truro are up to 100 and 150 feet high, and the sheer face of the cliffs exhibit layers of exposed silt and clay, with low heathland dune plants at the top.

The parabolic and other sand dunes of Provincetown give the Great Beach another distinctive topographic situation. The highly unusual parabolic dunes are characterized by their U-shaped formation with dune grasses on the trailing arms of the dunes. The dunes run from west to east, perpendicular to the prevailing winds. The dunes of the Province Lands cover hundreds of acres near the far extremity of the Great Beach. These grass-covered dunes are continuously shifting in

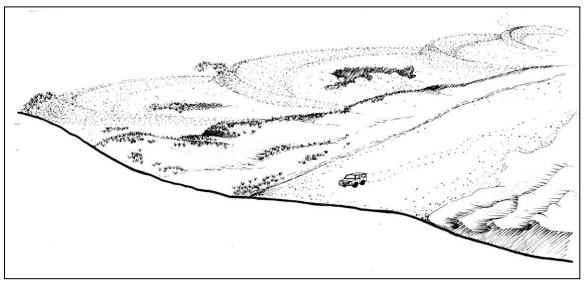


Figure 37: Parabolic dunes. (Source: UMass)

response to the constant forces of wind, waves, and rain. Their rolling topography and sparse vegetation creates an atmosphere of mystery, isolation, and elemental minimalism.

The topography of the Great Beach is characterized by constant change. The narrow peninsula of the Outer Cape seems terribly vulnerable to the wind and currents that move thousands of cubic yards of sand every season. The Great Beach will forever be at the mercy of the encroaching sea, and in this sense the landscape also conjures feelings of awe in the face of great powers of destruction and creation.

Figure 39: Access to Meadow Beach, Truro, MA, 2003. (Photo: UMass)

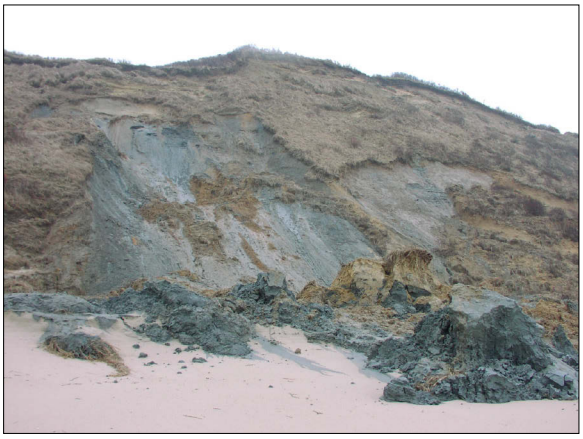


Figure 40: Erosion on the Great Beach, 2003. (Photo: UMass)

Figure 38: On the Great Beach, 2003. (Photo: UMass)

Off on the end, the edge, past the cities and the suburbs, the fixed house lots, the fields, and plains that make a patchwork of an entire nation, here is a country let go, barren, down to an essential minimum, but tossing and flowing with its own momentum in an envious proximity to the sea. It is the first and last land in America.

John Hay, "Dune Country" 1993.[94]

I am going to say something blasphemous: I do not think this landscape is beautiful. I am not even sure I like it. To me, this landscape looks honest (in that it is undisguised and uncultivated), blank, and defeated…for me and for others, there is a lingering fear of this place.

Oona Hyla Patrick, "The Shack of Art and Healing", 2003.[95]

Erosion is a constant of life on the Cape and Islands and has been a regular topic of resigned dinner conversation for a least a century and a half."

Paul Schneider, *Enduring Shore*, 2000.[96]

Lighthouses and Lifesaving

The presence of lighthouses standing guard over the Great Beach remind us that the waters of the Outer Cape were once among the most treacherous of the Atlantic Coast due to strong currents, storms, and numerous sandbars. The nineteenth-century perception of the beach was colored by the dangers of the coastal shipping routes around the Outer Cape. Henry David Thoreau found the Outer Cape rough and desolate. He described the dunes surrounding Provincetown as "the dreariest scenery imaginable," and suggested the Great Beach was a place where things came to die.[97]

Certainly this was true for a fair share of merchant shipping vessels. More than 1,000 ships and small fishing boats wrecked along the coast between 1843 and 1903.[98] Numerous efforts were undertaken to make coastal shipping less dangerous. Built in 1797 at the request of George Washington, Highland Light, also known as Cape Cod Light, was Cape Cod's first lighthouse. Over twenty lighthouses were built on the Cape over the next 200 years. Given their necessarily vulnerable sitting, many lighthouses have succumbed to winds, waves, and erosion over time. Many were rebuilt or moved inland. Both Highland Light and Nauset Light have been moved back from the edge of eroding bluffs. Although the Cape Cod Canal greatly diminished the need for lighthouses on Cape Cod, those that remain link the landscape to its maritime past. Nine light stations still exist on the Outer Cape. The Highland Light Station (1796), Race Point Light Station (1816), Long Point Light Station (1826), Three Sisters Twin Lights (1838), Wood End Light Lookout Station (1872), Chatham Light Station (1877), and Nauset Beach Light (1922) are all listed on the National Register of Historic Places. The lighthouses at Race Point, Chatham, Nauset Beach, Long Point, Wood End and Highland Lighthouse are still in operation and are popular destinations.[99] Images of the lighthouses proliferate souvenir shops and are central to

the character and perception of the Outer Cape.

The establishment of the Life Saving Service, the predecessor of today's U.S. Coast Guard, was a major step in aiding shipwreck victims. Life saving stations were built at Monomoy, Chatham, Orleans, Nauset, Cahoon Hollow, Pamet River, Pecked Hill Bars, Highland and Race Point, and over time others were added to the system. After the construction of the Cape Cod Canal in 1914, the number of shipwrecks declined greatly, and in 1915 the life saving stations were incorporated into the newly created U.S. Coast Guard.[100] Today the Coast Guard still staffs operational life saving stations in Provincetown and Chatham, though neither is located in their original structures.

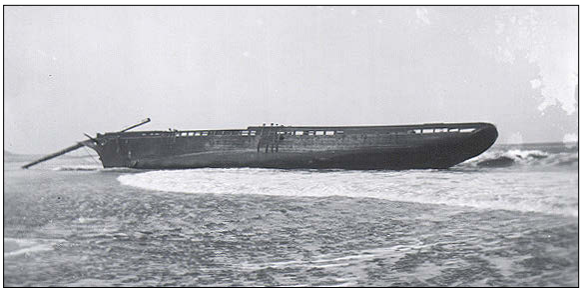


Figure 42: Shipwreck. (Courtesy: CCNS/NPS)

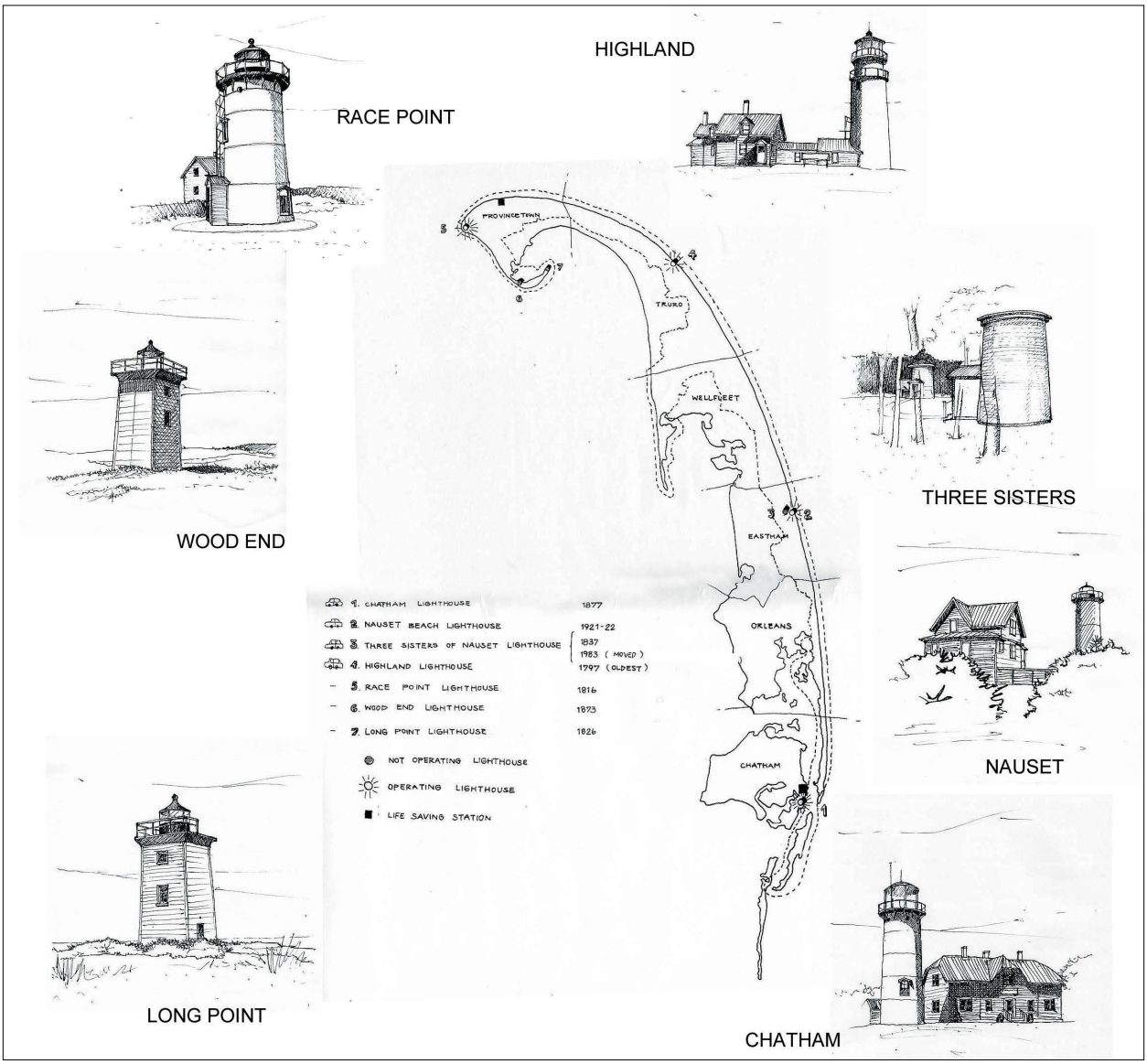


Figure 41: Sketch and map indicating existing lighthouses on the Outer Cape, 2003. (Source: UMass)

The landscape of the Great Beach was for centuries associated with the perils of the open sea, and inevitably evoked tales of shipwrecks, "mooncussers," and heroic life saving efforts. The regularity of shipwrecks supported an industry based on salvaging. Beachcombing was not an entirely respectable occupation but it was common. Professional "wreckers" commonly kept their rigs ready with crowbars, axes, and other implements used to break open a ship and haul away anything worth salvaging.[101]

We soon met one of these wreckers, - a regular Cape Cod man, with whom we parleyed, with a bleached and weather-beaten face, within whose wrinkles I distinguished no particular feature. It was like an old sail endowed with life.

Henry David Thoreau, *Cape Cod*, 1865.[102]

Figure 43: Race Point Lighthouse, Provincetown, MA, 2003. (Photo: UMass)

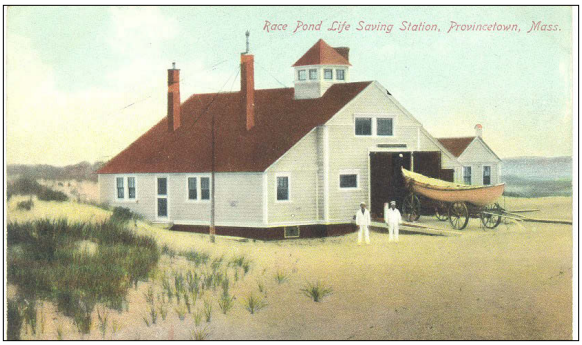


Figure 44: Postcard, Race Point Life Saving Station. (Courtesy: James O'Connell, *Becoming Cape Cod*)

The Beach

The ocean side of the Outer Cape was historically called the "backside" by residents and had long been considered too rough and forbidding for recreational pursuits. By the 1920s swimming had grown in popularity as recreation acceptable for people of all ages and walks of life. Recreational culture on the beach began to take on a new image. The very young and very old also enjoyed the beach, simply by reading, shell collecting, or playing in the sand.[103]

Today the Great Beach has nine town-managed beaches and five Park Service beaches. The town beaches provide parking lots and bathrooms and require resident permits. The Park Service beaches accommodate

Figure 45: Marconi Beach, Wellfleet, MA, 2003. (Photo: UMass)

There are two or three days, the hottest days of the first weeks of August maybe, where [beach parking] will actually fill up. But there aren't too many days...when you cannot go to the beach.

Edward Sabin, Cape Conversations, 2003.[104]

a far greater number of day visitors and feature larger parking lots, stairs to the beach, and buildings such as bathhouses, visitor centers, life saving stations and historic lighthouses.

The beach is the obvious reason so many tourists head to the Outer Cape each summer. The seemingly endless stretches of sand allow for a variety of experiences, even on the busiest of days. Most people tend to cluster around the access points and facilities, setting up camps of umbrellas, coolers and brightly colored towels. A short walk north or south, however, can often yield a more solitary experience.

Along the Great Beach are private residences that are tucked in hollows on the steep cliffs and between low dunes. Many of these cottages date to the 1940s and 1950s. These modest low-profile cottages peek out from the bluffs and hollows. The creation of the National Seashore effectively stopped new residential development on the Great Beach, but there is a recent trend of redevelopment and enlargement of some existing private properties, potentially creating a very different visual presence.

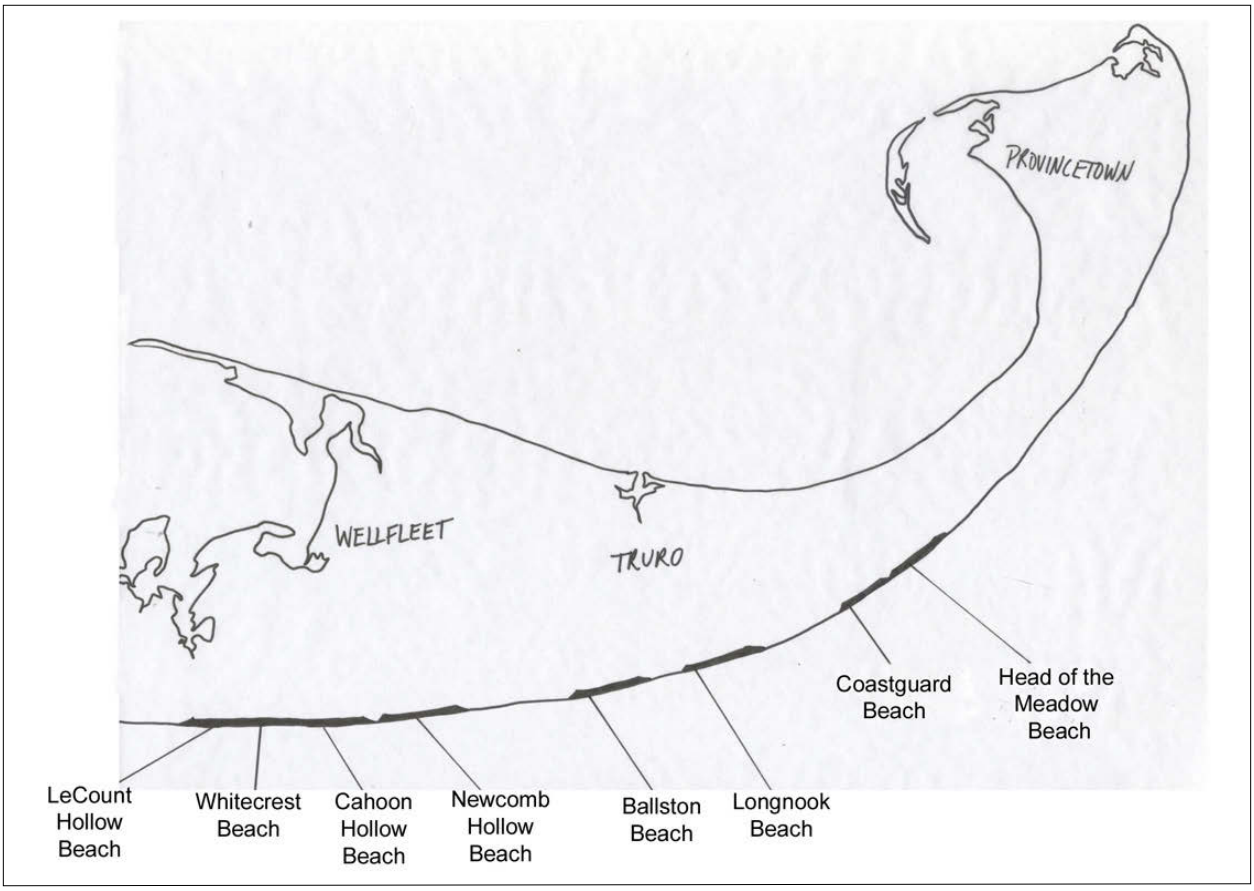


Figure 46: Town beaches, 2003. (Source: UMass)

Surfcasting

Downturns in the commercial fishing industry have done little to dampen the enthusiasm for sport fishing on the Outer Cape. With forty miles of ocean access, the Great Beach offers wonderful opportunities for surfcasting. Waves churn up the ocean bottom, exposing sand eels and other prey for large fish. Record-breaking bluefish and striped bass have been caught along the shoreline. Surfcasting can range from a passive summer beach activity to a serious year-round sport with its own etiquette and specialized knowledge. Catches may include bluefish, striped bass, yellowfin, false albacore, bonito or some fluke and flounder. Newcomb Hollow Beach in Wellfleet, Nauset Beach in Eastham, and Race Point Beach in Provincetown are popular surfcasting locations along the Great Beach. Surfcasting is a perfect example of an activity that is deeply associated with a particular place, the Great Beach, and one that needs to be understood and considered in many related management contexts.

The first year I moved here in September, the tourists had left. I went to Marconi Beach. I was the only fisherman on the beach and I caught a giant striper. It's the only big one I've ever caught. And there was nobody there.

Frank Szedlak, Jr., Cape Conversations, 2003.[105]

Figure 47: Race Point, Provincetown, MA, 2003. (Photo: UMass)

Figure 48: Surfcasting, Race Point, Provincetown, MA, 2003. (Photo: UMass)

ORV Access and Piping Plovers

The practice of driving on the beach with Off-Road Vehicles (ORV) has been a tradition on the Outer Cape for decades. Generations of families have been coming to the Great Beach to use the sand trails to gather with friends, camp on the beach, or surfcast. This use of the beach has been also been the subject of contentious debate. In 1981 the Park Service produced a Management Plan for ORV use within the park, which eventually lead to the closing of considerable areas of the beach to ORV access.[106] The Park Service manages ORV access on the northern section of the Outer Cape, from Race Point Beach to Long Nook Beach, with zones of use at set times of the year. This practice helps to conserve the beach as a resource for visitors as well as to protect wildlife habitat. ORV traffic is limited to the "backshore" or area between the spring high tide line and the normal high tide line.

Because tensions developed between ORV users and the Park Service, the agency commissioned an ethnographic study of

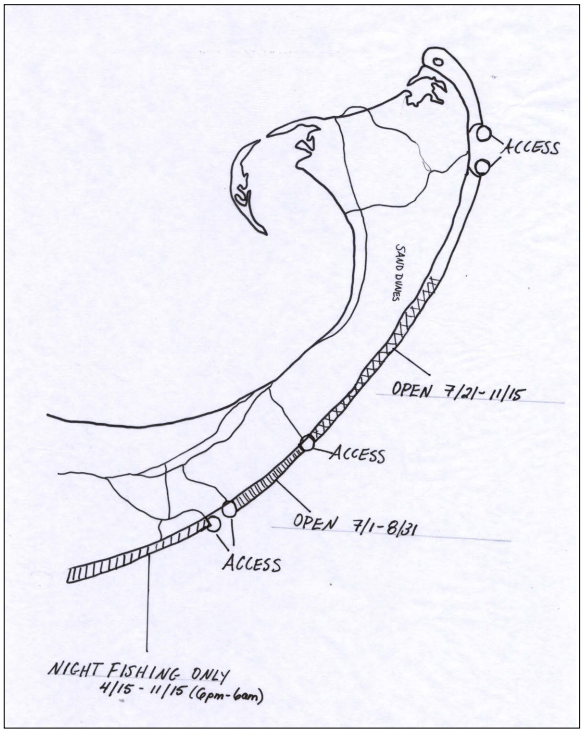


Figure 49: Off-road vehicles route, 2003. (Source: UMass)

Outer Cape surfcasters and ORV users in 2001. The study discovered that surfcasters tend to be local men who cherish the Cape and have been surfcasting for decades. They come from many occupations including commercial fishing and construction. They fish

Figure 50: Race Point, Provincetown, MA, 2003. (Photo: UMass)

There is peace and quiet yet it's so intriguing and dynamic where the sea meets the land. You think more clearly out there because you are really by yourself.

Cape Cod Surfcaster, "Surfcasters and Off Road Vehicle Use Ethnographic Study", 2001.[107]

as regularly as every day during the season, even organizing their work around fishing. In addition, surfcasting is often passed down as a family tradition, and together with driving on the beach, represents traditional lifeways that many residents and visitors feel should be protected by the National Seashore.[108] For these groups, surfcasting defines much of the character of the Great Beach. Restriction of ORV access to less than nine miles of the forty-mile Great Beach remains a sore point for many who do not see the necessity of such a broad restriction.

The Great Beach is a landscape used by both people and wildlife, and Seashore managers continually negotiate a balance between preserving habitat and providing for

The term Cape Codder implied a close cantankerous individualism defended to the last.

Henry Kittridge, *Cape Cod: Its People and Their History*, 1968.[109]

recreation. The piping plover (*Charadrius melodus*), a federally listed threatened species, has often been the flash point in this contentious negotiation.[110] Because the plover nests on undisturbed, open beach sites (sites which are increasingly rare), the Great Beach has become a vital, remaining source of nesting sites. Enclosures around nests, signs, and restrictions on Off-Road Vehicle (ORV) access all have helped increase the numbers of breeding pairs recorded on the Outer Cape.[111]

Figure 51: Plover Enclosures, Race Point, Provincetown, MA, 2003. (Photo: UMass/LARP)

They are trying to save the plover at the expense of the commercial fishermen. Commercial fishermen are the almost extinct species. It's a dying way of life and the National Park Service is not helping.

Cape Cod Surfcaster, "Surfcasters and Off Road Vehicle Use Ethnographic Study", 2001.[112]

Conclusion

The Great Beach is one of the most remarkable public spaces of North America. This narrow strip of sand is bounded by the limitless expanse of the Atlantic on one side, and high bluffs or extensive dune landscapes on the other. While it must serve large numbers of visitors, as well as competing purposes of recreation and habitat protection, the overall sense of the place is nevertheless one of wilderness, or more specifically the overwhelming wildness of the open sea. Although the beach landscape changes with every storm and tide, its overall spatial organization and sense of place remains remarkably unchanged. Because of its steep topography, residential development remains almost completely out of sight. Although the number of visitors can be enormous in summer months, often a brief walk from public access points can restore a sense of solitude. Even today, one can experience the Great Beach described by Thoreau.

The continued integrity of this experience depends very much on the public planning process and the management policies of the Park Service. Various user groups-including nesting birds-share the beach today through a complex set of arrangements that are the result of many studies and long hours of public meetings and negotiations. While certain compromises still evoke a sense of loss of traditional uses or practices, to a notable degree the Park Service has managed to strike a balance in which the long, narrow space of the Great Beach is shared through the zoning both spatially (certain uses restricted to certain areas) and temporally (certain uses restricted by time of day and season). There remains some threat of the redevelopment of private improved properties in a manner that would create a visual encroachment on the beach; but with the concerned interests of the six towns and the Park Service, this should be possible to avoid.

Overall, it is fair to say that the Great

Beach has fared well as a public landscape since the designation of the National Seashore in 1962. Its continued well being must be at the heart of any intention to identify and preserve the landscape character of the Outer Cape.

The flux and reflux of the ocean, the incomings of waves, the gatherings of birds, the pilgrimages of the peoples of the sea, winter and storm, the splendour of autumn and the holiness of spring - all these were part of the great beach. The longer I stayed, the more eager was I to know this coast and to share its mysterious and elemental life.

Henry Beston, *The Outermost House*, 1928.[113]

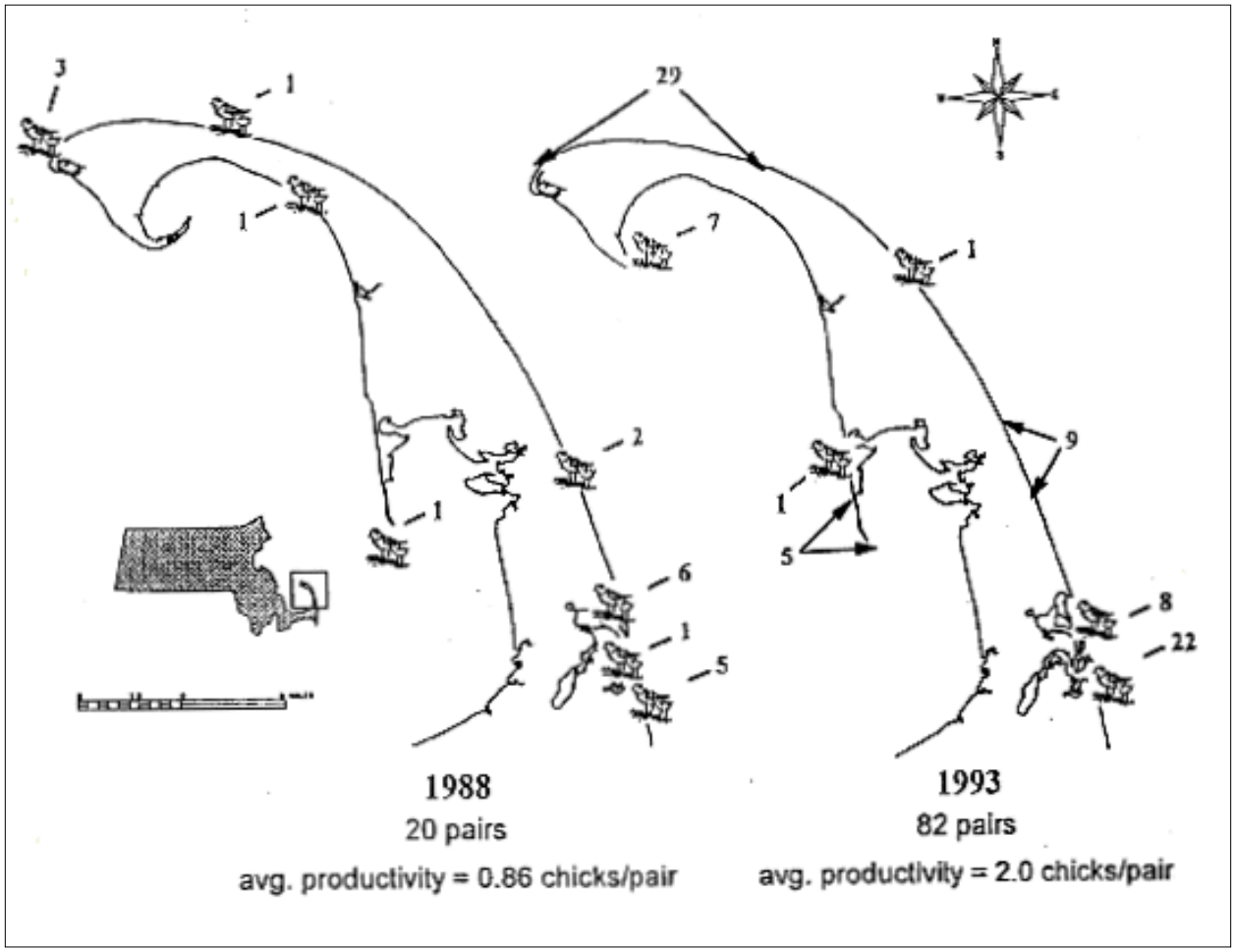


Figure 52: Piping plover distribution on Outer Cape Cod, 1988-1993. (Source: UMass/MassGIS)

Figure 53: Aerial view, dunes in Provincetown, MA, 2003. (Copyright: PANDION)

There is a waterness to it. It is changeable, growing and draws people from different points of view.
John Thomas, Provincetown, 2003.[114]

Waterways

Figure 54: Aerial view, Nauset Marsh, Eastham, MA, 2003. (Copyright: PANDION)

Interactions between people, land, and water on the Outer Cape are not limited to the region's beaches. Waterways include bayside places such as marshes and estuaries, as well as inland features such as white cedar swamps and kettle ponds. These places are valued for walking, exploring, swimming, boating, and bird watching. Occupations, such as aquaculture, are linked to these landscapes and are intertwined with issues related to environmental quality. Waterways support many of the region's economic and recreational opportunities and form a crucial part of the Outer Cape's character.

There are few places where both the ferocity and gentleness of the sea are experienced in such proximity as on the Outer Cape. In sharp contrast to the roar of the ocean along the Great Beach, the waters on the bay side can be placid. The warmer waters of Cape Cod Bay contrast with the colder, open expanses of the Atlantic just a mile or two away, across the dunes and bluffs.

The most vital resources for life on the Outer Cape occur where the ocean merges with the protected shores of Cape Cod Bay. Distinct margins of land and water trace small bays, inlets and harbors, providing fishermen and pleasure boaters with easy access to the ocean. Transitional land-sea margins produce tidal flats and salt marshes, which are ecologically rich environments offering prime shellfishing and providing essential habitat and nutrients for aquatic life.

Harbors

The harbors on the sheltered bay side of the Outer Cape retain a sense of their great maritime history, and they continue to contribute to the region's economy. Harbors are associated with all the towns of the Outer Cape, and often feature prominent artifacts from the maritime past, including docks, wharves and historic homes. Small commercial fishing fleets still make port at Provincetown, Wellfleet, and Chatham. They share the waters with numerous deep-sea chartered fishing boats, whale-watching boats, and thousands of recreational craft.

Figure 56: Rock Harbor, Orleans, MA, 2003. (Photo: UMass)

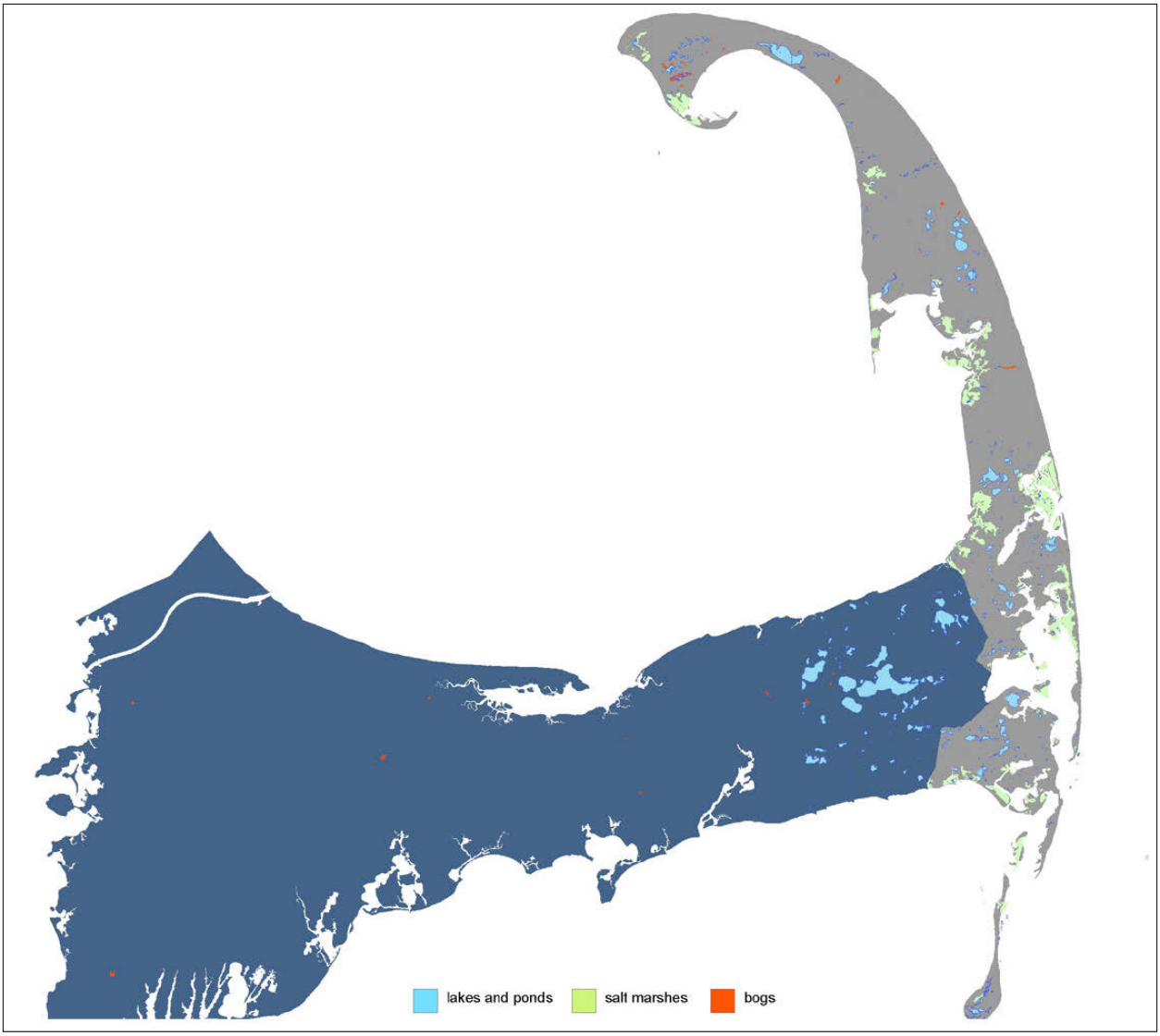


Figure 55: Distinctive hydrography of the Outer Cape. (Source: UMass/MassGIS)

Salt Marshes

Salt marshes exist in areas where saltwater and freshwater mix. With nutrient rich soils and water, these nurseries of the sea shelter and nourish a diverse array of species including marsh grasses, shellfish, mollusks, fish, wetlands, birds, and microorganisms. A resident of Wellfleet noted that the smell of decay, the mosquitoes and the black flies are all part of the experience of exploring salt marshes.[115] Others enjoy the variety of animal life supported by salt marshes such as spring peepers and numerous birds. Marshes have long been a source of recreational and economic opportunity for Cape Cod's residents and visitors. Today, salt marshes cover more than 13,000 acres of Cape Cod as a whole.

Figure 57: Wellfleet marsh/Duck Creek, Welfleet, MA, 2003. (Photo: UMass)

Figure 58: Salt marsh. (Photo: UMass)

Kettle Ponds

At the age of six, I learned to swim. or learned I could swim, in Minister's Pond. "Dog paddling" in shallow water was second nature for some time, but going into deeper water was too scary until Wilbur and Robert gave me a ride in an ancient rowboat they had salvaged...We were about thirty feet from shore when it slowly settled into the water and sank. I just dog-paddled to shore, to the approving applause of the older boys. After that, armed with the knowledge that I could swim, I joined the others in exploring the further reaches of Minister's Pond.

Donald B. Sparrow,
Growing Up on Cape Cod, 1999.[116]

Wetlands cover almost one quarter of all the land of Cape Cod, making contributions to water quality while providing unique wildlife habitat in an area of relatively dry soils. Kettle ponds, in particular, stand as cool, deep oases on the ancient glacial outwash plain. Salt ponds are also kettle ponds, but are connected directly to ocean waters. There are twenty kettle ponds located within Cape Cod National Seashore.[117]

Kettle ponds on the Outer Cape are sensitive to groundwater use, development, and pollution, making the careful planning of surrounding structures and activities essential for their sustainable use. People use most of the kettle ponds located inside the Seashore for a variety of recreational purposes, such

as non-motorized boating, swimming, fishing and hiking.[118] The shores of the ponds are also valued locations for residences, and many are ringed with sand roads and older cottages hidden in the trees. The potential redevelopment of existing cottages could severely change the visual character of several important ponds. The future of these ponds as freshwater oases serving water resource, recreational, scenic and habitat needs lies in coordinating future management with town governments and property owners.

Figure 59: Aerial view, kettle ponds, Wellfleet, MA, 2003. (Copyright: PANDION)

Figure 60: Woman floating in kettle pond, 2003. (Photo: UMass)

Cedar Swamps

Atlantic White Cedar (*Chamaecyparis thyoides*) swamps are a globally rare habitat type that can still be found on the Outer Cape. They form in shallow depressions in glacial outwash plains and develop in cool, shady environments.[119] The ancient trees require nutrient-poor, alkaline, water-saturated soils. These swamps buffer surrounding communities from floods and aid in the detoxification

Suddenly I was aware that the woods were filled with dozens of high-peeping little birds, flitting through the branches like small grey-green leaves, moving with a definate though staggered and erratic motion, as though blown by a common wind.

Robert Finch, *Special Places*, 2003.[120]

Figure 61: Tannin stained water, Atlantic white cedar swamp, Cape Cod National Seashore, Wellfleet, MA, 2003. (Photo: UMass)

of water. Moreover, they are filled with many other wetland plants including red maple, tupelo, ferns and wetlands shrubs. White Cedar swamps are home to wetland species such as spotted turtles. Dark and slightly eerie, they are places to explore slowly, and on foot. While this habitat type once covered an estimated 2,400 acres of Cape Cod, it was largely destroyed through peat farming, cranberry farming and lumber harvesting. Only a few narrow strips of Atlantic White Cedar Swamps exist today, including a large one at Marconi Station in Wellfleet. Walking through this rare ecosystem provides a memorable experience unique to the Outer Cape.

Wildlife and Bird Watching

The waterways of the Outer Cape are home to many wildlife species, including several federally and state listed endangered and threatened species. These include birds such as the sharp-shinned hawk, piping plover, least tern, roseate tern, and common moorhen, and aquatic species, including the northern right whale and shortnose sturgeon. Cape Cod Bay is federally designated as Critical Habitat for the North Atlantic right whale.[121]

Lands protected within the Cape Cod National Seashore and the Massachusetts Audubon Wellfleet Bay Wildlife Sanctuary provide safe habitats for numerous species of birds, turtles, snails, frogs, crabs, eels, and shellfish. In turn, the wildlife populations provide numerous educational and enjoyment opportunities for hikers, school groups, and bird watchers. With so many different habitats, observers are likely to see an array of coastal and upland species. Connecting with nature and observing wildlife creates lasting memories and associations with the character of the Outer Cape.

Figure 62: Birdwatchers, 2003. (Courtesy: CCNS/NPS)

With these big huge houses up on the hills…[they] don't want to see the fishermen out there. They absolutely do not want to see them out there. And they are fighting tooth and nail to get them out of there.

Cyndi Moe, Cape Conversations, 2003.[122]

Shell Fishing

Shellfishing on the Outer Cape has also become caught in the wake of the real estate boom of the last decade. Many people who have recently paid high prices for their beachfront property and views of Cape Cod Bay do not like looking out at shellfishing leases at low tide, nor do they feel shellfishermen should have the right to haul their gear across their beachfront. As a result many shellfishermen find themselves in legal battles with landowners.[123] Nevertheless, many towns are encouraging locals to harvest shellfish, regulating the shellfish stocks through permits and size and catch restrictions. Each town enforces its own restrictions and controls which beds are open.

The Outer Cape has long been famous for its shellfish. When Samuel de Champlain sailed into Cape Cod Bay in 1606, he described it as "Port aux Huitres," or Oyster

Harbor.[124] To this day, Wellfleet Oysters are prized for their quality and flavor.

The tradition of commercial shellfishing continues to provide a link between people, the landscape, and the sea. Boot-clad fishermen still carry buckets brimming with fresh mussels, steamers, cherrystones, quahogs or razor clams pulled from the rocks or tidal flats. Restaurants still serve this bounty within yards of the waters that produced it.

Figure 63: Clam diggers, Provincetown, MA. (Courtesy: CCNS/NPS)

I met a young man [who said that] he can't sell directly. The season is too short and he can't do it himself. He has to go through a wholesaler. Then the restaurants buy from the wholesalers. So he's really losing out financially. My father used to sell directly like that out of the back of his truck and it wasn't fish but it was interesting how that's the way it was done back then.

Eleanor Dumais, Cape Conversations, 2003.[125]

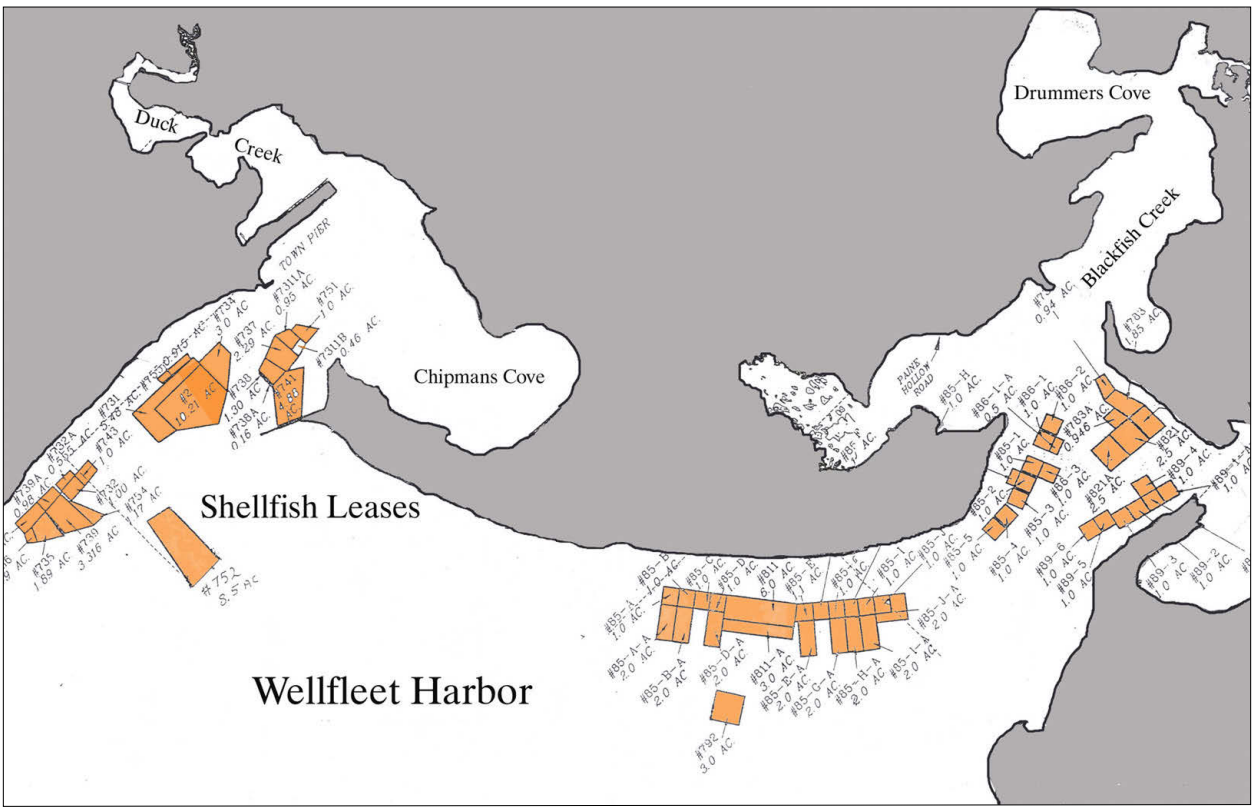


Figure 64: Shellfishing leases, Wellfleet, MA, 2003. (Source: UMass/Wellfleet Shellfishing Department)

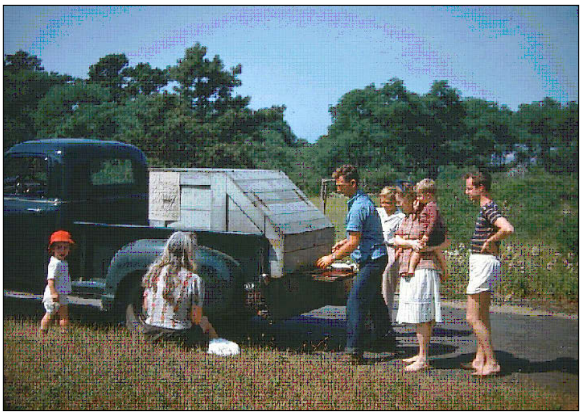


Figure 65: The fish man, Wellfleet, MA, 1948.
(Courtesy: Bob Arnold, photo by Carey E. Melville)

Figure 66: On the Flats.
(Copyright: ORION Photos Production, photo by Nathan Johnson)

Conclusion

The Waterways of the Outer Cape are a counterpoint to the awesome Great Beach. Here the complex and subtle rhythms of the bay, estuaries, marshes, swamps, and kettle ponds contrast with the power of the open sea. Many human rhythms and patterns of life, as well, intertwine with the natural systems of the Outer Cape's Waterways.

Waterways afford an assortment of experiences all of which contribute to the landscape character of the Outer Cape. For example, kettle ponds, long prized for their beauty and refreshing waters, provide a cool reprieve from the sun and salt of the ocean beach. They also attracted some of the oldest residences and vacation homes in the region. Waterways are also fragile environments that feature rich and diverse habitats for the Outer Cape's wildlife. Waterways continue to be the scene of active maritime occupations-fishing and shellfishing-which are some of the few economic activities in the region that do not relate to tourism and services. Many of the cultural landscapes and traditional activities that have characterized life on the Outer Cape have been centered around Waterways.

Maintaining the environmental and visual character of Waterways is one of the great challenges of protecting the landscape character of the Outer Cape. Waterways are both environmentally sensitive, and heavily populated and used. Sustaining traditional uses-such as shellfishing-remains important to visitors and residents, who not only value this as a source of income but as a working connection to their landscape. At the same time, increased levels of use and encroachment can easily degrade delicate water quality and disrupt vital habitat. Waterways are rich and diverse, and have attracted many different kinds of uses. These activities and the landscapes-harbors, marshes, and kettle ponds-that have shaped them, are among the most vital contributions to the overall character of the Outer Cape.

Now I am fascinated with East Harbor (Pilgrim Lake). Two days ago eighty percent of it was covered with ice, and the churning water of the northernmost basin was a deep cranberry color because it's so shallow. It's different all the time in color and appearance.

Diana Worthington, North Truro, 2003.[126]

Figure 67: Aerial view, shellfishing leases, Wellfleet, MA, 2003. (Copyright: PANDION)

Figure 68: Aerial view, Provincetown and Pilgrim Lake, 2003. (Copyright: PANDION)

There are no outstanding wonders on Cape Cod. The real charm lies in the fact that it is a community, or a way of life. Cape Cod is not an industrial community, nor is it an agricultural one; it is essentially residential. It is a community of homeowners, engaging in trades of their individual talents to provide for their financial requirements, and implementing their income by attracting summer tourists, retired persons, and others of financial means.

Mrs. Walter P. Chrysler, North Truro, 1960.[127]

Town Centers & Harbors

Figure 69: Aerial view, Wellfleet Harbor, Wellfleet, MA, 2003. (Copyright: PANDION)

The centers of Outer Cape towns have historically served as anchoring spots for communities as well as ships. They were lively places, where commercial, civic and family life intersected. Most town centers housed the town post office, the town hall, banks and shops. Both year-round residents and tourists frequented them daily. These bustling centers helped to reinforce the sense that the Outer Cape was a special place where one knew one's neighbors. Changing economic factors, new building codes, and some government policies have caused many of the functions that were traditionally linked to town centers to move out to Route 6. Many older buildings in town centers now house galleries, retail shops, and restaurants geared more for tourists than for routine activities such as grocery shopping or handling the mail. The town centers of Outer Cape towns grew up around their harbors, but today the activity in these harbors centers more on recreational boating than fishing industries. The tall masts of whaling and fishing ships have given way to the smaller sails of recreational sailboats and the low profiles of motor boats. But several towns have made a commitment to helping fishermen remain a part of the Outer Cape, and the sight of fishing boats in the harbors are still a reminder that the character of the Outer Cape remains somehow tied to an ongoing and working relationship with the sea.

Fishing and Whaling

The first European settlers on the Cape did not fish commercially, but relied on plentiful cod, mackerel, and bass in the surrounding waters to supplement their subsistence farming efforts.[128] Early European settlers also occasionally butchered beached whales for their valued oil. This practice slowly developed into the industry of shore whaling, where farmers would take turns scanning the water from stations along the coast, and then try to kill or beach whales using small boats. As Cape settlement became more established, the population turned more to the sea, and fishing for local consumption flourished in coastal towns. Fishing permits and leases were granted, and for a time the income generated by permit sales funded local schools.[129]

As demand for fish grew in distant markets, Cape Cod fisherman began venturing out of the protected waters of Cape Cod Bay and sailing nearly 1,000 miles to the Grand Banks off the coast of Newfoundland. Traveling greater distances required larger ships, which in turn required larger and deeper harbors. Although small-scale fishing continued throughout the Cape, towns with deep harbors such as Chatham, Wellfleet, and Provincetown became the centers of the region's fishing industry. Whalers, like fishermen, eventually chased their prey further and further from shore, and developed an industry that lasted from the late eighteenth to the middle of the nineteenth century.[130]

The growing fishing and whaling industries helped spur the development of concentrated town centers and introduced

These blackfish, only less valuable for oil than whales, down to recent times were occasionally beached in shoals on the Cape, and the stench of the rotting carcases carried for miles.

Mary Rogers Bangs, *Old Cape Cod,* 1920.[131]

Figure 70: Fishing flakes, Provincetown, MA. (Courtesy: CCNS/NPS)

new features to the landscape, such as the slatted fish drying platforms, called "flakes," that lined the streets and beaches of coastal towns. The towns of the Outer Cape, especially Provincetown, Wellfleet, and Chatham, were busy and prosperous places in the early nineteenth century. Boatyards, sail makers, rope makers, and saltworks, among many other businesses, were all linked to the business of exploiting the bounty of the great fishing banks. Many great whaling captains built impressive homes in the architectural styles of the day that helped to define the centers of these Outer Cape towns.

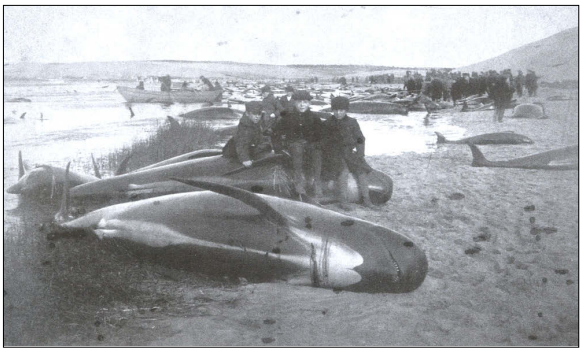


Figure 71: Beached pilot whales. (Source: D. Lombardo, *Images of America: Wellfleet A Cape Cod Village*, Charleston SC: Arcadia Publishing, 2000)

The Civil War brought great changes to the resource based economy of the Cape. By the end of the war Cape Cod's fishing industry was in decline, and only Provincetown and Wellfleet continued extensive, deep-sea fishing. Independent Cape fishermen could not compete with large, commercial fishing operations that could afford bigger boats and newer technology.[132] The decline continued, even as tourism began to take hold as a new economic foundation in the region. By the 1950s, as automotive tourism reached unprecedented levels, there was little left of the once dominant maritime industries.

Figure 72: Fishing boat, Wellfleet Harbor, Wellfleet, MA, 2003. (Photo: UMass)

Today the activity in town harbors centers more on recreational boating than on commercial fishing. The masts of whaling and fishing vessels have given way to the smaller sails of recreational sailboats and the buzz of motorboats. Nevertheless, several towns have made a commitment to helping fishermen remain a part of the Outer Cape, and the sight of a few commercial fishing boats in the harbors is a reminder that the character of the Outer Cape is still tied to a long-standing working relationship with the sea.

Long before cross-dressing meant anything, Provincetown was a place where going out to drag, though never in drag - was crucial to the town's way of life. Dragging for fish...is Provincetown's signature fishery.

Seth Rolbein, *The Cape Cod Voice,* 2003.[133]

Provincetown

In the course of the nineteenth century, Provincetown grew to be the richest town (per capita) in Massachusetts. Over 700 ships crowded into the harbor and docked at the town's fifty-four long wharves. To support this industry a thriving community arose with a distinct commercial center characterized by neat rows of buildings on narrow streets, punctuated by the more opulent homes of sea captains and merchants.

By the twentieth century, tourism began to compete with fishing as Provincetown's major industry. Rooming houses and campgrounds sprang up along Beach Point and bathers flocked to New Beach (Herring Cove). Vacationing writers, painters, and other artists and cultural figures flocked to the area. Provincetown boasted a number of art schools, the most famous of which was Charles Hawthorne's Cape Cod School of Art, started in 1899. The Provincetown Players began in a small building located on the wharf in Provincetown, performing works by its members, including Eugene O'Neill.[134]

The height of the original Provincetown art scene had arguably passed by the time the National Seashore was created. Hans Hoffman, a longtime Provincetown artist, claimed the "ruin of Provincetown as an art center dated from the construction of Route 6 in the 1950s and the flood of cars it brought to the tip of the Cape."[135] But the arts community persisted, although perhaps in different forms. In 1949 the famous "Forum '49" exhibition of abstract painting began a new era of Provincetown art galleries and exhibitions. In keeping with the time, Provincetown took on a more "beatnik" feel in the 1950s, and gay-friendly bars like the Atlantic House began to open. As one artist commented about the coffee house Ciro & Sal's, "Artists got special tables, special prices. Artists were welcome there. If you were an artist you were not treated like a tourist. You were treated as a member of the family."[136]

By the 1950s Provincetown was the home to several identifiable and unique communities. Although the primacy of fishing had faded by this time, a vibrant, Azorean Portuguese community remained. Today the

Figure 73: Commercial Street, Provincetown, MA.
(Courtesy: Cape Cod Pilgrim Memorial Association)

Figure 74: Commercial Street, Provincetown, MA, 2003. (Photo: UMass)

Figure 75: Aerial view, Provincetown, MA, 2003. (Copyright: PANDION)

Portuguese influence can clearly be seen at many restaurants and festivals in town. A resident recently described Provincetown as a "summer-long street carnival."[137] All life-styles-straight, gay, lesbian, transvestite, artist, laborer, tourist, and local-co-exist in this small town at the very tip of Cape Cod. A stroll along Commercial Street, the three-mile long thoroughfare, is an experience of sensory overload. One might glimpse cross-dressers, fishermen, and roller-bladers, mixed with typical vacationing families out to enjoy a day of whale watching. Provincetown is an eclectic community that prides itself on its irreverence.

Colorful characters are not the only point of interest in Provincetown. The varied architectural fabric of Provincetown, from sea captain's mansions to artisan cottages, showcases the town's rich heritage. Rather than giving way to large-scale commercial development, the community maintains its historic scale. Much of the town is covered by a large National Register district, and the architectural charm of nineteenth-century buildings, the density of development and the exceptional quality of light combine to create a unique environment.

Thousands of towns in our country are so alike that someone set down from the air, blindfolded, would not know his whereabouts, not one town from another. A person so set down in the back lands of Provincetown can at once exclaim, "This must be Cape Cod."

Mrs. Hazel Hawthorne Werner,
Provincetown, 1960.[138]

Wellfleet

Wellfleet is a historic town that draws thousands of visitors every year who come to admire its architecture and go to its restaurants, art galleries, and shops. Visitors and residents alike remark on the charming character of the community, its pedestrian scale, fine buildings, and working harbor.

Wellfleet officially became a town in 1775, after the "Billingsgate" district (as it was then known) was separated from Eastham.[139] Like Provincetown, Wellfleet prospered from whaling, fishing, and oystering. At one time there were as many as thirty whaling vessels based in the harbor, and their successful sea captains built fine homes in town. The town center became more consolidated in the mid-nineteenth century as people from Wellfleet's fishing villages, which had been dispersed over Wellfleet "islands" (such as Bound Brook Island, Griffiths Island, and Billingsgate Point), migrated to Duck Creek. This resulted in the construction of fishing wharves in Duck Creek.[140]

The compact nature of Wellfleet, and its rolling topography and narrow, winding streets, create a continuous sense of discovery. The visitor is never sure what lies around the bend. Roads running along and against the grade of the landform create unique view corridors and dynamic spatial sequences. From

Figure 76: Wellfleet center, view over Duck Creek, Wellfleet, MA, 2003. (Photo: UMass)

certain spots, picturesque glimpses appear of Wellfleet Harbor, with its sailboats, sport fishing, and commercial fishing boats. The steeple of the belfry in the Congregational Church is visible from almost all points, and serves as a central landmark. The church's clock tower evokes the seafaring past by striking ship's time to the puzzlement of newcomers.

Dense, two-story, residential-style development along Commercial and Main Streets reinforces a village feel with narrow streets, on-street parking, and sidewalks framed by structures set close to the road. Old linden trees dressed with vines shade streets and provide a canopy. Off the main thoroughfares, small houses with tiny gardens are nestled into the landscape. Such compact development patterns impart a pedestrian scale and neighborhood feel to the whole of downtown. The presence of the historic Town Hall near the intersection of Main and Bank streets forms an important civic and commercial cluster, which is located in the heart the Wellfleet Center National Register Historic District. The town library, the historical society, several markets, restaurants, and banks are all within easy walking distance of this intersection.

If some of our yards contain old cars, tools, building materials - the clutter of active working families - well, that is just part of our identity as a real, full-bodied town, not just an antiseptic bedroom suburb or retirement destination.

Brent Harold, *Wellfleet and the World*, 2003.[141]

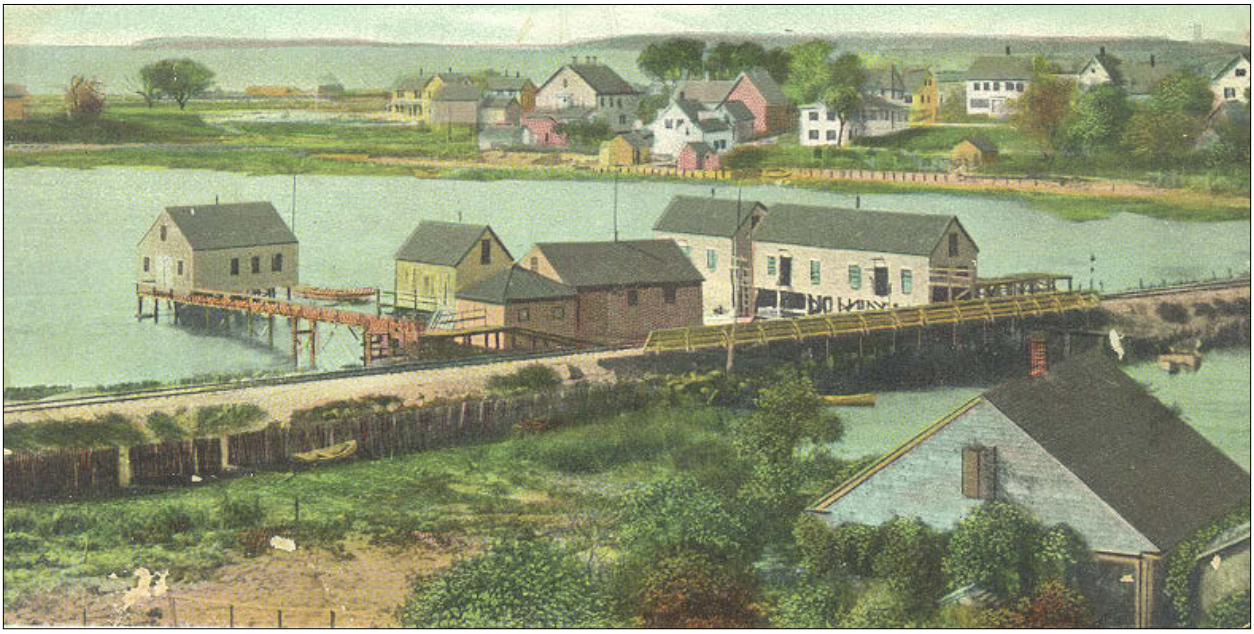


Figure 77: Postcard, oyster shacks, Wellfleet, MA. (Courtesy: CCNS/NPS)

Figure 78: Main Street, Wellfleet, MA, 2003. (Source: UMass)

Figure 79: Fish market, Wellfleet, MA, 2003. (Photo: UMass)

Tourism

As Outer Cape towns lost their maritime industry base, they gained the tourist trade. In the twentieth century, towns diversified to meet the needs of tourists and artists drawn by the beauty of the landscape. Thus began a long and continuing trend whereby town centers that were formed and structured around maritime industries came to be transformed into service-oriented centers. Many docks and shellfishing shacks crumbled, and the larger homes of merchants and sea captains were converted into restaurants, art galleries, and seasonal rentals.

Most town centers, however, retain their importance and remain lively places. Commercial, civic, and family life continue to intersect in the busy centers of Provincetown, Wellfleet, Eastham, Orleans, and Chatham. Many town centers house the post office, town hall, banks, and shops. These centers help to reinforce the sense that the Outer Cape is a place where one knows one's neighbors.

Figure 80: Main Street, Wellfleet, MA, 2003. (Photo: UMass)

A guidebook should have better manners, I suppose, than to point back to the tourist as one of the 'principal features of interest.' But manners or no manners, a Cape Cod guidebook must single him out for this distinction; for within the past two decades, the tourist has stepped into the leading role; 'summer business' has overshadowed all others; for most of the towns, it is now the mainstay.

There has been other commerce for the people of this sandy sliver of New England, industrial booms on which enduring fortunes were built. But the whaling, the foreign trade, the ship-building, the salt-making, all have passed; and the same evolution that wrote finis to each of these has brought the motor car and the hard-surfaced highway.

Jeremiah Digges, *Cape Cod Pilot*, 1937.[142]

Between seventy percent and seventy-five percent of our property is owned by nonresident taxpayers, twenty-five percent by resident taxpayers. In a town the size of ours, which in wintertime is 1,400 people and in the summertime is 10,000 people, we have a fairly good idea among those 1,400 people how they believe.... There was once a time we could tell what anyone had for breakfast. We can't tell that anymore.

Charles Frazier, Jr., Wellfleet, 1960.[143]

When people come to Wellfleet they know that on Friday and Saturday night they can walk around to different galleries and have a wine tasting and look at the art.

Frank Szedlak, Jr.,
Cape Conversations, 2003.[144]

Washashores

Drawn by the natural beauty of the seashore and the charm of Outer Cape towns, the proportional number of residents not born on Cape Cod-or "washashores"-has long been increasing. Over time Outer Cape towns have struggled to maintain their identity as places where people live and work. This is difficult in what are still essentially seasonal communities. In Wellfleet, for example, a population of 2,700 is joined by some 17,000 seasonal residents in the summer.[145] During the summer months the streets of Provincetown, Wellfleet, and Chatham buzz with tourists and shoppers. This bustle of activity is largely seasonal and sharply declines by Columbus Day. Some locally-owned businesses have been able to adapt to seasonal cash flow. Although community residents and tourists alike do not want to see large chain stores invade the Outer Cape, increasing numbers of them drive to Orleans to buy goods from shopping malls.

People come down here and they see the lobster pots sitting in backyards. And they see fishermen and the old boats and stuff lying around. And they think, oh, it's so quaint. And then they get here and they want to clean it all up. And that bothers me. That always bothered me.

Cyndi Moe, Cape Conversations, 2003.[146]

In recent years changing economic factors have caused some of the routine functions that were linked to town centers, such as grocery shopping or handling the mail, to be moved to Route 6. Although the towns of the Outer Cape have retained their humanized

Figure 81: Jacob Fanning Gallery, Wellfleet, MA 2003. (Photo: UMass)

Figure 82: Wellfleet Harbor snack shack, Wellfleet, MA, 2003. (Photo: UMass)

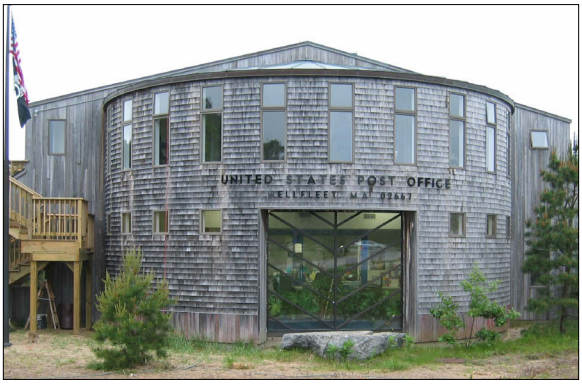


Figure 83: Wellfleet Post Office, Wellfleet, MA, 2003. (Photo: UMass)

Figure 84: Wellfleet Town Hall, Wellfleet, MA, 2003. (Photo: UMass)

scale of streetscape and historic architecture, they have struggled to maintain the functional authenticity of their town centers. The quaint, meandering, pedestrian scale streets do not allow easy access for the large service trucks needed to supply stores, bed and breakfasts, restaurants, bars, and art galleries, which have all but replaced private homes, grocery stores, and post offices.

Conclusion

The Towns of the Outer Cape have been the centers of residential, civic, and commercial life since the eighteenth century. If their central importance in this regard has diminished somewhat in the post-World War II era, it has done so less than in most regions of the country. The Towns of the Outer Cape-even if they have lost post offices and grocery stores to their peripheries-remain the center of community life. New functions, including theaters, retail stores and bed and breakfasts, may have replaced old, but the sense of community often endures.

While roadside and peripheral development has sapped some of the economic vitality from the Towns, their historical and architectural significance has become more appreciated than ever. Wellfleet and Provincetown, in particular, are exceptional concentrations of nineteenth-century commercial, ecclesiastic, and residential architecture, a fact recognized through the establishment of extensive National Register districts. The Towns of the Outer Cape are themselves cultural resources. They also continue to function, grow, and change, inevitably reflecting the patterns of life today, as much as the past.

The Towns are a vital component of the character of the Outer Cape which, perhaps more than any other component can and do benefit from traditional planning tools and ordinances. They represent a legacy of concentrated, pedestrian-oriented development, and will benefit from policies that continue to encourage this kind of growth. The towns still serve as civic centers, and will continue to do so, to the degree to which public functions and buildings can persist in them. Future development outside town centers-especially shopping centers with large-scale retail chain outlets-would change more than just the roadside areas they would cover; they also would substantially alter the economic and social functions of the Outer Cape's historic Towns.

As for the increased movement of civic and commercial functions outside of town center, careful study and controls over design and development will have enormous impacts on regional character.

	Provincetown	Truro	Wellfleet	Eastham	Chatham	Orleans	US Ave.
Total population	3,431	2,087	2,749	5,453	6,625	6,341	
Median Age (yrs)	45.4	45.7	47	47.6	53.9	55.50%	35.3
% population under 18	8.0%	17.4%	25.7%	17.7%	13.3%	13.8%	25.7%
% population 65 and over	17.8%	17.0%	21.7%	26.0%	34.3%	36.0%	12.4%
% White	87.6%	95.1%	96.6%	96.3%	96.0%	97.6%	75.1%
Ave. household size	1.69	2.18	2.11	2.24	2	2	2.59
Total housing units	3,890	2,551	3,998	5,535	6,743	5,073	100.0%
Renter-occupied housing units	46.2%	22.1%	23.4%	17.7%	20.0%	24.4%	33.8%
Vacant housing units	52.8%	64.4%	67.5%	56.7%	53.1%	39.1%	9.0%
In Labor Force (16 years and older)	64.2%	63.5%	62.4%	53.0%	50.7%	46.8%	63.9%
Median household income	$32,716	$42,981	$43,558	$42,618	$45,519	$42,594	$41,994
Median family income	$39,679	$51,389	$50,990	$51,269	$56,750	$50,046	$50,046
Per capita income	$26,109	$22,608	$25,712	$24,642	$28,594	$21,857	$21,857
Individuals below poverty level	16.3%	11.2%	7.5%	7.0%	4.8%	6.5%	12.4%
Median home value	$323,600	$286,500	$242,700	$192,300	$273,900	$300,700	$119,600

Table 3: Demographic Data for Outer Cape Towns (U.S. Census 2000).[147]

Nature will take over…the area of the National Seashore, except for the beaches dunes and marshes, will be a second-growth wilderness of oak and scrub pine, of poison ivy and briars.

Quincy Shaw, Eastham, 1959.[148]

Farms & Forests

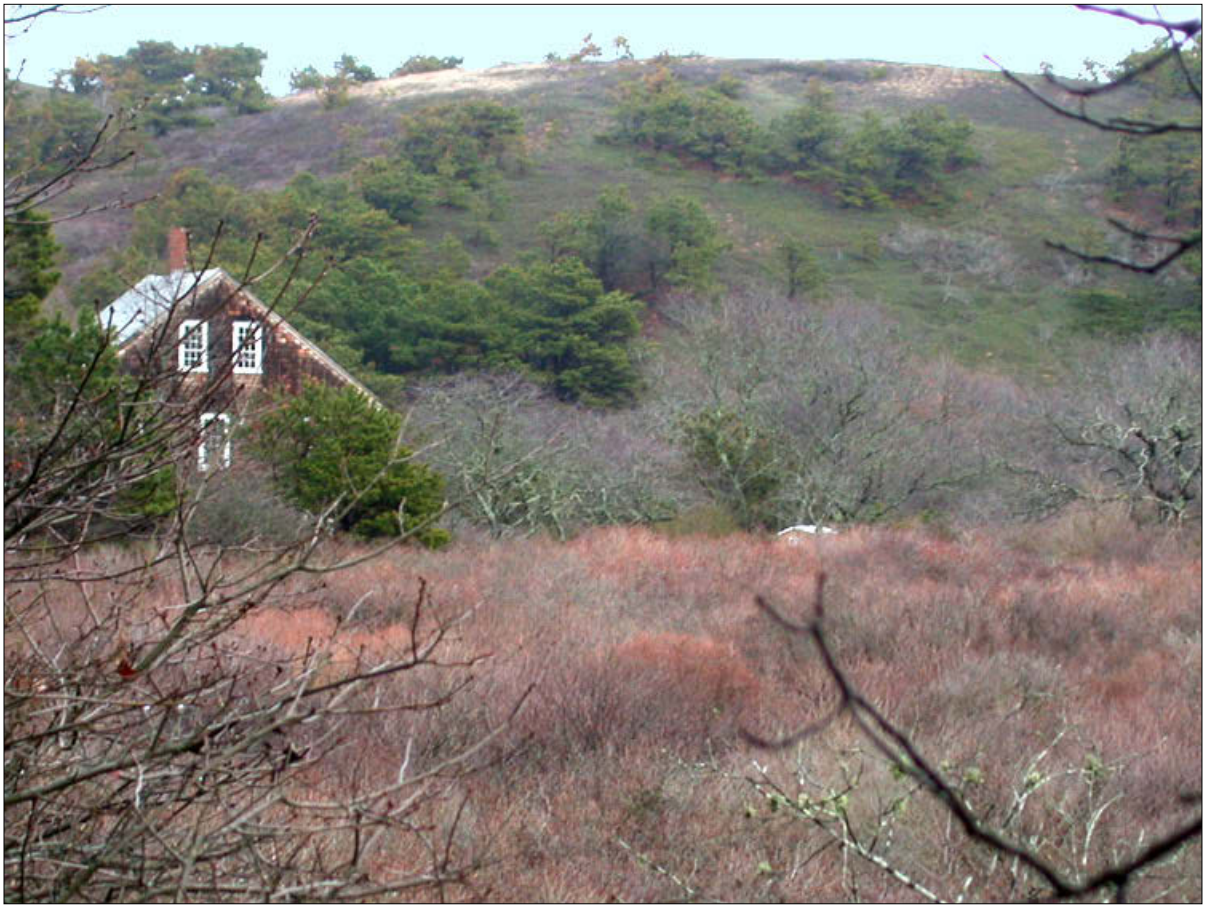


Figure 85: Pamet Bog house and bog, Truro, MA, 2003. (Photo: UMass)

As in so much of New England, the farms and forests of the Outer Cape are really one landscape, in that farms were once forests, and most forests in the area have grown where there were once farms. The pattern of agricultural and wooded land on the Outer Cape today has resulted from alternating patterns of succession, disturbance, and use. Much of the Outer Cape landscape has gone from forest to agricultural landscape and back to forest. Existing natural conditions, such as soils, climate, and hydrology, combined with a long history of human influence, have resulted in pine and oak forest, open meadows and heath lands. Management of remnant agricultural landscapes and heathlands (which are themselves often another remnant of agriculture) demand a balanced understanding of how natural systems and cultural practices have been interwoven for thousands of years on this delicate landscape of fragile soils and occasionally severe weather.

Soil

The soils of the interior lands on the Outer Cape are very different from the beach sands. Most of the soils are Podzolic, which means that although they are capped with a surface accumulation of organic matter, they are usually dry, poor in nutrients, and acidic due to extensive leaching action. They are generally low in agricultural value and typically support forests.[149] As a result, the landscape of the Outer Cape we know today is mostly covered with pine and oak forest.[150] Also present in these forests are hardy species such as bearberry, sedges, broom crowberry and lichens.

Figure 86: Soil horizon showing podzolic soil, 2003. (Photo: UMass)

Agriculture

Human influence on the Outer Cape landscape has been continuous for thousands of years. Archeological remains of pottery and arrowheads date back 7,700 years, although people are thought to have first inhabited the region at least 9,000 to 12,000 years ago.[151] Groups of Wampanoag inhabited the Outer Cape in late sixteenth century and practiced clearing and burning techniques for hunting and agriculture that may have kept significant portions of the landscape open and unforested.[152] In any case, agriculture was being practiced on the Outer Cape long before European contact. When Champlain explored New England in 1604 - 1606 he saw "a great deal of country cleared up and planted" in Massachusetts Bay and on Cape Cod.[153] Later Captain John Smith during his 1614 exploration noted "many miles all planted with corn," and remarked on the number of houses and gardens.[154]

With the arrival of European colonists, entirely new relationships developed between people and the landscape of the Outer Cape. Soils were generally more suitable for cultivation on the Upper Cape than

Figure 87: Pennimen chickens, Eastham, MA. (Courtesy: CCNS/NPS)

on the Outer Cape, but agriculture had a strong presence on the Outer Cape, nevertheless, from the early settlement period. Early Colonial farmers mixed cultivation and husbandry. In a typical farmstead most land was used for hay or pasture with small areas for woodlots. Maize, or "Indian Corn," was a hearty staple.[155] Early agriculture depended on-and was limited by-the potential of the poor land to support grazing animals.[156] Livestock was often allowed to roam, browsing in trees and grazing understory plants. This type of grazing eventually was one factor that encouraged the establishment of extensive heathlands.

I remember when there were no trees or bushes - it was barren. I remember the sad sound of the railroad.

Joyce Johnson, Eastham, 2003.[157]

Deforestation

European farming practices dramatically changed the landscape of the Outer Cape. As European settlers enlarged their farms, they cleared forests for lumber, firewood, and for the creation of more fields. Repeated cutting, cultivation, grazing, and burning of the lands on the Outer Cape changed the structure of soils, and left few remaining forests. The lack of forest cover hastened the silting in of many harbors. By the end of the eighteenth century, areas of the Outer Cape had also become unfit for farming because of soil erosion.[158] Tree cutting was banned in the area of the Province Lands in an attempt to stop sand drifting over croplands and silting in at the harbor

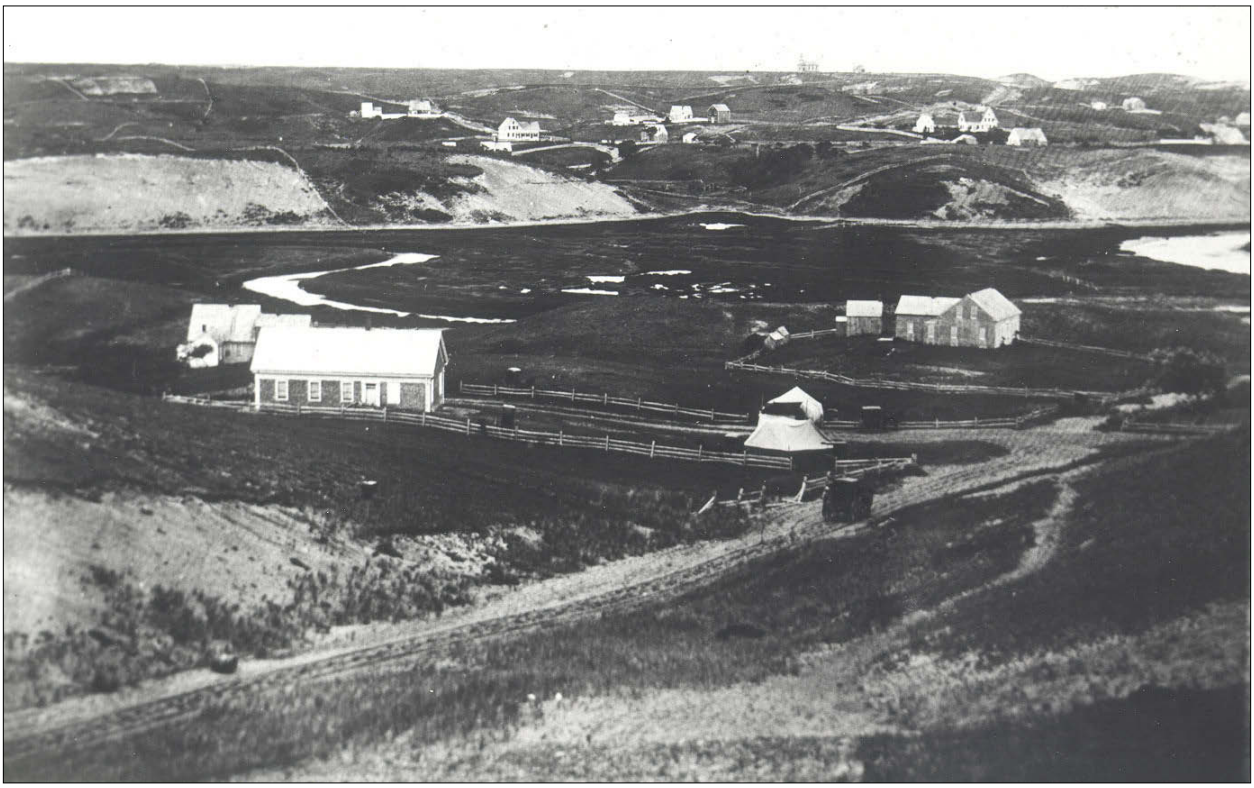


Figure 88: Truro landscape. (Courtesy: CCNS/NPS)

at Provincetown. A Massachusetts Bay general law was also passed to regulate burning of woodland (and to prevent the destruction that sometimes followed uncontrolled forest fires). But by the turn of the nineteenth century, forest resources were severely depleted and wood had to be imported to the Outer Cape. Truro began planting pine seeds (in ploughed furrows) to try to bring back forests; Eastham had used up its oak and white pine for ship building; in Orleans peat replaced wood burning for cooking and heating. By mid-nineteenth century the Outer Cape was only about forty percent wooded.[159]

Salt Hay

Until the late nineteenth century, the most common way of supporting animals through the winter was by planting and harvesting hay, and by harvesting salt hay from marshes. Some of the earliest settlements on the Cape were chosen for their proximity to salt marshes.[160] When land shifted from common to private ownership, salt marsh lots became basic investments for Cape Cod farmers. In many cases, non-milk producing livestock subsisted solely on a diet of wild hay. Harvesting salt hay had to be timed exactly with the tides, and farmers often worked together to cut and gather a marsh. Today, more limited harvests of salt hay are still made by some nurserymen and landscapers, who use it as mulch, since it is rich in minerals and effective at preventing weeds.

Figure 89: Haying, Eastham, MA. (Courtesy: CCNS/NPS)

Figure 90: Saltworks, Provincetown, MA ca. 1840. (Source: William F. Robinson, *Henry David Thoreau's Complete Text with the Journey Recreated in Pictures*, Boston: Little, Brown and Co. 1985, 175)

Windmills

Associated with agricultural harvests and the grinding of grains, windmills were once a part of the agricultural landscape on the Outer Cape. Windmills were also used to power pumps for the saltworks industry. In 1935 the Farris Windmill of West Yarmouth was purchased and moved to Henry Ford's museum in Dearborn, Michigan. The move angered many Cape Codders, causing communities to take stock of the area's built heritage. Historic structures on the Cape were frequently linked to other cherished elements of the landscape. Windmills eventually became recognized as important symbols of Cape history and the landscape itself. Towns such as Eastham undertook restoration efforts to save local structures for historical reasons as early as 1920. Other windmills were purchased by wealthy homeowners and moved to their properties.[161] The windmill in Eastham is visible from Route 6 and a windmill in Chatham is listed in the National Register of Historic Places.

Figure 91: Windmill, Eastham, MA, 2003. (Photo: UMass)

Heathlands

Heathlands are open areas covered by thick mats of low, tenacious shrubs that gain a foothold in the sandy soils and help prevent erosion. Heathland plant species colonize soils disturbed by intensive agriculture and deforestation, including burning, which began in the late seventeenth century.[162] Heathlands can be seen along the coast and inland on patches of cleared land such as roadsides and abandoned farmland. Coastal heathlands are comprised of bearberry, beach heather, and black huckleberry; inland heathlands are dominated by bearberry, huckleberry, golden heather, and bushy rockrose. Although once abundant, this habitat type has suffered a sixty-three percent decrease since 1962. Heathlands are disappearing because of development (outside National Seashore boundaries) and forest succession.[163] A relatively rare habitat in the U.S., heathlands support a diversity of plant and animal species as well as provide a sense of openness and light, and enabling expansive views of sky, ocean and landscape.

Figure 92: Heathland vegetation on the Outer Cape, 2003. (Source: UMass/MassGIS)

Figure 93: House in the heathlands, Truro, MA, 2003. (Photo: UMass)

Market Agriculture

By the mid-nineteenth century, the industrialization of textile manufactures off-Cape made production of wool more profitable, and sheep farming expanded in Chatham, Orleans, and Truro. Egg and poultry production increased during this time. The area also became known for shipbuilding, and the industry relied on a local supply of lumber.[164] Vast improvements in shipping and land transportation in the later nineteenth century aided the decline in farming on the Outer Cape, as goods brought from other regions became increasingly affordable. Some farming persisted into the twentieth century, but most farmers switched to more specialized and profitable crops that could be shipped to distant markets. Asparagus, cranberries, and turnips were all produced for local and distant markets, and subsistence-type farming all but ended.[165] Little of this activity remains on the Outer Cape today.

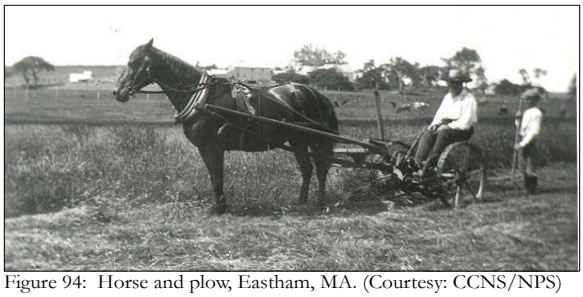


Figure 94: Horse and plow, Eastham, MA. (Courtesy: CCNS/NPS)

As young boys our major chores were helping with asparagus and turnips and cutting wood for the kitchen stove.

Donald B. Sparrow,
Growing Up on Cape Cod, 1999.[166]

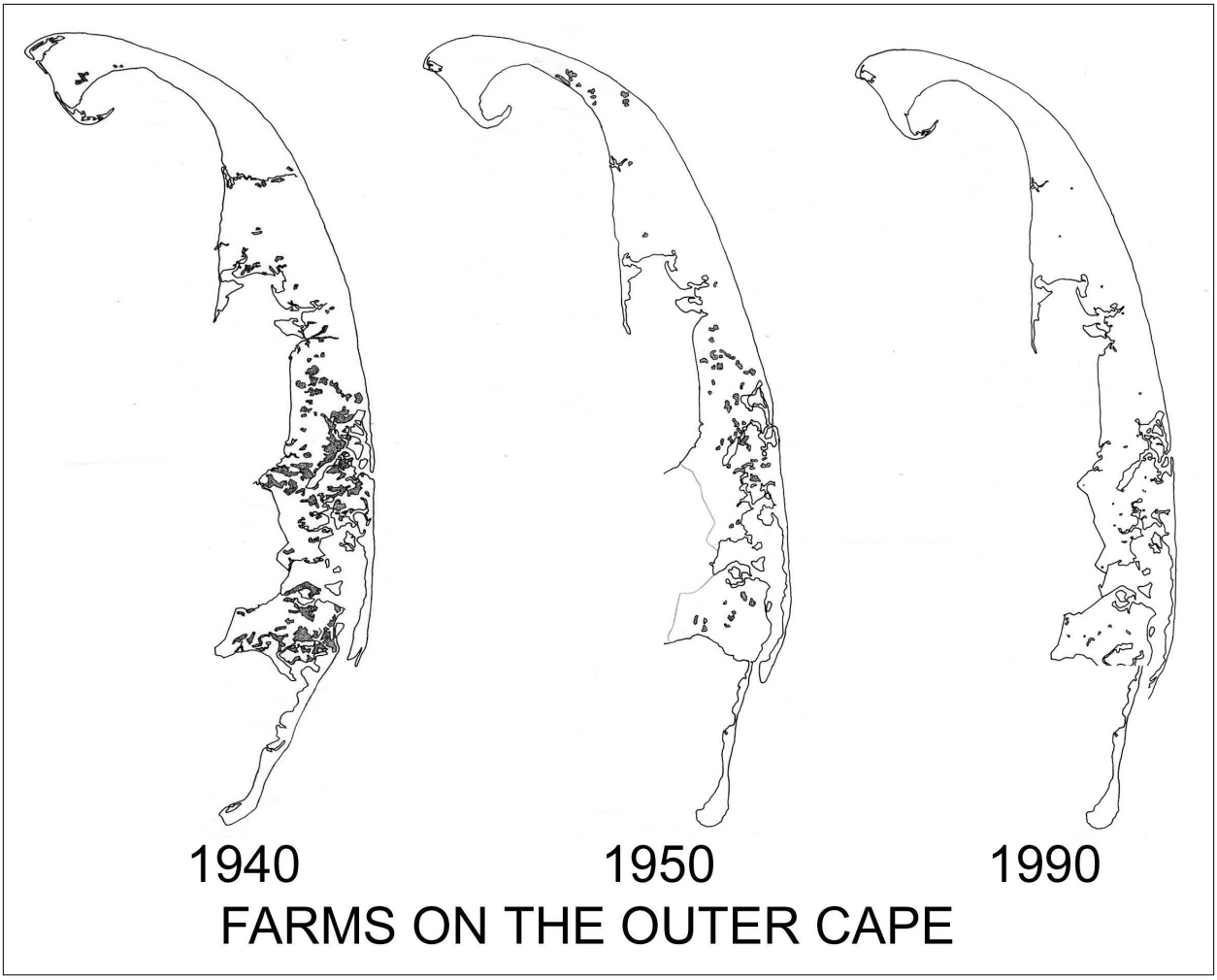


Figure 95: Farm loss on the Outer Cape, 1940 - 1990. (Source: UMass/MassGIS)

This picture here would not have looked much different if it were taken in 1604 when the French explorer came here and mapped the area. That's the neat thing about having the Seashore here.

Edward Sabin, Cape Conversations, 2003.[167]

Forest Succession

No comprehensive descriptions of the forest of Cape Cod at the time of European contact exist, but it is possible to estimate their composition and extent using early descriptions of the area in conjunction with records of population and land use.[168] Upland areas were probably occupied by a fairly open forest containing large expanses of pitch pine or oak (scarlet, black and white) with scattered red maple, gray birch and white pine. Pollen analysis indicates that at time of European settlement, oak-chestnut forests probably dominated most of the Outer Cape.[169] These forests may have been maintained in a fairly open state through periodic burning. At lower elevations more moisture was present and fires were less intense, and so a variety of hardwood species were common. Trees at these elevations were probably taller and better formed than those at higher elevations, with an understory of shrubs and vines. Many bogs contained nearly pure stands of Atlantic white cedar. Shrubs dominated other low areas.

Figure 96: Pitch pine forest, Outer Cape, 2003. (Photo: UMass)

As the changing economics of agriculture caused people to abandon farms almost everywhere in New England, reforestation began. By 1951 the woodlands of all of Cape Cod had returned to cover over sixty percent of land area. This trend was reversed by postwar residential and commercial development, and in 1990 only forty-three percent of the entire Cape was forested, although most of this loss has been on the Upper Cape.[170]

The regenerating forests on the Outer Cape are not the same as those that existed prior to European settlement. Recent studies have confirmed that prior land use has a profound effect on the species that re-colonize an abandoned agricultural area, and these effects can influence modern species composition and abundance for many years. The change in forest species composition has significant implications for conservation efforts and reinforces the idea that cultural and natural processes are inseparable, highly interrelated factors responsible for the formation of the Cape Cod landscape.[171]

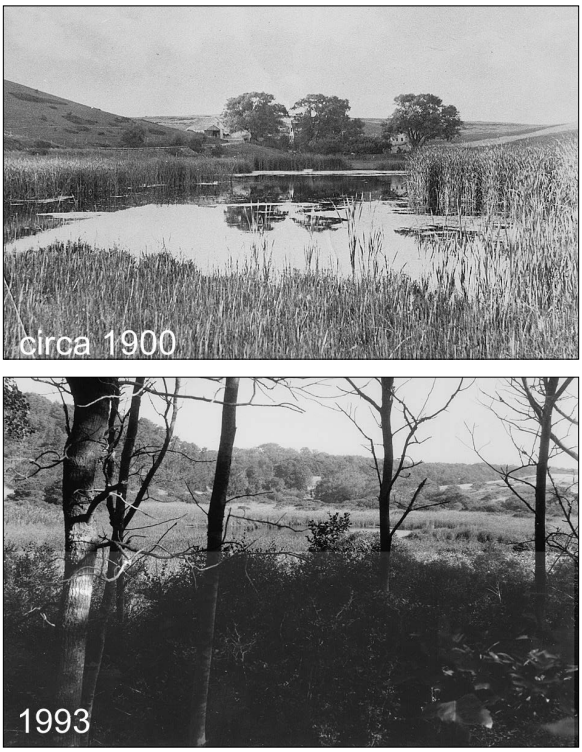
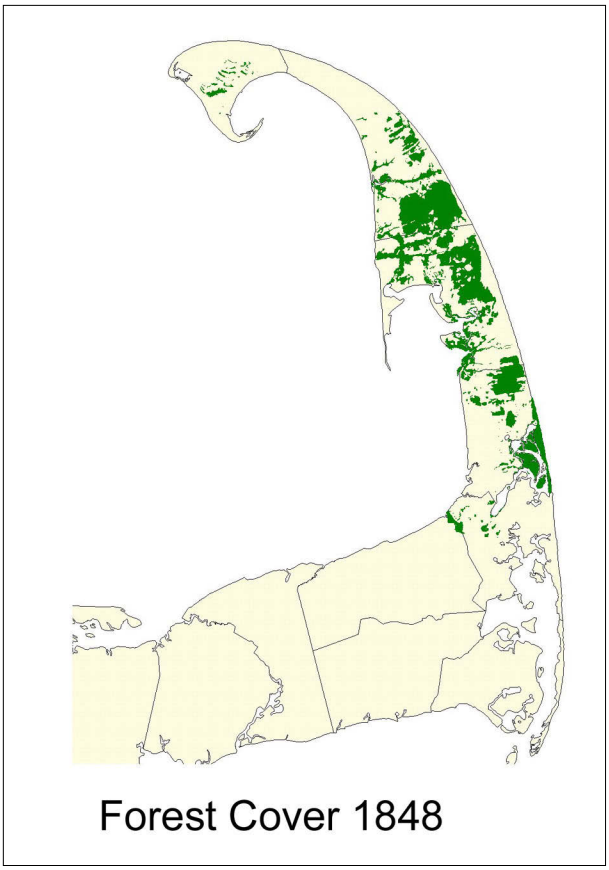


Figure 97: Windy Willows estate, 1900 and 1993.
(Courtesy: Truro Historical Society and CCNS/NPS)

Agriculture left an indelible mark on the landscape character of the Outer Cape. At the first public hearing on the creation of the National Seashore, Quincy Shaw, a wealthy landowner in Eastham argued that farming created the character of the Cape as it was then known, "As our hardy forefathers cleared the land…and tilled their farms, the vistas opened up. The sea could be seen across the rolling farmlands; and it was during the 1800s that the Cape we think of, as such, came into being."[172] To a significant degree, much of the "historic landscape character" described in the 1950s (as the creation of the National Seashore was being debated) was the result of an agricultural history that had come to an end by that time. The open landscape described by Shaw belonged to another era, and to another basic premise of the relationship between the people of the Outer Cape and their landscape. As tourism, not agriculture, became the most important economic foundation, residential use predominated. The more enclosed landscape of regenerating forests is the result of the new way of perceiving and using the land, essentially as tourists, not farmers. The densely wooded landscape blocked many vistas, and eventually resulted in a strikingly different visual landscape character than had existed in the nineteenth and early twentieth centu-

Figure 98: Vegetative succession. (Source: UMass)



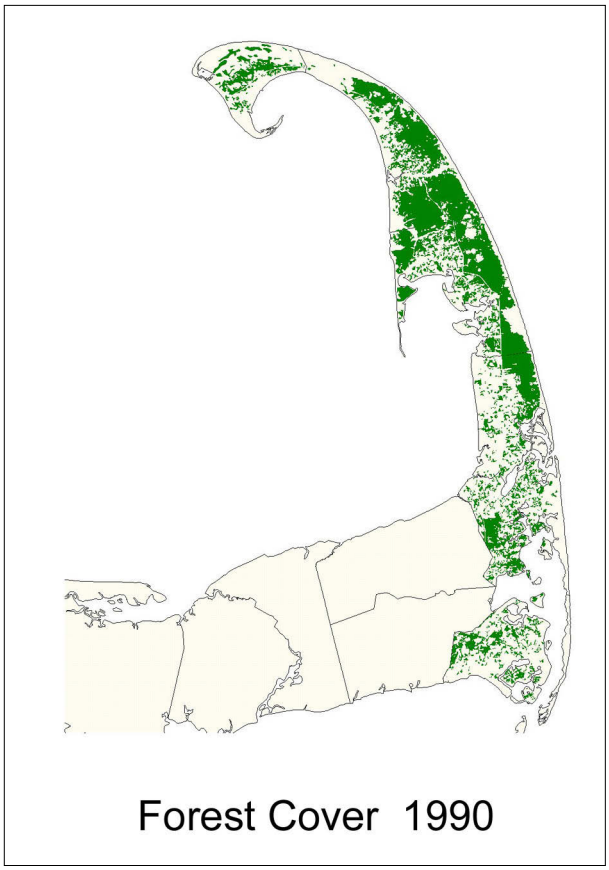


Figure 99: Forest cover on the Outer Cape, 1848 and 1990. (Source: UMass/MassGIS)

ries. However, the overgrown landscape also served to screen out and hide much of the new residential development of the postwar era. If the open, deforested conditions of earlier times were to return, the once open vistas would only be blocked with houses, instead of trees.

Fort Hill

Fort Hill is an area of land that overlooks the entrance to Nauset Harbor in Eastham. A map of the land around Nauset Harbor produced by Samuel de Champlain in 1605 depicts Native American agriculture in the area. Fort Hill is now part of the Nauset Archaeological District and other National Register listings and contains high concentrations of Native American shell and stone

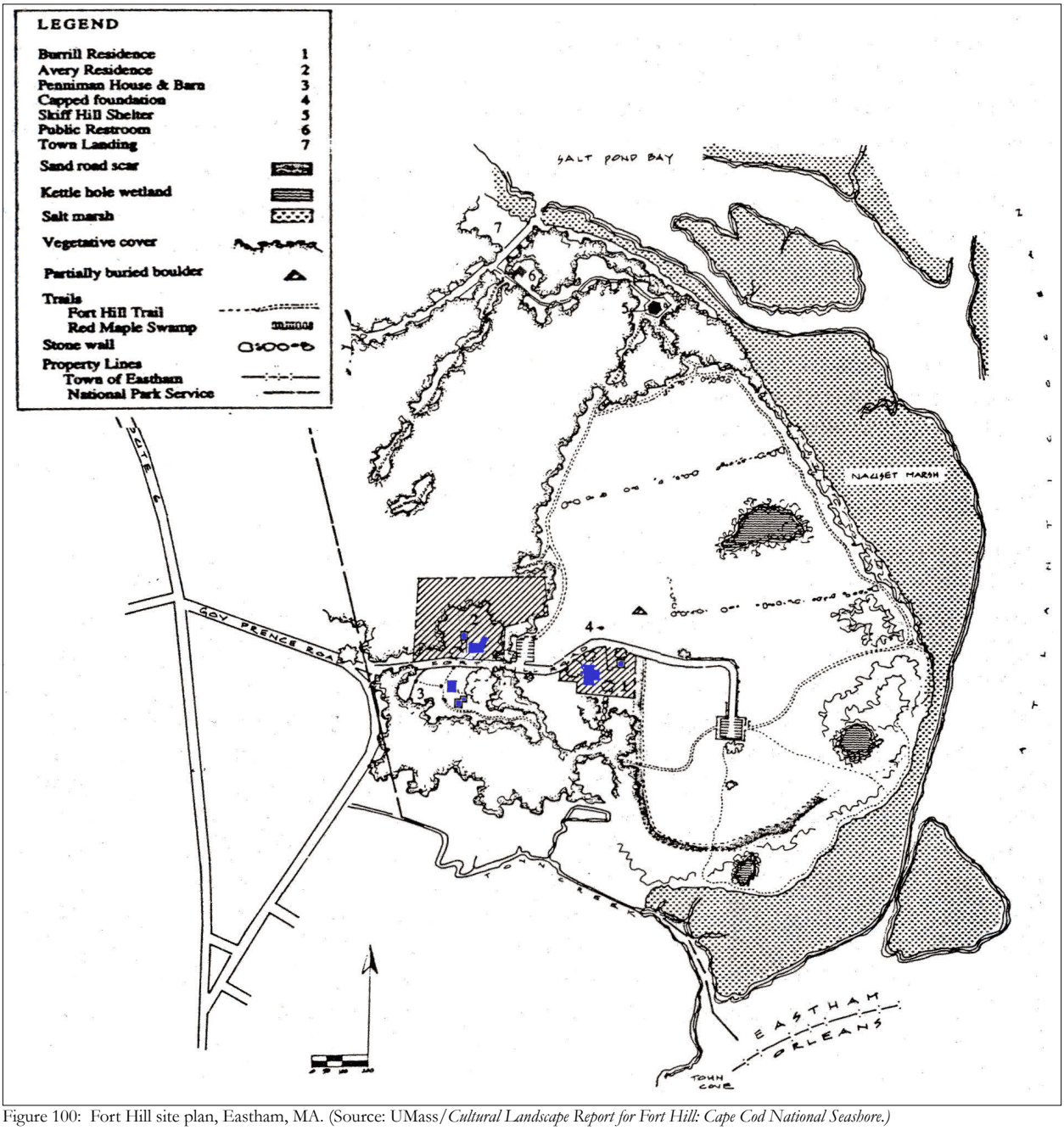


Figure 100: Fort Hill site plan, Eastham, MA. (Source: UMass/*Cultural Landscape Report for Fort Hill: Cape Cod National Seashore.)*

tool remnants. Today the 100 acres of the Fort Hill area covers open fields, salt marsh, and forests. The Captain Edward Penniman House, the Avery House, and the Burrill House are also here. The Penniman House is an impressive Second Empire structure, and is the only example of a whaling captain's residence within the boundaries of the National Seashore.[173]

The Fort Hill landscape is a powerful symbol of the agricultural past of the Nauset area, and the entire Outer Cape. The site layout of Fort Hill stands as a representation of traditional land practices that have ceased, but have left unmistakable marks on the landscape. The sweeping landscape dotted with visible remnants of agricultural activities requires regular burning or mowing to remain open. The Park Service's Cultural Landscape Report for Fort Hill recommends such treatment for maintaining the site and to prevent succession to forest.[174]

Figure 101: Postcard view, Pennimen house, Eastham, MA. (Courtesy: CCNS/NPS)

Figure 102: Fort Hill, Eastham, MA, 2003. (Photo: UMass)

I know a woman who has lived in Orleans for a long time. She talks all the time about how open the Cape landscape used to be. And it was like the English countryside with clear open hills and hedgerows and that sort of thing. And she just would love to see it return to that but I don't know how you do that economically.

Patricia Crow, Cape Conversation, 2003[175]

Figure 103: Fort Hill, Eastham, MA, 2003. (Photo: UMass)

Truro Highlands

Truro Highlands is a dramatic and windswept site that sits high on a cliff overlooking the Atlantic Ocean. Early European settlers used this fertile area for farming. In 1797 the Highland Light was built on the cliff and became the first lighthouse on the Outer Cape. In the nineteenth century the area was converted into a resort under the ownership of the Small family. The Highland Resort became a popular destination spot during the first period of tourism, and reached its peak between 1870 and 1920.[176]

Under early Park Service management, the site was primarily viewed as a "natural area" and many historic buildings and cottages were removed. In 1975 the Highland House and Highland Golf Links were listed in National Register of Historic Places due to their significance as an early resort. In 1996 the Park Service teamed up with the U.S. Coast Guard and the Truro Historical Society to fund the relocation of the 450-ton Highland Light back from the eroding cliff.

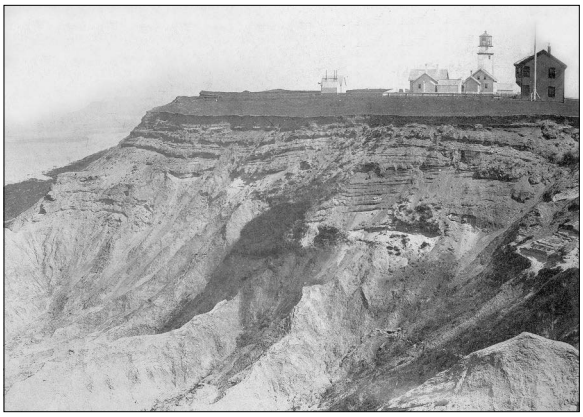


Figure 104: Highland Light. (Courtesy: Truro Historical Museum)

Figure 105: Highland Light and buildings, Truro, MA, 2003. (Photo: UMass)

Today the Truro Highlands Historic District is recognized as a landscape of distinctive character that links the history of farming on the Outer Cape to the area's popularity as a tourist destination in the late nineteenth century.

What I'd like preserved is the roses at Nauset Light, near the lighthouse, a field of roses. I'd like them to stay there and proliferate.

Eleanor Dumais, Cape Conversation, 2003.[177]

Cranberries

For many people, cranberry bogs epitomize agricultural endeavors on Cape Cod. Cranberries came to symbolize Cape Cod, since the region's acidic peat soils, ample water supply, and long growing season provided a perfect setting for the growth of wild and cultivated cranberries. The legacy of cranberrying still holds strong in the minds of many Cape visitors and residents and contributes to the special character of the Outer Cape. Before the 1830s, wild cranberry bogs were public property that residents of the Cape were free to pick. Cultivation of the cranberry began in 1816, when Captain Henry Hall of Dennis began transplanting wild plants and growing them on his property. As cranberrying became more popular and more profitable, towns established regulations on harvesting.[178]

In the early days of cranberry cultivation, the harvest was a community operation; children left school, and husbands, wives, grandparents, and neighbors lined up on their knees and combed the bogs by hand. As demand for cranberries rose, financially worthless acres of Cape Cod wetlands suddenly became valuable. Families were able to

And if you go out to the dunes you can see the wild cranberries still growing in the low, wet parts, which is just such an anomaly when you come over those dry hills and then all of a sudden there are cranberries growing there.

Patricia Crow, Cape Conversations, 2003[179]

Figure 106: Postcard, "Placing Cranberries in Trays." (Courtesy: CCNS/NPS)

Figure 107: Cranberry screening. (Courtesy: Truro Historical Society)

Figure 108: Postcard, Cranberry Workers, UMass Experimental Station, East Wareham, MA. (Courtesy: CCNS/NPS)

plant cash crops instead of subsistence crops, and cranberries provided economic opportunity as maritime industries declined. After the cranberries were harvested, local residents were allowed to "glean" the remaining berries in the bog, and this second harvest could provide a winter supply of cranberries.[180]

We used to glean bogs when I was a kid. After they commercially cleaned them… my sister and I would go out and my cousins and we'd basically take boxes and fill up several boxes from the gleanings, you know, the stuff that the commercial truck didn't pick up.

Bill Doherty, Cape Conversations, 2003[181]

With increasing commercial demand by 1890, cranberry operations soon began to employ immigrant laborers, including Cape Verdeans and Finns. These immigrant communities, particularly the Cape Verdeans, became strongly associated with the cranberry industry on the Cape.[182] In 1888 the Cape Cod Cranberry Growers Association was formed in Massachusetts. During the Depression, cranberries were a crucial source of income for Cape Codders.[183] But although commercial cranberrying was significant for a time on the Outer Cape, Plymouth County and the Upper Cape produced far more at the industry's height.

Figure 109: Children harvesting cranberries.
(Courtesy: Truro Historical Museum)

Figure 110: Postcard, "Harvesting Cranberries on Cape Cod."
(Courtesy: CCNS/NPS)

Pamet Cranberry Bog

The Pamet Cranberry Bog is located within the National Seashore in North Truro and covers twenty-seven acres. Like many Cape Cod cranberry bogs, this swampy land was once covered by a forest of red maple, and much of it has reverted to that condition. The Pamet bogs are thought to have contained cranberries throughout the last 7,000 years and were likely used by Native Americans.[184] The earliest records specific to the Pamet Cranberry Bog include a map of the area drawn in 1848 that depicts the basic outline of the bog, as it appears today, with the open pond evident in the southeast corner. The bog house is situated on the main tract north of the road between the two cranberry bogs. Historically the bogs were open and full of cranberries, and the area surrounding the Pamet River was clear and used for grazing animals. The bog was first cultivated for cranberries by James F. Howe when he purchased the site in the late 1880s and hired Clarence Parker to manage the cranberry business. The bog was enlarged and passed from company to company and from family to family until

the land fell into disuse. The bog produced an all-time high of 166 barrels of cranberries from the 1953 harvest, but ten years later commercial production ceased when it was purchased by the Park Service.[185]

Currently there are two cranberry bogs at the Pamet site covering about twelve acres. Much of the rest of the site consists of rolling uplands that afford views of the surrounding countryside, and from some sections, glimpses of the ocean. The upland soil is sandy with a very light top-soil covering. Groundcover consists of a vine called hog cranberry, sparse wild grass, beach plum bushes, and some sections of scrub oak and pine. Today the site is heavily overgrown with several types of successional vegetative communities, and the upland area around the bog is forested with pitch pine and other species. Numerous walking trails traverse the site, which is interpreted as a cultural landscape.

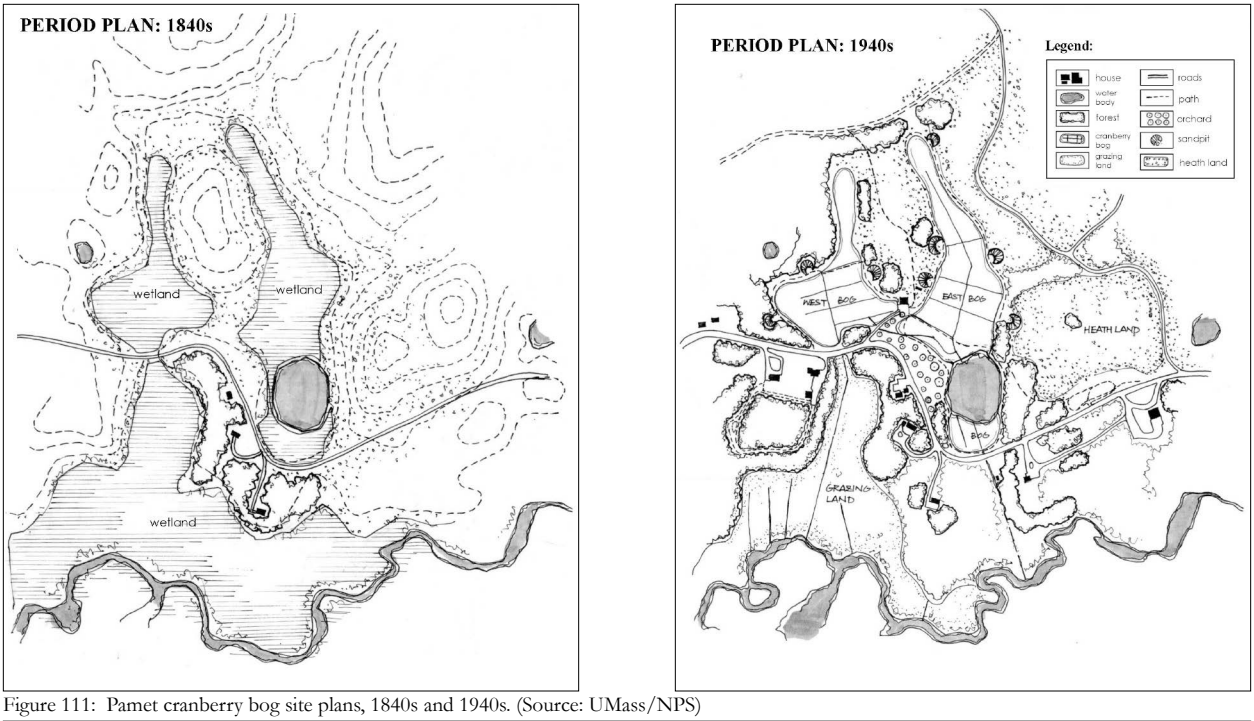


Figure 111: Pamet cranberry bog site plans, 1840s and 1940s. (Source: UMass/NPS)

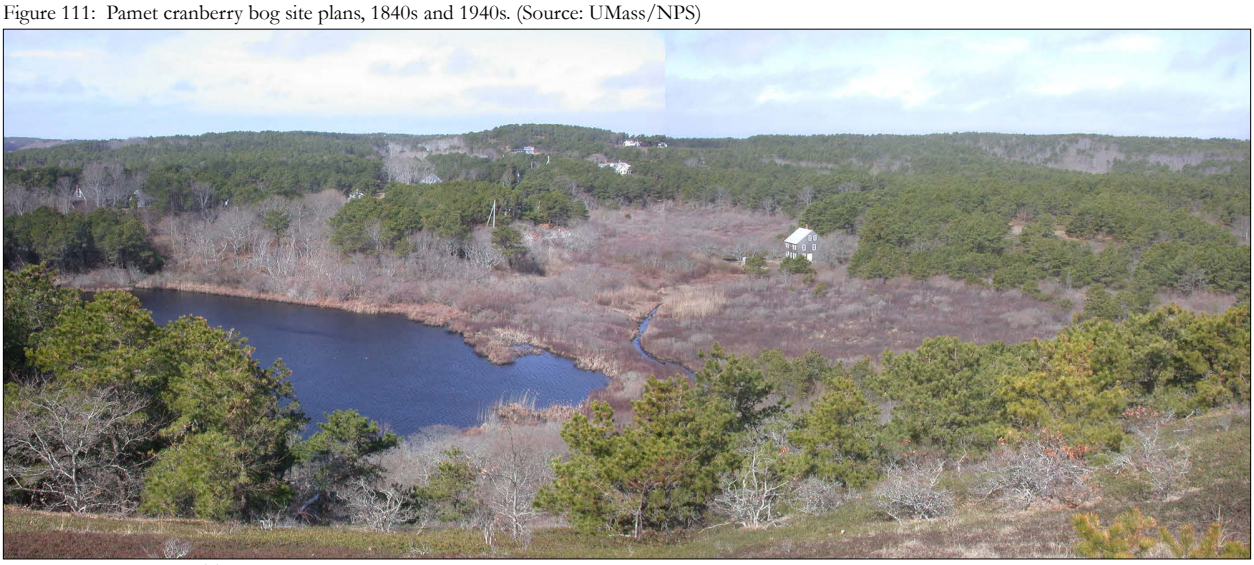


Figure 112: Pamet bog, Truro, MA, 2003. (Photo: UMass)

I know people who go out cranberrying still on a regular basis, pick their cranberries and then they'll make cranberry crisp and cranberry cake. And it's an important and integral part [of life on the Outer Cape].

Kaimi Rose Lum, Cape Conversations, 2003[186]

Figure 115: Pamet bog, Truro, MA, 2003. (Photo: UMass)

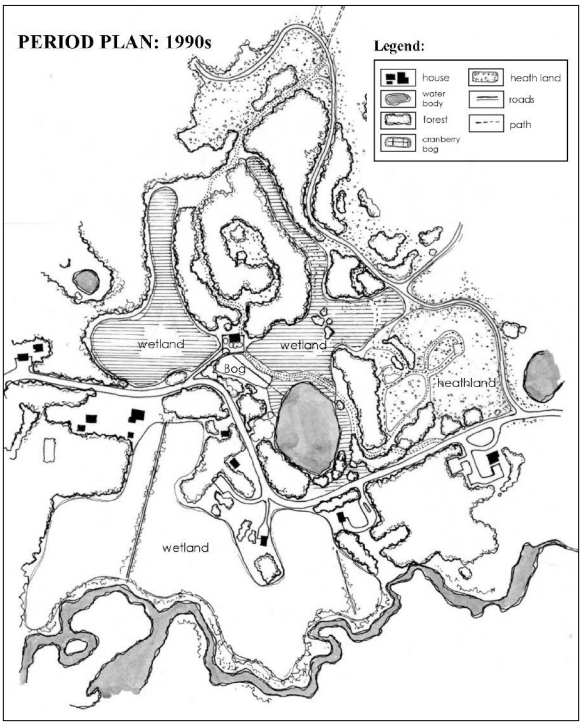


Figure 113: Pamet Bog site plan, 1990s. (Source: UMass/NPS)

Figure 114: Pamet bog house, 1912. (Courtesy: Elizabeth Haskell as depicted in *Images of America, Truro*)

Berry Picking

Picking wild and cultivated berries is an old tradition on the Outer Cape, and one that is an appreciated aspect of the character of the area. Following cranberry harvests, neighbors were permitted to pick whatever berries remained. The tradition of berry gleaning relates to older traditions of berry picking. Generations of residents harvested berries for personal consumption or to supplement their income by selling berry products such as jams, pies and scented candles to tourists on roadsides. Berrying brought Cape Cod residents into close personal contact with their surroundings, forming economic bonds as well as specialized local knowledge of the landscape. The purchase of these items was also a desirable way for visitors to involve themselves in the lifeways of the Cape.

During the Senate Hearings regarding the creation of the National Seashore, Dr. Madelane Winslow raised the importance of access to wild food sources:

> *Many families here augment their seasonal wages, earned during the summer months, by picking the beach plums, blueberries, Rosa rugosa, pine cones, and bayberries…Some of the berries are*

> *shipped directly to wholesalers for use in industrial factories…The fruit berries are made into jellies by individuals and offered for sale on their premises. In many instances the jellies are used to stretch cost-of-living dollars in their own food budgets.*[187]

Dr. Winslow went on to mention the exported quantity of certain wild berries, citing an average of one to two tons of bayberries every year.[188]

Some feared the creation of the National Seashore would limit access to wild berry crops, thereby endangering this traditional livelihood and local cottage industry. Although the Park Service prohibits collecting wild berries for commercial use, residents are permitted to harvest berries for personal consumption, making pies, jams, and other homemade specialties. This connection to the bounty of the landscape holds strong in the memories of many Cape residents, although it is not as popular as it once was. Successional forest growth is slowly overtaking the habitat and reducing the number of wild berries available for picking. Additionally, "ticks have put a crimp on berry picking" as one resident of Eastham stated.[189]

Figure 116: Woman with berries, Hawk Mountain. (Courtesy: Hawk Mountain Sanctuary)

I walk a path through scrub pine and maple to one high berry bush, half grey and brittle, and half blooming with berries. As I pick, I day dream: blueberry pancakes, blueberry pie, blueberries floating in a bowl of cream. I'm greedy for blueberries.

Necee Regis, *Boston Globe*, 2003[190]

Figure 117: Jam stand, Wellfleet, MA, 2003. (Photo: UMass)

Conclusion

The Forests and Farms of the Outer Cape are a complex landscape mosaic that represent hundreds of years of cultural activities and natural processes occurring together. These landscapes clearly reflected the patterns of life of the residents in the past, as they do today. The open meadows and grazed lands seen in nineteenth-century views belonged to an agricultural life that has been all but abandoned. The wooded landscape more typical of today indicates that most residents make their livings in very different ways. Today's wooded landscape is essentially a residential landscape, not a productive one.

The most dramatic change in landscape character of the Outer Cape over the last 100 years is the ratio of open farmland to pine forests. The overall sense of an open landscape-with frequent vistas to the sea-has all but disappeared from many areas of the Outer Cape. In its place is a more intimate, wooded landscape, in which the sense of enclosure is punctuated by only infrequent openings offering a view. It may be just as well that the landscape is more visually enclosed; if it were open it would reveal the extensive residential development of more recent decades.

Heathlands and other landscapes associated with historical agriculture also continue to diminish, and with them cherished activities and pastimes, such as berry picking. But the scale and extent of this landscape change make it impossible to do much to prevent it or alter its course. Certain important vestiges of agriculture remain, such as Fort Hill and the Truro Highlands, and these are being actively managed as significant cultural landscapes. In general, however, it is quite impossible to maintain an agricultural regional character where tourism, not agriculture, is the principal economic foundation. With or without the creation of the National Seashore, the agricultural landscapes (and associated ways of life) that were disappearing in the postwar period could not be perpetuated economically.

The management of existing heathlands, forests, and other former agricultural areas of the Outer Cape, however, depends on understanding the effects of historical land uses. The preservation of cultural activities associated with agricultural traditions also is a desirable objective for many Outer Cape residents. In both cases, the management of cultural landscapes such as Fort Hill and the Truro Highlands will be vital laboratories and examples.

This is a neighborhood of sand roads. A mere one lane in width, they can be inconvenient for cars, as when one must back up to a widening to let another pass. Bust they are soft, sinuous, undulating-easy on the eyes, easy on the legs.

Brent Harold, *Wellfleet and the World*, 2003.[191]

Getting Around

Figure 118: Aerial view, Route 6, Eastham, MA, 2003. (Copyright: PANDION)

How people circulate through the Outer Cape landscape influences their experience of it, and their perception of character. Getting Around examines the history of railroads, highways, traffic, and roadside development, as well sand roads and drives, and other experiences of moving from here to there on the Outer Cape. Route 6, often choked with traffic and lined with roadside development, nevertheless represents the "front door" of the Outer Cape. It is the one Outer Cape landscape that every visitor and resident is likely to experience on a daily basis.

Circulation on the Outer Cape

Route 6 follows the topographic spine of the Outer Cape and it is the primary conduit for most movement on the peninsula. Shifting from a limited access highway to a high-speed connector road at the Orleans rotary, Route 6 is fed by numerous small collector roads that radiate out towards the east and west. The road has several distinct zones, each with its own feel. In Eastham, it carves through the town center, stopping at several major traffic lights and passing by many twentieth-century motels and newly constructed commercial clusters. In places where old homes still exist next to the road, formidable wooden fences shield the view, forming a disconnection between road and roadside. In Wellfleet and Truro, both sides of the highway are often bordered by thick woods interspersed with the occasional business or motel. Heading towards Provincetown, drivers are treated to sublime vistas of the bay to the west and the majestic spire of Pilgrim Monument in the distance. It is here, as the road traverses the narrow causeway separating Pilgrim Lake from the waters of the bay close to the west that Route 6 seems to be swallowed up by the encroaching ocean.

A network of roads and sand drives, often following hollows or "pamets," link Route 6 to the Ocean and the Bay. These small back roads lead to branching networks of subordinate roads, composed of either short straight spurs, as in the neighborhoods of Eastham, or more curvilinear routes that follow the topography, as in Wellfleet. Typically these side roads have narrow right-of-ways, dense roadside forest cover, and curving alignments.

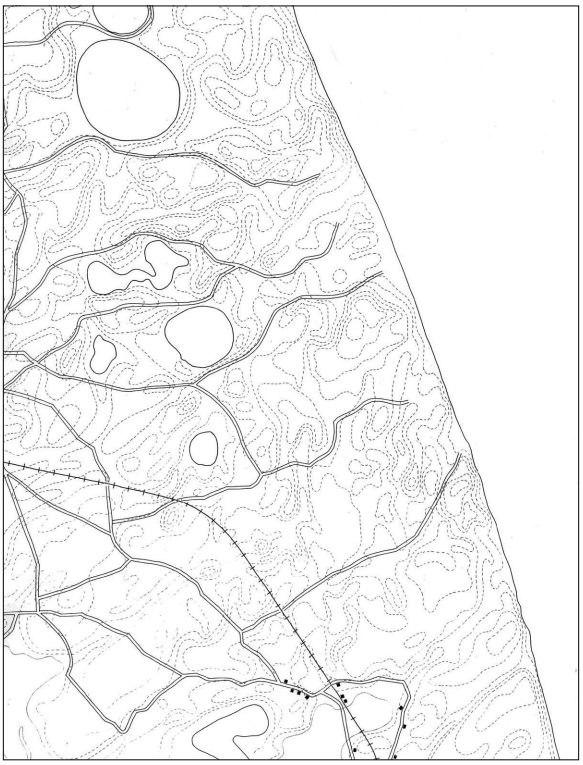


Figure 119: Wellfleet, MA, 1893. (Source: UMass/UNH)

Figure 120: Name signs on Thoreau Way, Wellfleet, MA, 2003. (Photo: UMass)

Sand Roads and Drives

One of the landscape features that lends a rustic, casual feel to communities of the Outer Cape is the presence of sand roads and shell drives. By their very structure, sand drives force drivers to cruise along slowly and take in the view. These are narrow, rural roads, winding and flecked with pebbles. Their narrow width enables pitch pine and oak trees to grow close to and overhang the road, creating an intimate sense of enclosure, a defining aspect of the Cape's landscape character. After a long journey across miles of highway and traffic in a packed car, the simple act of turning onto a sand drive leading to a cottage or campsite marks the beginning of vacation for many visitors. At that moment one has truly arrived and left the cares of the frenetic, paved world behind. These sand passageways are continuously affected by the elements and must be regularly maintained, but their existence is integral to the special character of the seaside homes on the Outer Cape.

Figure 121: Sand drive, Wellfleet, MA, 2003. (Photo: UMass)

Figure 122: Sand road, Wellfleet, MA, 2003. (Photo: UMass)

CM: And now we have a thing going because of the police 911. They have to number all your houses. And every street has got to have a name. Now in Wellfleet we have a lot of places called Way...Way 63, Way 10, 105, Way whatever. We don't have street names. Well it gets confusing for the emergency vehicles...so [they] want to have every street named and every house numbered. Well it's just typical Cape Cod to put your foot down and say, no I'm not going to do it. So they're trying to mark every house with a number. Good luck to 'em.

ES: That doesn't seem like a bad thing to do.

CM: No, it doesn't except people just like to think that they're still living very rural.

ES: But they're not.

CM: No, they're not. They're not. You're right. They're not. But they like to think that.

Exchange between Cyndi Moe and Edward Sabin, Cape Conversation, 2003.[192]

Figure123: Shell driveway, Wellfleet, MA, 2003. (Photo: UMass)

Hollows

Hollows, or "pamets" as they are sometimes known, are long valleys, usually perpendicular to the central spine of the Outer Cape. The hollows also lead to the Great Beach. In some cases they create a break in the bluffs and form natural access points. Their fresh water streams and shelter from the wind made them excellent choices for early houses and homesteads sites. Today they still feature winding rural roads and older farms and cottages. The roads often derive their names from early settlers: Newcomb's, Cahoon's or LeCount's Hollows, for example.

Railroads

Prior to the mid-nineteenth century, access to the Outer Cape was usually by boat or stagecoach. The railroad first reached Sandwich in 1848 and extended to Provincetown in 1873.[193] Small clusters of buildings sprung up around train depots and began to define new inland town centers. The railroad also made the Outer Cape more accessible to tourists, which helped spur the rise of the first large resorts on the Outer Cape such as the Highland House and the Chequessett Inn. But the railroad era on the Outer Cape was relatively late and short lived, and automobiles and improved highways began to replace them in the early twentieth century. Today there are no active railroads on the Outer Cape.

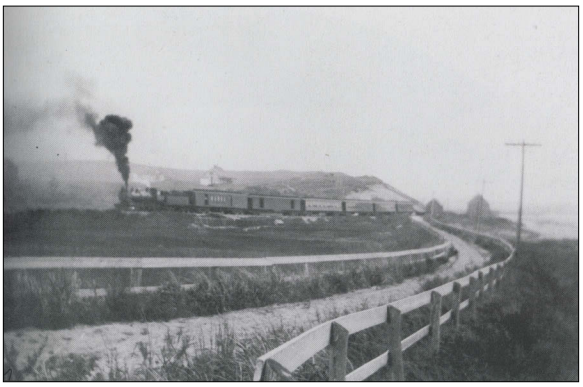


Figure 124: Railroad, Truro, MA, 1910.
(Courtesy: Diana Worthington as depicted in *Images of America, Truro*)

Roads

The earliest roads on the Outer Cape most likely began as a series of Native American trails. The idea of roads or "highways" as we think of them today contrasts markedly with the pre-1775 era concept of the word "highway" that merely referred to a right of way to pass over parcels of land. Travelers often had to stop to open pasture gates in the middle of the road.[194] Up until the end of the eighteenth century, most of the roads within Outer Cape towns were no more than unmapped, rudimentary paths, serving as informal passageways for scattered inhabitants traveling to local schools and meetinghouses. Many transportation needs during this time were made by boat. Early records indicate that these towns were loosely connected via a common way serving as the postal route, sometimes referred to as the "County Road" or "Kings Highway." By 1727 this road, composed of a patchwork of local throughways, extended all the way to Provincetown.[195]

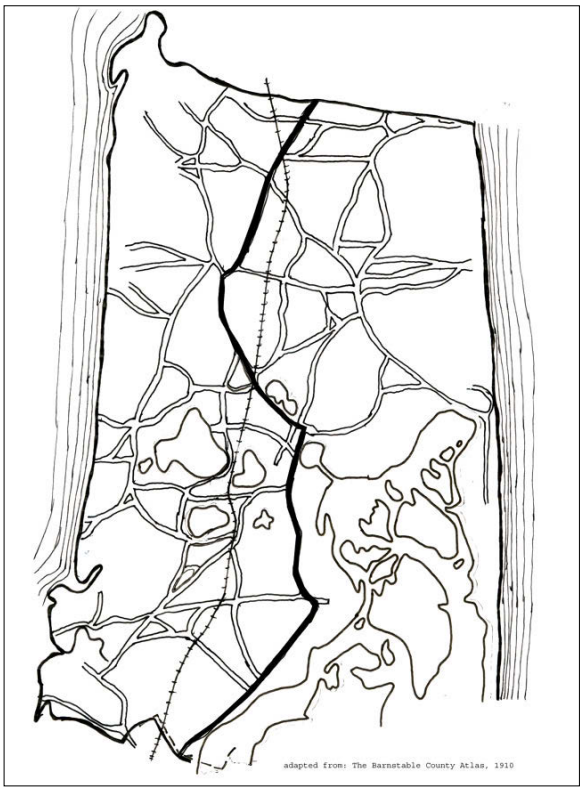


Figure 125: Eastham roads, 1910.
(Source: UMass based on map in Barnstable County Atlas)

For many years roads were poorly maintained as upkeep was left to the whims of individual towns that dedicated scant resources to the effort. Road deterioration was a constant problem. Roads running north from Truro reverted to paths in the endlessly shifting dunes, and as late as the 1830s poor road conditions stopped stagecoaches traveling down the spine of the Cape at Orleans. Although the Old King's Highway, running from Bourne to Provincetown became a hard-surface road by the late 1890s, many side roads on the Cape remained dirt or sand until after World War II.[196]

Whoever travels between Truro and Provincetown, though he goes up hill and down dale continually, runs his wheels over the virgin sand; for even the stage-coach, that plies daily backward and forward leaves no track that lasts longer than an hour.

W.H. Bartlett, *The Pilgrim Fathers of the Founders of New England in the Reign of James the First*, 1953[197]

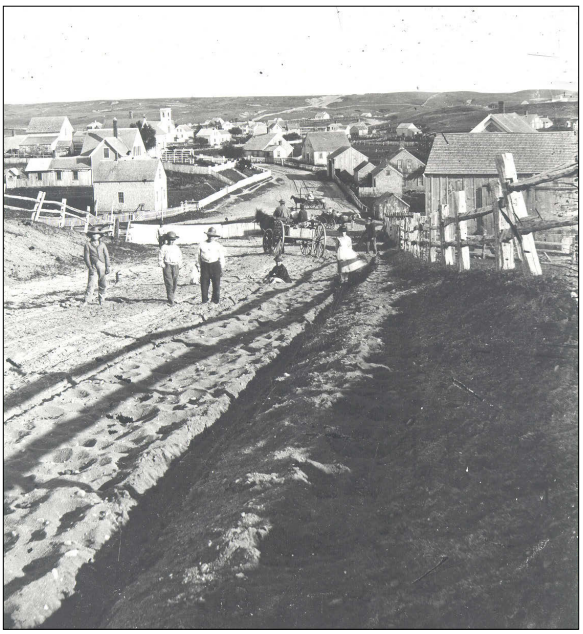


Figure 126: County road, North Truro, ca. 1890.
(Courtesy: CCNS/NPS)

Improved road conditions coupled with the construction of new bridges across the Cape Cod Canal in 1935, effectively ended the isolation of the Outer Cape.[198] By the 1950s the Mid-Cape Highway stretched incrementally closer to the Orleans rotary, connecting traffic that crossed the Sagamore Bridge with the Outer Cape. With other road improvements such as Route 3 coming south from Boston, the area was now within one day's drive of nearly 50 million people living along the Atlantic seaboard, causing one Cape Cod resident to remark, "God help us…if they all arrive at the same time."[199]

The popularization of the automobile affected the landscape of the Outer Cape more than any other social or technological trend since the days of salt works and whaling. The slow nature of horse and train travel limited access and encouraged long vacation stays. Affluent families often "spent the season" of July and August. A lack of mobility on the Outer Cape also precluded much travel away from the hotel resort communities where most vacationers stayed. In contrast, the influx of automobile traffic encouraged roadside development and empowered vacationers to leave their vacation accommodations to explore the region's shops, restaurants and distant beaches.

In the 1950s motor courts booming with tourists became a familiar roadside feature along Route 6. Builders looking to make a quick profit erected strip developments and subdivisions along the road. Many of these structures were close to the road and followed contemporary Modernist architectural trends, employing cost saving construction techniques and materials. The accompanying gas stations, mini-golf courses and food stands that catered to the crowds, were also set fairly close to the road with modest parking lots.

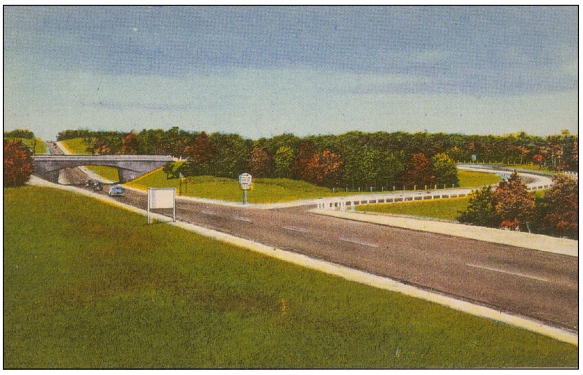


Figure 127: Postcard, Mid-Cape Highway.
(Source: James O'Connell, *Becoming Cape Cod*)

Route 6 Today

Today the Route 6 corridor remains the main transportation route on the peninsula, and virtually everyone who visits or lives in the region passes through it regularly. Drivers exiting the limited access highway at the Orleans rotary, leave a fast-paced, guard-railed highway experience filled with little more than exit signs and surrounding forest behind them. After passing the rotary, Route 6 changes into a road that cuts directly through communities and allows for sightseeing. Yet, as the Outer Cape becomes increasingly devel-

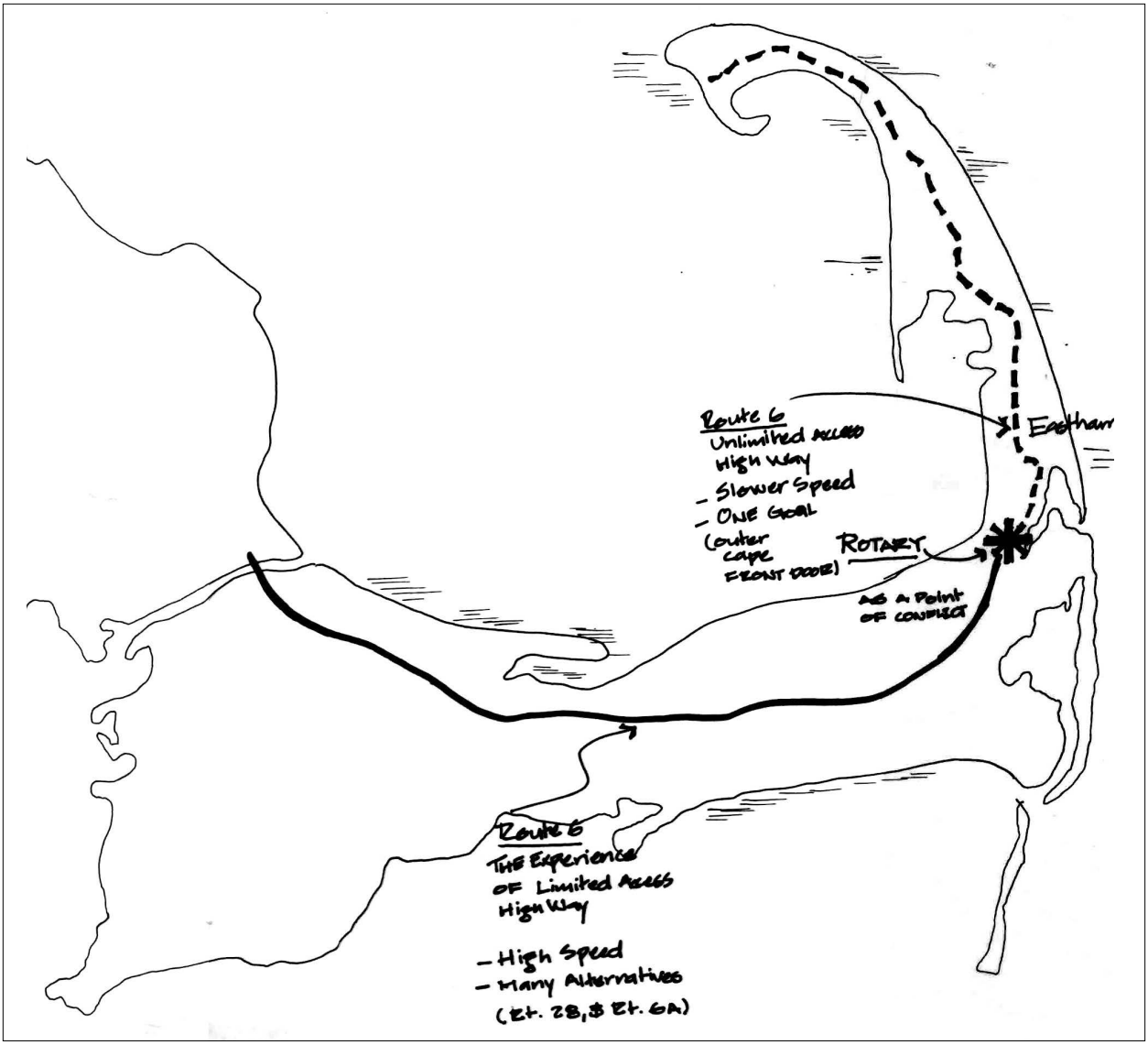


Figure 128: Route 6, Eastham, MA, 2003. (Source: UMass)

oped, and tourism continues to rise, this road grows ever more congested by legendary traffic tie-ups and jams. During peak season, Route 6 is often transformed into a landscape of chrome and glass, shrouded in exhaust fumes simmering in the heat.

The high traffic volumes have attracted a continuous strip of commercial development from Orleans to Wellfleet, and in parts of Truro. In fact, the only significant undeveloped stretches of the corridor are those protected by the national seashore in Wellfleet, Truro, and Provincetown. For the most part, the character of the existing development recalls the mid-century era of independently owned small businesses, roadside cottage colonies and motels. More recently, hotels, such as the full-service Sheraton Four Points Hotel in Eastham, and shopping clusters styled after colonial architecture and sited off the main road exemplify a new scale of development. These commercial clusters were constructed in an effort to guide development architecturally and to limit the number of curb cuts along Route 6. The mid-century structures that remain, however, help frame the road and provide most of the setting for the continuous line of summer traffic crawling by.

Route 6 presents a common transportation dilemma: it needs to expand to accommodate current traffic volumes but expansion will attract more traffic. In addition, land use regulations on the Route 6 corridor allow for even more commercial uses in the future. Maintaining landscape character along this corridor as traffic increases and new commercial uses appear will be a major challenge.

Figure 130: Route 6, Eastham, 2003. (Courtesy: CCNS/NPS)

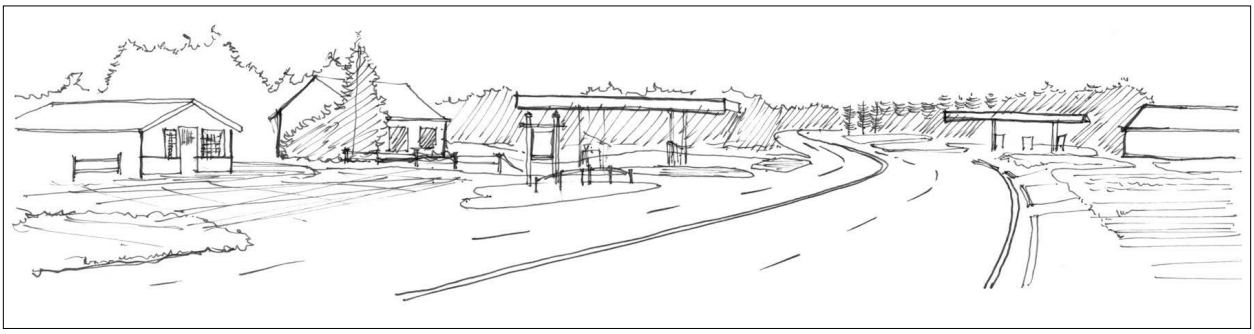


Figure 129: Route 6, Eastham, MA, 2003. (Source: UMass)

Conclusion

Different ways of Getting Around on the Outer Cape represent modes of perception as much as landscape features. As automobiles became the dominant, and then virtually the only, means of getting to and around in the course of the twentieth century, the implications were profound not only for landscape features (such as highways and roadside development), but also for how residents and tourists alike most commonly experience the landscape: through a windshield. This shift coincided with the dominance of an economy based on tourism, an increasingly wooded (rather than agricultural landscape), and an increase in population and new services those residents required.

Features such as sand drives should be considered for the mode of perception and experience they offer as much as their visual presence. New modes of perception, such as the bikeway and potentially increased ferry services, will probably grow, and enrich what has been an often too monotonous experience of automotive highway travel.

Because of the near universality of certain experiences of the Outer Cape-such as the Route 6 corridor-such landscapes should not be dismissed as "already spoiled." Controls over the design and location of new development will have enormous impacts on the perception of regional character in such heavily traveled corridors. Careful study of historical patterns of roadside development may offer guidance for future strategies to protect-or ameliorate-this dimension of landscape character.

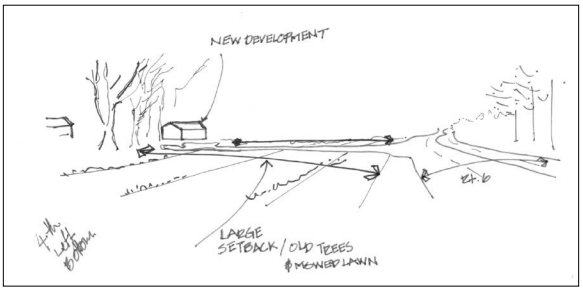


Figure 131: Building set backs, Route 6, Eastham, MA, 2003. (Source: UMass)

Figure 132: Sheraton Four Points Hotel, Eastham, MA, 2003. (Photo: UMass)

...these homes have history dating back nearly 300 years, and represent a culture and way of life which is unique and a truly significant part of the charm of the Cape.

John Worthington, Truro, 1959[200]

Homes on the Outer Cape

Figure 133: Aerial view, houses on bay shore, 2003. (Copyright: PANDION)

Few landscape features bear the imprint of Cape Cod's cultures, climate, and geography more than the region's distinctive architecture. The residential architecture of the Outer Cape extends beyond the signature Cape Cod cottage and includes an assortment of styles that reflect the history of the region. The Outer Cape's early historic architecture encompasses a number of lesser-known, vernacular styles of houses, in addition to many churches, town halls, hotels, banks, and stores. These structures are often closely sited around narrow streets or town squares. Historic residences are often tucked into hollows along unpaved, traditional sand roads and drives, or on farmsteads. Many of the larger historic homes provide important examples of the Georgian, Greek Revival, Federal, Italianate, and Shingle styles on the Outer Cape. Over centuries buildings in different architectural styles have been juxtaposed in such a manner that the older sections of Outer Cape towns are a menagerie of structures in scale with one another. The result is a richly textured and delightfully varied experience that is somehow unified and harmonious.

Twentieth-century residential architecture on the Outer Cape is epitomized by cottage colonies in both the classic Cape Cod cottage style and the Modernist style. Much of the architecture and construction of the 1950s contrasted with more traditional patterns of Cape Cod development, and raised the concern that the regional character that had made the area famous would disappear as a result.

In recent years, modest cottages are being torn down and replaced by sprawling residences that sometimes feature gated driveways, atriums, and Palladian windows. Other new homes represent a more successful effort to blend well into the surrounding landscape by maintaining a low profile, simple rooflines and traditional materials. The past several years have seen rapid residential development on the Outer Cape. Eastham and Orleans have seen much of their landscape converted into housing as shown dramatically on maps depicting land change over the past century.

There's not enough recognition of accelerated loss of good quality, old housing stock being replaced by large undistinguished, poorly designed, over-scaled buildings. And not enough people recognize that this is a major problem that's right there on the horizon.

James Hadley, Cape Conversation, 2003[201]

Figure 134: Cape Cod cottage, Wellfleet, MA, 2003. (Photo: UMass)

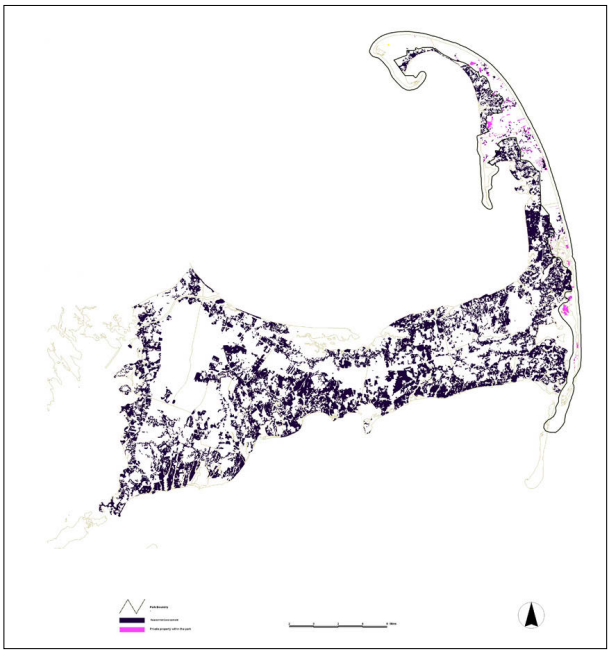


Figure 135: Residential development on Cape Cod, 1951 and 1999. (Source: UMass/MassGIS)

Settlement Patterns

Settlement patterns and architectural styles on the Outer Cape are a product of historical trends in maritime industries, farming and tourism. In the eighteenth century Outer Cape residents clustered their dwellings around protected bayside harbors, or in hollows, shunning the harsh landscape of the open sea and the incessant wind. These early structures were nestled into the landscape and certain buildings seemed to fit better than others. Already in the mid-nineteenth century, Thoreau wrote that "generally, the old-fashioned and unpainted houses on the Cape looked more comfortable, as well as picturesque, than the modern and more pretending ones, which were less in harmony with the scenery, and less firmly planted."[202]

The remoteness of early Outer Cape communities forced residents to form tight-knit social groups within their towns. For much of the nineteenth century, those who did visit considered it a wild and remote setting. Historian James O'Connell notes that when Thoreau first visited the Cape in 1849, it was precisely because "it was so far off the beaten track."[203]

The success of the maritime industries not only provided income for small, cottage dwellings, but also supported the construction of many grand homes that were most often located in town centers. As the wealth of New Englanders increased, and the railroad extended to the Outer Cape, this remote quality began to draw summer vacationers hoping to escape the bustle of industrial cities.

Between 1870 and 1930 increased access due to rail transportation spurred a boom in tourism. The comforts and services of resort hotels such as the Hotel Mattaquason in Chatham, the Chequesset Inn in Wellfleet, and the Highland House in Truro drew many wealthy urban dwellers that began to value the Outer Cape as a place to spend the entire summer. They also purchased the declining former homes of sea captains,

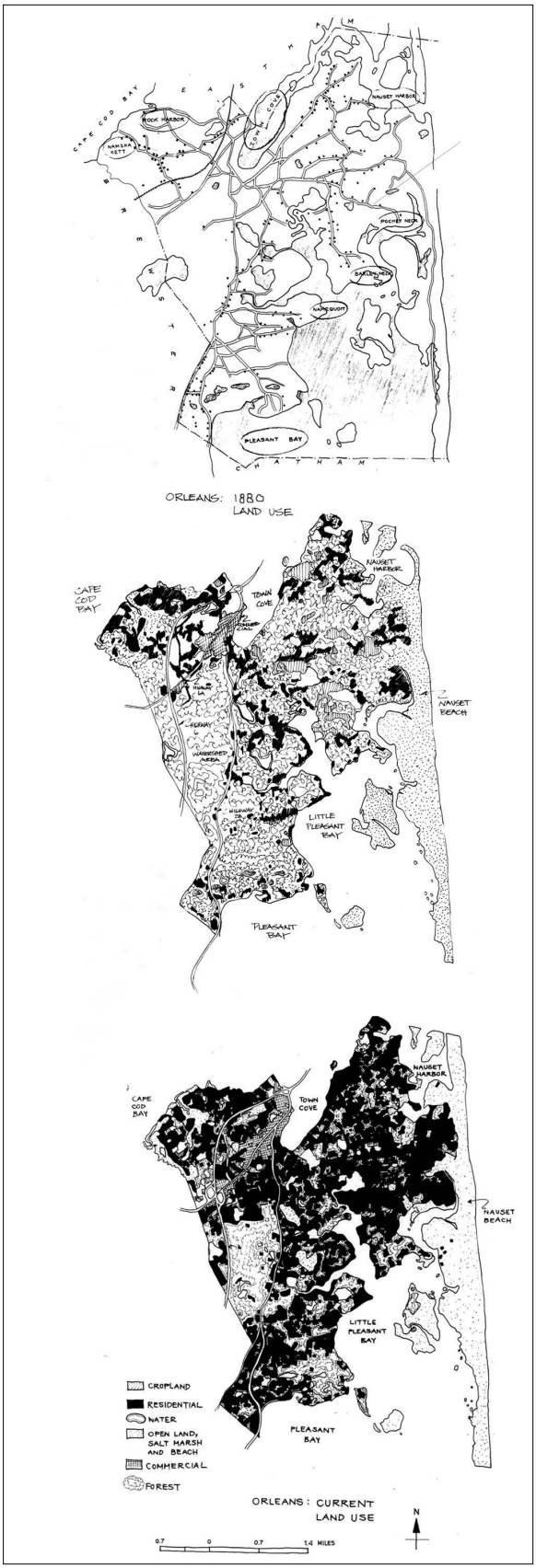


Figure 136: Land use change, Orleans, MA. (Source: UMass/MassGIS)

Here was a kind of soft scrubbiness in the landscape, and a sweetness begotten of low horizons, of mild air, with a possibility of summer haze, of un-regarded inlets where on August mornings the water must be brightly blue. Ransom had heard the Cape was the Italy, so to speak, of Massachusetts; it had been described to him as the drowsy Cape, the languid Cape, the Cape not of storms, but of eternal peace. He knew that the Bostonians had been drawn thither, for the hot weeks, by its sedative influence, by the conviction that its toneless air would minister to perfect rest…They wanted to live idly, to unbend and lie in hammocks, and also to keep out of the crowd, the rush of the watering-place.

Henry James, *The Bostonians*, 1886.[204]

Figure 137: Highland House, Truro, MA. (Courtesy: Truro Historical Museum)

and other residences.[205] Outer Cape towns remained a mix of stately homes of the wealthy and the more modest homes of the working people.

Cape Cod Cottage

The Cape Cod cottage was one of the predominant residential home styles from the seventeenth century until the 1830s. The Cape Cod cottage's functional, weathered and unadorned appearance became a trademark. When people daydreamed about vacationing on the Cape, they often envisioned a "cottage," snug and simple, lying low on the land. A typical cottage had a low profile, one and a half stories, with weathered, wood shingle exteriors, and a simple porch. Cottages were often surrounded by saltspray rose, beach plum, and other untamed vegetation clinging to the sandy soils and the weathered shingles.

By the twentieth century, staying in such a cottage typified vacationing on Cape Cod. Many cottages (whether historic structures or built in the twentieth century for tourists) were un-

Figure 138: An Outdoor Shower, Wellfleet, MA, 2003. (Photo: UMass)

insulated, unheated, and closed for the winter. Walls were thin and children often slept in the unfinished loft. The cottage represented the experience of a no-frills summer on the Outer Cape, redolent with salty ocean breezes, and filled only with the sounds of a screen door banging shut, or the cry of seagulls overhead. An outside shower, and a small clothesline supporting brightly colored beach towels and swimsuits might have completed the image. Everything about such a cottage suggested that Outer Cape life was meant to be lived outdoors. It offered an uncomplicated lifestyle, away from the extravagances and comforts of home. The embodiment of this dream still exists today, although many quintessential cape cottages have been refurbished and enlarged until they seem no different from a standard suburban home.

During the Depression and post-World War II era, the Cape Cod cottage assumed an iconic position for residential construction all over the country. The charm of the Cape Cod landscape, in this case, directly contributed to the adoption of the Cape-style house in tract subdivisions. Cottage colonies offered a quaint yet effective way to meet the demand for vacation homes and rentals in the 1950s. One of the first and most famous Cape cottage colonies opened in 1931 on Beach Point in North Truro. At the time of the National Seashore's creation, modernized Cape Cod cottages were still being built both as homes and vacation cottages on the Outer Cape.

A Cape Cod house, with all its quaint and subtle charm, has developed an identity that can't be mistaken. The shingles, the shutters, the white picket fences, the low eaves with simple doorways and windows snuggled up under them - all lend to the charm of the infinitely livable houses found on Cape Cod.

"A Genuine Cape Cod House",
Better Homes & Garden, 1938.[206]

Figure 139: Aerial view of Day's cottages, North Truro, MA, 2003. (Copyright: PANDION)

Ocean View Drive

In the nineteenth century and earlier, residential development on the Outer Cape was concentrated on the bay side and in hollows or other sheltered areas. The ocean side was considered less desirable, because of the wind and occasional devastating weather. The lifesaving stations, dune shacks, and lighthouses were the only visible cultural presence along the Great Beach.

The attraction of the Great Beach for recreation increased in the twentieth century, especially after World War II. Shacks and summer vacation homes were beginning to make their presence felt along the ocean side. During the 1950s many architects began to vacation and build Modernist homes on the Outer Cape. Aside from strip commercial development, contemporary homes had spread along the arterial roads, kettle ponds, and along Ocean View Drive in Wellfleet, which was constructed to connect beach access roads in the 1950s. The Surfside community of summer homes, the first of its kind in the area, and later Wellfleet-by-the-Sea, made for attractive destinations with their quintessential Outer Cape appeal.

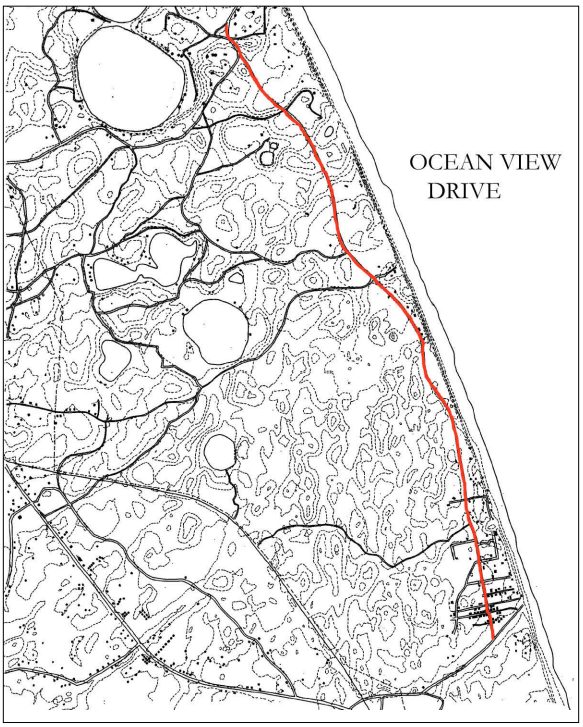


Figure 140: Ocean View Drive, Wellfleet, MA, 1999. (Source: UMass/USGS/UNH)

The popularity of the two communities increased interest in developing the area; however the National Seashore was established as plans were underway thus prohibiting further construction. As a result, the area offers an increasingly rare scene of period residential development, brought to a halt before it completely filled in with houses of different styles

Figure 141: House on Ocean View Drive, Wellfleet, MA, 2003. (Photo: UMass)

Figure 142: Ocean View Drive, Wellfleet, 2003. (Photo: UMass/LARP)

or in a denser pattern. The presence of the National Seashore has prevented this type of development from overrunning the surrounding landscape, securing the magical quality of a rustic, summer escape a stone's throw from the mighty force of the Atlantic Ocean. Today this elevated scenic drive offers breathtaking views to the ocean framed by the bordering heathlands. With its wild, untamed vegetation, momentary glimpses of the ocean, and relative seclusion, the drive is a special Outer Cape experience. Redevelopment of existing Ocean View houses should be carefully managed to retain the unique and characteristic views that many enjoy today.

Surfside and Wellfleet-by-the-Sea

Surfside was started as a residential community in the 1940s when Wesley Reid and Michael Ulrich bought their first lot for seventy-five dollars. By 1959 they had a bustling vacation community with eighteen cottages constructed in a Modernist style. Wellfleet-by-the-Sea, a community of ten cottages situated on the bluffs between Ocean View Drive and the beach, was built soon after.[207] Surfside embodies local character with its typical Cape Cod style cottages set in the undulating slope of the bluffs. Today houses in both developments fetch high seasonal rental fees, as renters cherish the rustic atmosphere, breathtaking views to the ocean, and immediate access to the beach.

Cottages at Surfside are close together: spaced twenty to thirty feet apart with a building footprint of about fifteen by twenty feet. They are trim, uncluttered and independent of one another, with outdoor showers and clotheslines at the rear. Whereas the close spacing is indicative of its communal intent,

Figure 143: House on Ocean View Drive, Wellfleet, 2003. (Photo: UMass/LARP)

the untamed vegetation and absence of connecting pathways is reflective of a more private, independent character.

The houses at Wellfleet-by-the-Sea are more uniform, taking the form of modest, rectangular, one-storied Cape Cod cottages with gray cedar shack siding, white trim, brick chimneys and low-pitched roofs. Each has a deck running along its side facing the ocean. The houses are raised above the ground on stilts, giving them an elevated prospect of the ocean but not high enough to block others' views from above. Snow fences and wood post fences run along the paths throughout the community holding back the vegetation and eroding sand banks. The areas between the cottages are filled with low-growing, wild vegetation.

Both cottage communities on Ocean View Drive derive their unique character in

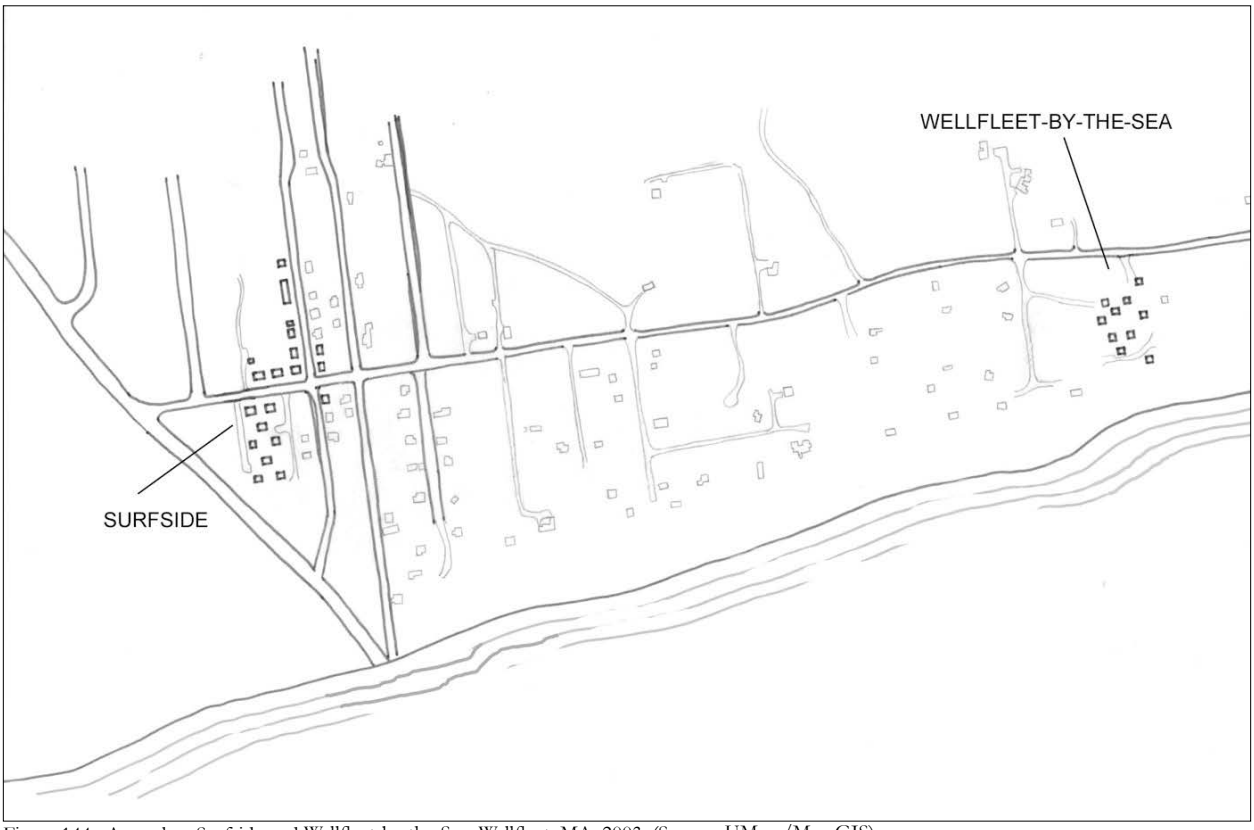


Figure 144: Area plan, Surfside and Wellfleet-by-the-Sea, Wellfleet, MA, 2003. (Source: UMass/MassGIS)

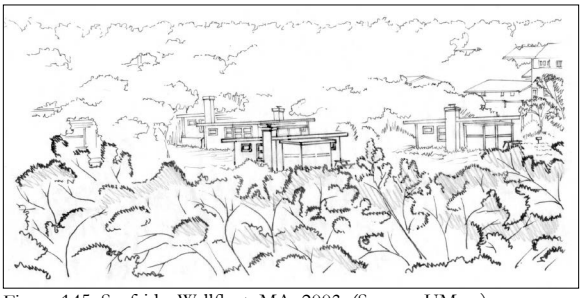


Figure 145: Surfside, Wellfleet, MA, 2003. (Source: UMass)

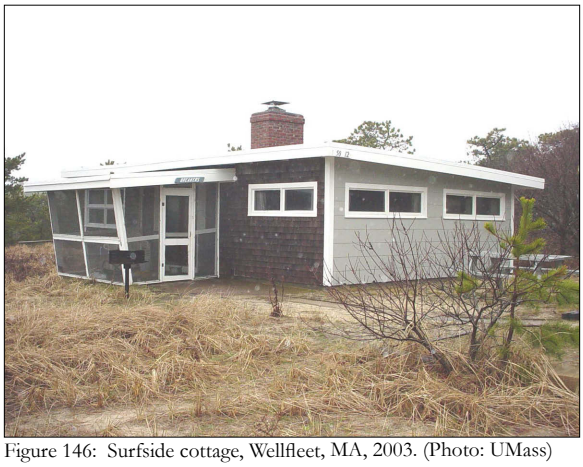


Figure 146: Surfside cottage, Wellfleet, MA, 2003. (Photo: UMass)

part from the surrounding vegetation and natural topography. At Surfside, the landform drops thirty-five feet within the 120-foot distance over which the cottages are spread. The slope directs the cottages towards the ocean. Raised vegetated mounds along the road shield the cottages from people passing by, increasing the sense of privacy and solitude of the space. Closer to the ocean, the vegetation tapers off to low growing grasses, heaths, partridge berry and bearberry, providing a few cottages unhindered views to the ocean. The vegetation around Wellfleet-by-the-Sea is shrubby and stunted. Existing growth is too short to obstruct the view or protect the cottages from the harsh wind; however, it does create a physical barrier that restricts movement, directs circulation and protects the sandy banks of the bluffs from erosion.

Figure 147: Wellfleet-by-the-Sea cottage, Wellfleet, MA, 2003. (Source: UMass)

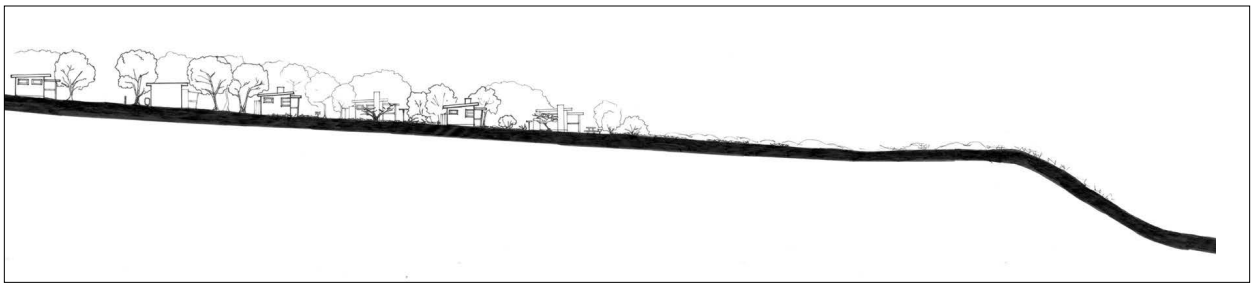


Figure 148: Surfside section, Wellfleet, MA, 2003. (Source: UMass)

Figure 149: Wellfleet-by-the-Sea, Wellfleet, MA, 2003. (Photo: UMass)

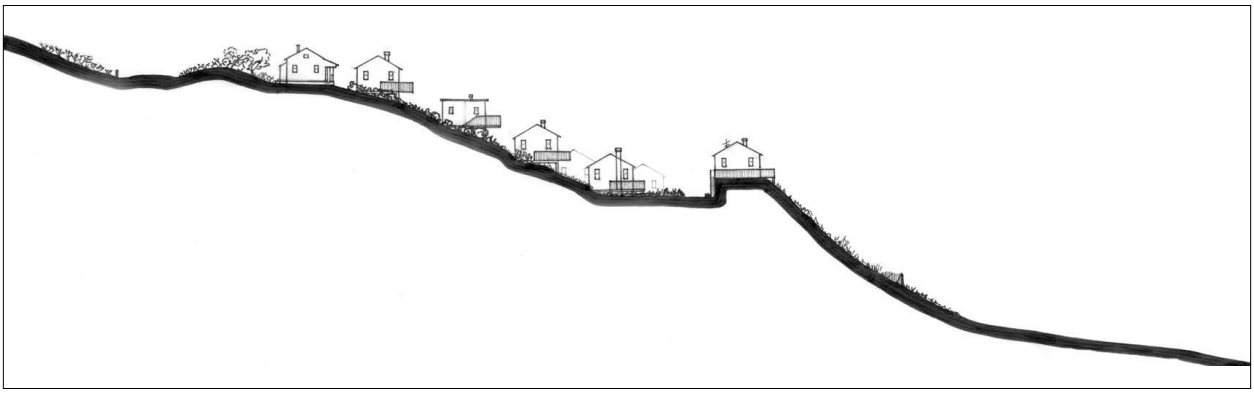


Figure 150: Wellfleet-by-the-Sea, Wellfleet, MA, 2003. (Source: UMass)

Dune Shacks and Beach Cottages

Perhaps nothing symbolizes the precious sense of escape and isolation that can still be found on the Outer Cape more than the dune shacks of Provincetown and Truro and the rustic "camps" of Nauset Beach. These tiny structures, perched on the edge of the sea, grew out of a tradition of erecting rudimentary shelters for fishermen and shipwreck victims. The famous dune shacks of the Province Lands evolved from Charity Huts built by the Massachusetts Humane Society in the nineteenth century. The shacks, sometimes composed of the debris of wrecked ships found on the beaches, were intended to shelter seamen who survived shipwrecks along the Outer Cape. The original dune shacks were spaced sporadically from Race Point to east of Pilgrim Lake in Truro, and along Nauset Beach in Eastham. Later dune shacks were built as recreational shelters for beach dwellers. Countless fishermen and hunters have used the Nauset and North beach camps.

As the Outer Cape became increasingly known as a place of beauty in the twentieth century, many artists, writers, and playwrights came to find inspiration in the dunes, fishing villages, and the quality of light. The dune shacks in Provincetown - and to a limited extent, those on Nauset and North Beach - were also a unique part of this artistic culture, providing artists the opportunity for isolation, inspiration, and communion with the dunes and the ocean. One famous resident of these shacks was the eccentric Harry Kemp, self-proclaimed "Poet of the Dunes." The dunes have also drawn other famous artists, such as Hans Hofmann, Tennessee Williams, Jackson Pollack and Edward Hopper among others. The Dune Shacks of the Peaked Hill Bars Historic District was listed in the National Register in 1989, largely for the association of the shacks with cultural figures who have used them.

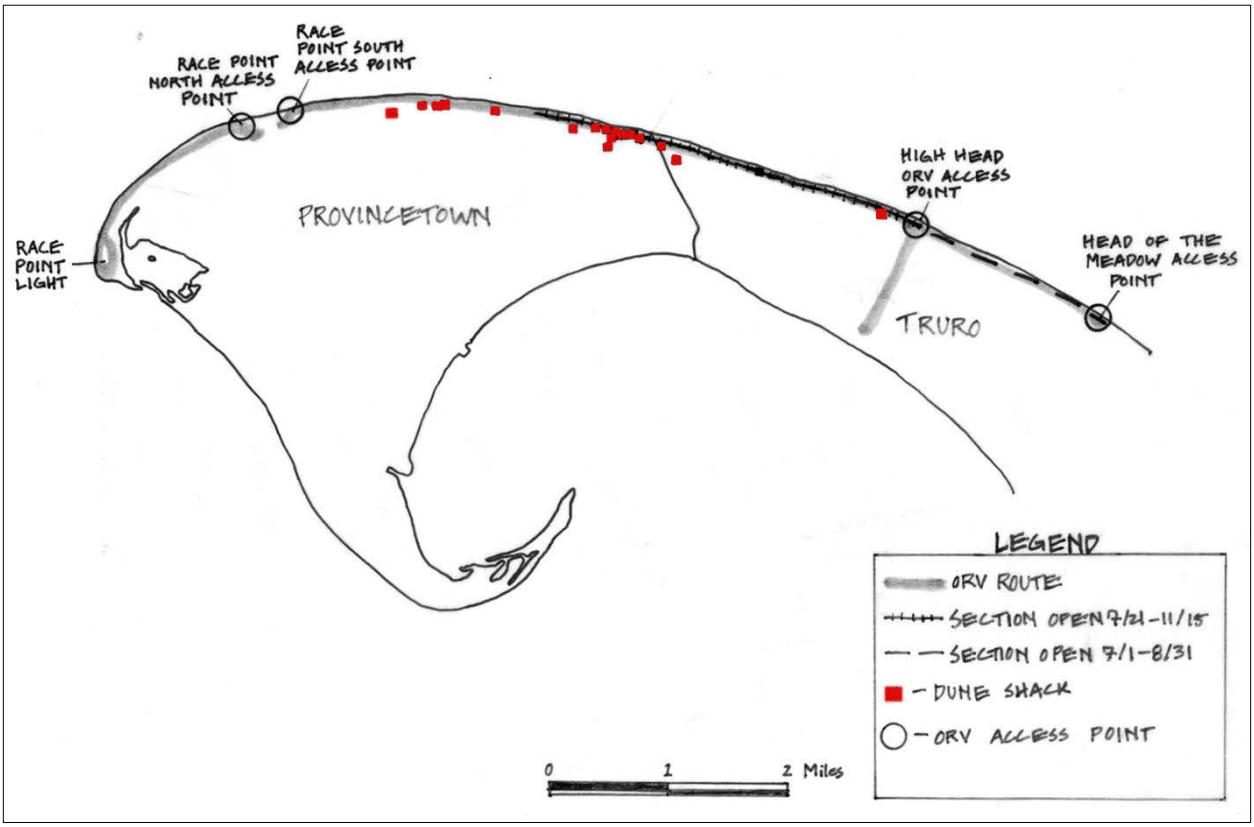


Figure 151: Area plan, dune shacks, Provincetown, MA, 2003. (Source: UMass/NPS)

Henry Beston, unlike many others, chose to reside in a small structure on Nauset Beach, next to the Nauset Marsh, where he wrote his book, The Outermost House. This work has since continued to inspire others to have similar experiences among the dunes. The opportunity for this kind of experience continues today through the efforts of non-profit organizations such as the Peaked Hill Trust, and Artist-in-Residence programs, which allow artists and others the experience of dune shack life for a week to two weeks at a time.

The exceptional quality of light of the Outer Cape is perhaps best experienced on the dunes, away from the distracting artificial glow of modern nightlife. The light changes from warm to harsh to subtle, transforming the sea and sand with each passing hour. The light of the Outer Cape casts innumerable hues upon the landscape, conjuring countless moods.

Late in the afternoon, there descends upon the beach and the bordering sea a delicate overtone of faintest violet. There is no harshness here in the landscape line, no hard Northern brightness or brusque revelation; there is always reserve and mystery, always something beyond, on earth and sea something which nature, honoring, conceals.

Henry Beston, *The Outermost House*, 1928.[208]

I think it's a romantic vision of a lost way of life because the way of life out there is exactly the same now as it was one hundred years ago. The only difference is we have a composting toilet and a propane stove and a refrigerator.

Joyce Johnson, Eastham, 2003.[209]

These camps are as close to heaven as I'm ever going to get.

Dana Eldridge, Eastham, 2003.[210]

Figure 152: Harry Kemp at his dune shack.
(Source: *Images of America: Provincetown*)

Dune Shacks of Provincetown and Truro

The dune shacks of Provincetown and Truro are set into a landscape of undulating dune topography, and although some are relatively close they are visually separated by mounds and dips of sand. Most of the structures are located on the first ridge of dunes off the water, dwarfed by the topography, desert-like vegetation, and expansive views of land, ocean, and sky. The sand that makes up the dunes of Provincetown and Truro is constantly buffeted by wind and water. This adds to the surreal and dynamic character of the landscape, imbuing the area with a sense of timeless isolation. In the past, the erosion of the dunes due to wave action has caused dune shack structures to fail and others to be moved back from the water.

Figure 153: Found art, Race Point Beach, Provincetown, MA, 2003. (Photo: UMass)

Figure 154: "The Dunes" by Katherine Baltivik. (Courtesy: Charles-Baltivik Gallery, Provincetown, MA)

Figure 155: "In Late Afternoon Haze" by Sheila Benzer. (Courtesy: Lyman-Ayer Art Gallery, Provincetown, MA)

These shacks are small, unpretentious, one or two-room structures that allow for easy movement. Euphoria Cottage measures twelve by sixteen feet and has a low profile, and is a typical example. Many of these primitive structures were constructed of cheap, recycled materials, and lacking electricity most are equipped with outhouses, gas stoves, and

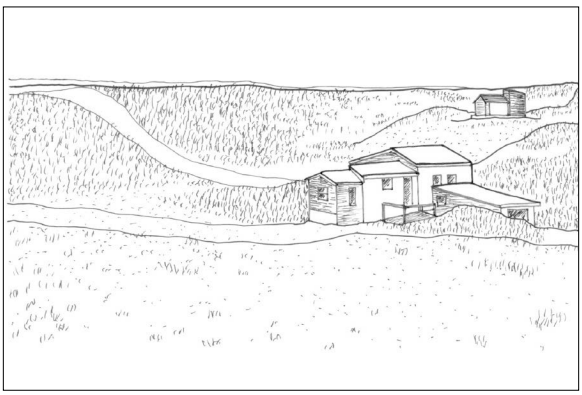


Figure 156: Dune shacks, Provincetown, MA. (Source: UMass)

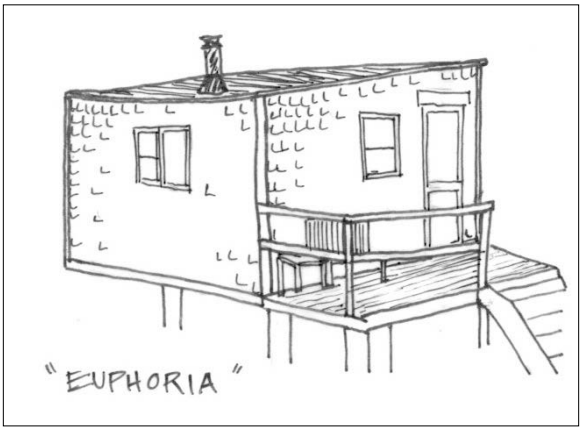


Figure 157: Euphoria Shack, Provincetown, MA. (Source: UMass)

water pumps. The lack of amenities creates a bare bones living environment that fosters a feeling of austerity.

Figure 158: Restored dune shack, Provincetown, MA 2003. (Photo: UMass)

Nauset/North Beach Camps

The Nauset/North Beach "camps," a name derived from associations with hunting and fishing camps, are different structures from the dune shacks in Provincetown and Truro. There are approximately thirty-five camps on the Nauset Spit, with twelve in Orleans and the remainder in Chatham. The camps are slightly more elaborate than the dune shacks, and vary in size and style. A typical building may measure sixteen by twenty-one feet, and rise to one or one and one half stories. The most famous of the Nauset camps was "Fo'castle," Henry Beston's shack.

The quest for isolation has drawn many to these camps and shacks. The dune shacks can be reached by a long walk through the dunes and bluffs. Shack owners have vehicle access. The emptiness of the surrounding landscape coupled with the vastness of the sky and the ocean creates a distinct atmosphere. Topography plays an important role in the sense of isolation, as the rolling dunes hide shacks from visitor's eyes. In contrast to

I left the road and walked east. . .to enjoy the incomparable view of the great...marshes and the dunes. Viewed from the…moors, the marsh takes form as the greener floor of a great encirclement of rolling, tawny, and treeless land. . .the vast flat islands and winding rivers of the marsh run level to the yellow bulwark of the dunes…so beautiful was the spacious and elemental scene that I lingered a while.

Henry Beston, *The Outermost House*, 1928.[211]

You're faced with yourself out there. You really get to be restored out there and a lot of people have that same experience.

Joyce Johnson, Eastham, 2003.[212]

Figure 159: Nauset Spit, Eastham and Orleans, MA. (Courtesy: MassGIS)

the now heavily wooded upland areas of the Outer Cape, the dune shacks are situated in a landscape of "big sky", as Harry Kemp, proclaimed: "And here is all space that ever eye can see: The ocean completing all immensity, And the sky, mother of infinity."[213]

To the observer, the presence of the diminutive constructions, juxtaposed against the open landscape, make the dunes appear more desolate than if there were no structures in sight. Such character is almost entirely absent elsewhere on the eastern seaboard.

Figure 160: Henry Beston's beach camp "Fo'castle", Nauset Spit, Eastham, MA. (Courtesy: Cape Cod National Seashore)

Figure 161: Beach camp, Nauset Spit, Eastham, MA, 2003. (Photo: UMass)

Conclusion

In many ways, the changing meanings and character of Homes on the Outer Cape represent both the most cherished and the most threatened aspects of the area's character. For many, it is the seaside cottage, the beach house, or the historic town house or farm that are the center of everything desirable about life on the Outer Cape. Nothing more directly expresses the aspirations and dreams of a chosen way of life than the character of dwellings.

In the twentieth century, as the economy of the Outer Cape became based in tourism, the landscape has become essentially a residential landscape; people are not here, primarily, to fish or farm any longer as much as simply to live here (or provide services to those who do). The growth of year round population and the proliferation of new (or expanded) residences, as well as the additional commercial services needed to serve such a population, have become the dominant facts of current trends in the landscape.

In this regard, it may be helpful to look back at the simple cottages (and even "shacks") of the past to consider what has been deemed essential and desirable about domestic lifestyles on the Outer Cape. One theme comes through: more humble cottages and beach houses enabled a direct contact and appreciation of the landscape in which visitors played and residents sought inspiration. Larger, year round homes provide the conveniences available in mainland regions, but they also engender a more ubiquitous lifestyle, perhaps less carefully tuned to an immediate relationship to the landscape. The cottage communities of Ocean View Drive, the Provincetown Dune Shacks, and other examples of traditional lifestyles on the Outer Cape are reminders of important values, as well as significant landscape features.

The potential redevelopment of improved properties within the National Seashore boundaries also deserves special consid-

eration. The "Cape Cod Model" that brought the park into existence in 1962 did not anticipate the development pressures of the next century, at least not in this regard. Like other aspects of redevelopment on the Outer Cape-whether of commercial or residential properties-the expansion of homes that once fit easily into their setting is one aspect of a new generation of challenges in maintaining the unique character of the Outer Cape.

Figure 162: Heading to the dune shacks, Provincetown, MA, 2003. (Photo: UMass)

PART III
Cape Conversations

Figure 163: Trap Fishermen, Truro, MA, ca. 1940. (Courtesy: Truro Historical Museum)

Centuries of interaction between humans and nature produced the distinctive look and feel of the beaches, waterways, towns, farms and forests, transportation routes, and homes discussed as Landscape Headings on the Outer Cape. How do contemporary residents experience those landscapes today? The Cape Cod National Seashore has learned much about the landscape attitudes of Cape residents through ethnographic studies, written surveys, and individual interviews. In June 2003, a team from the Public History Program at the University of Massachusetts Amherst added to this knowledge by holding a series of three "Cape Conversations," one each in Provincetown, Eastham, and Truro. The idea behind the Conversation format is that deeply held landscape values and perceptions are often articulated only in groups, through local residents' conversations with one another. To stimulate these conversations about the landscape of the Outer Cape, the UMass historians invited local residents to view a slide presentation of contemporary and historical photographs, and listened to the comments and dialogue that emerged in response to each image. The juxtaposition of old and new, each section of images introduced by a quotation from the United States Senate hearings in 1959-60 that established the Cape Cod National Seashore, prompted thoughtful

"Places furnish the raw material for the symbols and collective memories of group communication."

Kevin Lynch, *The Image of the City*, 1960.[214]

Figure 164: Houses, Mayo Beach, Wellfleet, MA, 2003. (Photo: UMass)

discussion of how the Cape has changed over the past four decades since the establishment of the National Seashore. Quotations from those discussions appear in earlier sections of the report analyzing particular aspects of the Cape landscape. This section of the report briefly summarizes the collective portrait of the changing landscape of the Outer Cape that emerged from the Conversations, and the perspectives of contemporary residents on where they live.

The first set of images depicted people working the land and sea--fishing, clam digging, harvesting cranberries, and selling jam. Prompted by these images of work, residents sought to distinguish past from present economic activities. A historic photograph of fishermen prompted one resident at the Provincetown conversation to comment that "it was more like Nova Scotia than Cape Cod," until he learned the photograph was taken in the 1940s. But the same man commented on a picture of clam diggers that the activity was still going on in 2003 and done in much the same way.[215] Similarly, in response to a slide of Cape Verdeans picking cranberries, the group acknowledged that "although you still have bogs on the Cape the economics have changed a lot. Everything's mechanized now so you don't have these kinds of images anymore." Yet someone pointed out that in Orleans there were still small individually owned bogs, "so you can't say that they're gone nor can we say that they are relics because they're still actually used in the same way that they were used."[216] Residents also talked about picking blueberries, driftwood, beach plums, and other items from nature in their youth that historically supplemented Cape family diet and incomes.

Participants in the Conversations observed that even if these traditional activities were not as widespread or significant to the overall economy of the Cape, they still held great meaning for local residents and tourists alike as aspects of the Cape's distinc-

tive landscape character. In response to a picture of an old fishing boat, one man at Truro commented, "Sure that's one of the reasons why tourists come though. If you go back to that picture and you look at that boat, tourists like to look at things like that. And if there aren't any around, if it's all modern, just regular fishing boats, it doesn't mean as much."[217] As reminders of a time when their ancestors were primarily farmers and fisherman, and as focal points for the tourist economy, local residents identified more with images of the old Cape Cod than those of the new.

The second set of images came from Outer Cape towns, mostly Wellfleet. Many of the participants in the Truro and Eastham Conversations lived in Wellfleet, and they had much to say about how in the 40 years since the creation of the National Seashore the physical characteristics of their town had remained much the same while the social aspects changed dramatically. Observations about the changing character of local society especially emerged in response to a picture of the row of shops and art galleries in downtown Wellfleet that now catered primarily to a new class of affluent tourists and summer residents. One woman observed that Wellfleet's year-round residents no longer walked into town to get their essentials, but traveled by automobile to larger stores down Cape in Orleans and Barnstable. A slide of the Wellfleet Post Office, newly constructed on the outskirts of town, also prompted comments about the changing character of Wellfleet's town center.[218]

The image that provoked the greatest response at all three Cape Conversations was a picture of a new house built on Mayo Beach in Wellfleet that dwarfed the neighboring ones. Those present roundly attacked the new construction for being way out of scale and driving up housing prices and tax valuations beyond the reach of most local residents. In the words of one Wellfleet resident:

Figure 165: Bicyclists, Wellfleet Center, Wellfleet, MA, 2003. (Photo: UMass)

> *"It's a pity. When people come here, and they want to stay and they build the big houses and they put in these fancy lawns and they water them daily, you can no longer conserve what was here. And the people who were here can no longer afford to live here because it doesn't make any sense to keep your property when you're making fifteen thousand dollars a year and then you can sell the property for a million".*[219]

The picture of the house on Mayo Beach also prompted discussion about the changing demographics of the Cape towns, and in particular, how skyrocketing housing prices in response to rising demand for vacation and retirement homes has meant that local families of ordinary means cannot afford to purchase homes near where they grew up. Residents noted that the preponderance of expensive summer homes in Wellfleet boosted the town's real estate prices to among the highest in the Commonwealth, but the average income of its year round residents remained among the lowest. "The families, the kids can't afford to stay. Kids are moving out at a remarkable rate."[220]

The third set of images depicted recreational activities-tourists in Provincetown, bicyclists in Wellfleet, bathers enjoying Mar-

coni beach, and surf casters camped in recreational vehicles at Race Point, near Provincetown. Most interesting was contemporary residents' response to a quotation by Senator Saltonstall from the Senate hearings in 1960 that "Americans, in dire need of the natural grandeur of the clean open spaces, will find [in the Cape Cod National Seashore] an outlet for their crowded grimy urban lives."[221] A man at the Provincetown Conversation commented that even with the opening of the National Seashore, the urban masses tended to go to Revere Beach, not the Outer Cape.[222] The group acknowledged that the towns of the Outer Cape have always been more of an upper-middle class tourist destination, a characteristic reinforced in recent years by the high price of rentals and an explosion of expensive second homes. Looking at the images depicting Cape recreational activities, those at the Cape Conversations praised the variety of recreational opportunities that the land and sea offered them, even while declaring their opposition to more tourist development and the traffic it would bring.

The Cape Conversations slide show concluded with images depicting areas where wild nature had overtaken the earlier landscape of fields and farms. Pictures of overgrown trees clustered on sand dunes and of former agricultural landscapes such as Fort Hill in Eastham and Pamet Bog in Truro prompted recollections of a time when the Cape vistas were much more open. Residents appreciated the natural beauty of these newly wooded areas, though also wondered whether it was feasible economically to bring back farming and other economic activities that kept the spectacular views to the ocean intact.

Summarizing the three Cape Conversations, those present associated the most striking changes in the landscape character of the Outer Cape with the transformation of the region's traditional economic base. For centuries, landscapes on the Outer Cape were shaped by the hard work of local residents harvesting national resources-farming, cranberrying, and fishing. Elements of these ways of life are still visible, and are far and away what residents and tourists think makes Cape Cod distinctive. But these activities are no longer the prevailing forces shaping the landscape. Rather, the landscapes of the Outer Cape are now primarily shaped by the leisure activities of a growing number of affluent tourists, summer residents, and retirees. Local residents feel the economic transformation of the past two decades has affected all aspects of Cape life, from the skyrocketing price of housing and the plummeting number of schoolchildren to the increasing pressure to build new and larger stores to serve the growing year-round population. Those attending Cape Conversations talked about the difficulty of curbing the development and redevelopment of second homes, the scarcity of affordable housing for their children, and the near-impossibility of finding tradespersons to work on their houses at reasonable rates.

"The greater power of place lies not in inhabiting it but remembering it."

Robert B. Riley, *"Attachment to the Ordinary Landscape,"* 1992.[223]

Looking down Cape Cod at the dense development in Orleans and below, those attending Cape Conversations applauded the efforts of the National Park Service and its partners to preserve open space within the boundaries of the National Seashore, and by and large credited the Seashore for channeling visitors to the beaches best designed to accommodate them. Local residents also appreciated Park Service attempts to conserve their traditional recreational activities such as surf-casting on the beach, driving off-road vehicles, and gathering beach plums and other wild fruits for jam. But local residents did not see how the Cape Cod National Seashore could help them with the larger "redevelopment" and "loss of historic character" issues transforming the landscape. The Seashore can help keep the piping plovers from becoming extinct, but not the resource-based indus-

tries responsible for the look and feel of the traditional Cape landscape.

The Cape Conversations revealed that the residents of the Outer Cape are suspended between past and present, caught by the dramatic changes to the landscape that have occurred within living memory. The historical photographs reminded those present of a time when they were young. Many now moving to the Cape as year round residents also have childhood memories of the place. But soon after their arrival, they become acutely aware that while the region has lost none of its natural beauty, the Cape to which they have moved is not the same as the one that they remember. Yet these new "wash-ashores" do bring their memories to the landscape, infusing it with personal qualities that may only exist in their memories.

Collecting and preserving the memories that local residents and visitors have of places on the Outer Cape that have since been transformed can help to protect its distinctive cultural landscapes. The Cape Cod National Seashore has often partnered with local environmental organizations to preserve the natural environment and unique wildlife. But Cape Conversations reveals a need on the Outer Cape, as in other areas of the world where landscape change is occurring quickly, to partner with local historical organizations in projects designed to capture the memories attached to places, so that new residents to the area can understand what happened there and the distinctive cultural heritage that they and future generations will be called upon to protect. Describing the landscape elements that she felt made the Outer Cape special, a woman at the Provincetown Conversation challenged the group, "There are things that are valuable to you. Maybe they are not valuable to the people who are coming along."[224]

Cape Conversations demonstrated the challenge of protecting the traditional look and feel of the Outer Cape against the seemingly inevitable changes brought by a population growing larger, richer, and older. But there are still strategies for local governments to adopt that would protect the characteristics of the natural and built environment most associated with the Cape's distinctive landscape character. These strategies are the subject of the Recommendations section that follows.

PART IV

Conclusions and Challenges, Retaining the Landscape Character of the Seashore

Figure 166: House, Truro, MA, 2003. (Photo: UMass)

This study has been produced to better understand, document, and analyze the complex interactions of people and places on the Outer Cape, both historically and today. The purpose of this study is to provide the National Park Service, local government, other organizations, and all residents of the Outer Cape with an improved basis for making the decisions that will decide the fate of the landscape character valued by all. A central premise and conclusion of this study is that the character of the Outer Cape is based in the interplay of the landscape and its people. They are inseparable in the sense that culture and landscape have mutually influenced one another for thousands of years.

In this chapter we summarize the findings of the study regarding how the current trends in land use on the Cape will likely affect its future landscape character. Key topics are the redevelopment of existing homes and commercial structures, significantly increasing housing sizes, the related challenge of providing housing affordable to long-time residents, and a diminishing working waterfront. After describing these challenges, we identify a set of goals that the towns, Cape Cod National Seashore, and the Cape Cod Commission could strive for to meet these challenges. These goals are followed by a set of recommended actions and planning and zoning techniques that can address many of the issues raised in this report.

Challenges

The cultural landscape of the Outer Cape landscape has seen dramatic changes, particularly over the last 300 years. But the next decades of landscape change may be critical in determining whether future generations are also able to appreciate the special and unique character of the region. The Net Usable Land Area analysis (NULA) included in Part One, estimates that only ten percent of the land area of the Outer Cape is available for new development. The rest is already protected, developed, or regulated. The fate of this last ten percent will have a major impact on the character of the Outer Cape. Choices need to be made: accept this incremental change, or consider alternatives.

The redevelopment of existing homes and cottages and the redevelopment of commercial properties to serve a larger, permanent population have replaced new development as a major threat to the character of the Outer Cape. The significant building that occurred on the Cape during the 1980s and 1990s, along with natural and regulatory constraints on where development can occur, have left few undeveloped parcels that are available for new development.

Constraints on the supply of new development, along with the demand for homes from retirees and second home buyers, have significantly raised the price of real estate. The increase in year-round residents leads to larger homes with more amenities, and stronger demand for nearby retail and service business. These changes also make it more difficult for long-time residents to afford property taxes, or for the children of long-time residents to purchase or to build a home on the Outer Cape. The lack of affordable housing was a strong theme in the Cape Conversations described in Part Three of this report.

Figure 167: Photo simulation of potential housing redevelopment. Top: Existing Conditions, 2003. Center: Impact of one expanded cottage. Bottom: Impact of vertical development on two expanded cottages. Wellfleet, MA, 2003. (Source: UMass)

Recommended actions were developed from a dual goal of allowing for appropriate change that addresses current needs, but also supports the traditional ways of life, economy, and landscape character of the area. Policies should accommodate changes in the ways that are most supportive of the ecology and character of the existing landscape and the life ways of its people. Addressing these challenges needs to occur in ways that are respectful of the private property rights of landowners, as well as the autonomy of the towns and of the Cape Cod Commission. Many of what we view as the solutions to these challenges have already been proposed in one forum or another: excellent guidance is available through such documents as the zoning analyses and growth management recommendations sponsored by the National Park Service, the new Cape Cod Regional Policy Plan from the Cape Cod Commission and their model bylaws and regulations project, and the Commission's publication entitled, Designing the Future to Honor the Past.[225]

The challenge appears to be not so much technical (in terms of the specifics of planning tools) as political. This relates, we believe, to the phenomenon of the invisibility of incremental change. It is difficult to see the impact of changes in the landscape when they happen gradually over years and are dispersed across the region. The sum total of these changes, however, can so change a landscape that is no longer unique, or even identifiable. Chain stores, strip development, and developer-designed, oversized residences, after all, can be found anywhere. If unchecked on the Outer Cape, these trends could result in the loss of a regional cultural landscape of national significance.

To address these challenges, we have

Goals

identified the following goals followed by a series of recommended actions and planning and zoning tools and techniques.

- Establish and maintain a database of significant landscapes and development trends across the Outer Cape.
- Increase cross-institutional understanding of managing seashore areas with public lands and significant private inholdings.
- Improve local ability to effectively preserve positive landscape attributes while allowing for acceptable and necessary change.
- Increase awareness of the effects of incremental change.
- Increase knowledge of issues and opportunities surrounding fishing and shellfishing on the Outer Cape.
- Implement techniques designed to increase community influence on the redevelopment of houses as well as the building of particularly large homes.
- Address the need for affordable housing both for workers and for next-generations Cape Codders.

Community Based Actions

The focus of our recommended actions is on ways to encourage citizens to see their landscape and its changes over time, to empower local communities in their planning, zoning and site reviews, and to improve the collaboration among the stewards of the Outer Cape. We present here a set of actions that we believe would contribute to the stewardship of the region. We do not provide legal advice here, but we do believe all these techniques would be legally practicable. Rather than a to-do list, these recommendations should be interpreted as a menu, ideas from which the six towns, the National Park Service, the Cape Cod Commission, and other stakeholders may select the items that appear the most feasible and effective for their particular situation and interests.

Identify Notable Landscapes

With this study, the Outer Cape has gained greater awareness of the most important types of cultural landscapes and their connections to the Cape's history and future. Additional effort is needed for a comprehensive study and documentation of the Capes notable landscapes of the Outer Cape.

This inventory could be organized and maintained as a database of existing conditions and trends across the Outer Cape. The data could then be used to prepare design review guidelines for appropriate development within each type of landscape. We recommend the following actions:

Conduct a full inventory of the Outer Cape's cultural landscapes. Components of this inventory include:

- Expand upon on the prototype landscapes identified as Landscape Headings in this report to conduct a comprehensive inventory
- Develop design review recommendations for each prototype landscape
- Identify spatial boundaries for identifiable landscape types across the entire Seashore
- Publicize these boundaries and the suggested design review guidelines for each type with the towns to encourage their adoption within town zoning practices

The Cape Cod Commission could collaborate with towns to generate a landscape study of the entire Outer Cape.[226]

Share Knowledge Across Institutions

Management of coastal areas is a topic of increasing importance but great complexity. The expertise and knowledge developed in the Cape Cod National Seashore can assist other areas, and the knowledge developed in other areas can suggest fruitful directions for National Seashore policy as well.

To increase cross-institutional understanding of the challenges of managing seashores with significant in-holdings and broad public use, we recommend the following action:

- Sponsor a workshop that brings together experts from various seashores in the United States, and potentially internationally, as well as local residents, to investigate both problems and solutions as they have been addressed by the National Seashore and by other communities

The National Park Service could take a lead role in coordinating workshops with input from towns, local organizations, and the Cape Cod Commission.

Increase Regional Collaboration

The Outer Cape is rich in institutions and people committed to sustaining the character and livability of the area. Increased collaboration among these groups will help assure that policies and perspectives are shared, thereby increasing their effectiveness.

To improve local ability to effectively preserve positive landscape attributes while allowing for acceptable and necessary change, we recommend the following actions:

- Sponsor a new standing collaborative forum including the town governments, National Park Service, Cape Cod Commission, and town historical and conservation commissions, fishermen and other stakeholders to investigate ways to retain cultural landscapes. The forum should address both retention of built environment and retention of local jobs and shore-based culture

- Develop an updated set of recommended techniques for planning, zoning and permitting within and outside of the seashore

- Develop techniques through the collaborative forum described above, to ensure local relevance and acceptability and increase political support and buy-in

- Include design guidelines for specific landscape types derived in part from landscape character studies (See Action Step: Identify Notable Landscapes)

- Further ideas for discussion are listed in the next section under planning and zoning tools and techniques

To effectively carry out these actions, the towns, National Park Service, Cape Cod Commission and interested stakeholders would work together through a collaborative forum.

Build Community Awareness

Implementing improved land use management on the Cape requires increased community awareness of the cumulative effects of incremental change and improved planning techniques to address this challenge.

Increasing awareness of the effects of incremental change requires collaboration and political support for good land use management among residents, municipalities, and institutional stakeholders in the area. Recommended actions include:

- Prepare presentations, posters, and displays demonstrating recent landscape change and likely future landscapes

- Work with town planners and Cape Cod Commission staff to determine local perspectives on key issues to be addressed and most descriptive sites to illustrate change

- Present to town meetings, conservation committees, Lions clubs and other public gatherings

- Provide technical assistance to towns attempting to update zoning to include these recommended techniques and more appropriately address particular needs of the National Seashore lands within their boundaries.

- Assign a National Park Service staff member or consultant with land use planning expertise to be a liaison to towns and the Cape Cod Commission

- Meet with town staff to publicize new efforts at partnership in this area

- Assist towns in applying for funds, whether federal or from other sources, to update zoning and planning, with particular attention to the following issues:

    - Redevelopment design guidelines for existing homes

    - Encouraging appropriate density within town centers while discouraging it outside of the town centers

    - Encouraging construction of town facilities within town centers, to enable pedestrian and local use of town centers

- Allowing for and protecting the interests of fisherpeople within zoning and planning

- Encouraging affordable housing, particularly targeted to long-term, year-round residents of the Cape and municipal workers, and possibly to service workers in tourist busnesses

The National Park Service could work in collaboration with towns and the Cape Cod Commission to strengthen community awareness of change.

Build Landowner Awareness

Many of the key decisions that affect the ecology and character of the Cape are based on the individual decisions of landowners. Recent purchasers are likely to have less connection to the Cape and less awareness of its ecology, history, and regulatory issues. Improved land management by newcomers to the area can address many challenges in a non-regulatory fashion, including retention of native plant species, awareness of the fragility of the aquifer, and housing and landscape designs that compliment the landscape character. We recommend the following actions:

- Develop a brochure for new property purchasers and renters that explains essential architectural, ecological and landscape characteristics of the Outer Cape and actions they can take to support this, plus Cape Cod National Seashore regulations and boundaries. Topics to address include:

  - using of native plants and identification of invasive plants to be avoided

  - protecting ground water through property owner actions minimizing use of fertilizers and options for organic gardening

  - importance of working waterfronts and fishermen to the area and actions local property owners can take (or avoid) to support this industry

- Distribute the brochure to real estate brokers and ask them to include it whenever someone begins to look for property on the Cape and near the National Seashore, so that they are familiar with the unique qualities of the area from the start

- Distribute brochure to town offices and local libraries and other visible public locations

We recommend that the National Park Service take a lead role in developing and circulating this brochure to improve landowner awareness on land management issues.

Retain Working Waterfronts

The identity of the Cape developed in response to its importance as a fishing and shellfishing center. These activities continue to provide income for long-time residents and a sense of connection to local history and a unique character. With the shift to high-income homes and tourism, positive actions are needed to assure that these activities can continue, and thereby retain both jobs and authentic local culture.

To increase knowledge of issues and opportunities surrounding fishing and shellfishing in the Outer Cape, we recommend the following actions:

- Gather studies from other areas that have addressed this topic; resources from Maine may be the most applicable

- Undertake conversations or more formal focus groups with local fishermen as well as (although separately from) property owners known to have expressed dismay with fishing's landscape effects to better understand local perspectives on the problems and future of that industry

- Sponsor a study or designate a staff person to develop recommendations for towns as to how to overcome obstacles and minimize conflicts between property owners and fishermen, and appropriate zoning or other regulatory techniques to encourage retention of this industry in the Outer Cape.

- Build a 'caught-locally' campaign for bringing fish to restaurants and making patrons aware of this, to ensure an ongoing market for locally caught or raised fish and shellfish

- Provide capacity support for a strong fishermen's cooperative organization, to increase their political profile at local and state levels

We recommend that the towns coordinate these actions with participation of the National Park Service and the Cape Cod Commission. These actions could be facilitated by the collaborative forum described earlier in order to retain the working waterfront.

Planning and Zoning Tools and Techniques

Figure 168: Photo simulation of potential housing redevelopment. Left: Existing conditions, 2003. Right: The effect of an enlarged cottage along the shoreline. Wellfleet, MA, 2003. (Source: UMass)

Managing Super-Sized Homes

Redevelopment of existing homes, often with very large additions or tear-down and new construction of much larger homes is the key land use management challenge within the Outer Cape. Very large homes, if not sited and designed very carefully, significantly change the visual, historical, ecological and social character of the Cape.

Several planning approaches are designed to increase community influence of the redevelopment of houses as well as the building of particularly large new homes. These techniques would be triggered when particular conditions are met, such as homes or additions greater than "X" square feet or homes in easily viewed or otherwise sensitive locations. Techniques which have been used in other Massachusetts towns include:

- Require site design review at time of permit application for new homes and significant additions; review can be by town engineer or more full-scale design review by a committee including citizens and planners. Include criteria such as:

  - Define percent of site or stated acres to be left uncleared during construction

  - Set limitations on impervious surface as a percent of site or other techniques for retaining aquifer recharge and stormwater management

  - Minimize sightline impacts

  - Define appropriate design guidelines

(materials, massing, height, details), which can follow from the findings of the Cape Cod Commission's *Designing the Future to Honor the Past* or from National Park Service-sponsored studies and recommendations

- Implement limitations designed to assure that new homes and additions fit into scale and character of neighborhood and achieve ecological criteria. These would be zoning code changes that either:

    - Limit overall size of home (difficult to sustain legally but possible), or

    - Limit floor-area-ratio (FAR) and address number of stories outside the National Seashore area (building stories are already limited to three stories for homes within the National Seashore)

    - Develop design review guidelines with a goal of minimizing sight line impacts for new homes or additions not set within forested landscape

    - Determine whether it is appropriate to have stricter limitations within the National Seashore and more generous limitations outside of it

    - Use landscape character studies as reference documents for setting limitations as well as existing National Park Service, Cape Cod Commission, and town studies

- Encourage cluster or cottage style development for new homes, and revise codes so that this form of development is just as easy as standard development to build under.

    - Outside of town centers, make clustering an as-of-right process rather than by special review, thereby increasing likelihood developers will use this technique

Each of the towns in the Outer Cape would be responsible for adopting these planning and zoning tools.

Encourage Affordable Housing

The enormous increase in property values within the National Seashore and the surrounding areas has made it difficult for the children of long-time residents to find homes in the area. The lack of affordable housing diminishes community diversity, and makes finding housing for seasonal workers particularly challenging. The great desirability of the Cape for retirement and second home development means that the Cape Cod National Seashore and the towns will need to take active steps if they wish to assure diversity in the available housing to meet the needs of a wider variety of existing and potential residents.

To address the need for affordable housing both for workers and for next-generation Cape Codders, we recommend the following actions:

- Add a linkage fee for affordable housing to existing impact fees. Under this program, each developer of commercial or multiple residences would pay into a fund. The proceeds would be used to build or purchase affordable housing units. Some of these units could be reserved for existing Cape residents and their children. This fee may be able to be applied to very large homes as well, as they presumably will hire domestic help who will have to be housed somewhere on the Cape.

- Provide incentives in zoning and permit approval process for small homes or projects that include an affordable housing component. Be sure there are techniques in place to assure that the affordable housing remains available for year-round residents or for seasonal workers, rather than seasonal visitors

Because of the restrictions on new development within the National Seashore, most of these actions will need to be taken outside the seashore area with town-based initiatives.

Retain Working Waterfronts

As described earlier, the influx of new residents without multi-generational connections to the Cape as a site of work, as well as the increase in property values, has made the lower-value and sometimes unaesthetic uses necessary for the local fishing industry more difficult to sustain. If the Outer Cape is to retain some continuity with its history as a working waterfront, the towns and the National Seashore will have to undertake policies that facilitate retention of working waterfronts necessary for fishermen to catch or raise and process fish and shellfish.

To retain the working waterfront, the Outer Cape should evaluate other models and adapt successful programs. Significant work has been undertaken on this topic by the State of Maine as well as some towns in Massachusetts, but it is nevertheless a relatively new area of concern in planning, and therefore techniques are still being developed and tested. A few ideas may suggest possible directions for further consideration:

- Include in zoning an 'aquaculture use notice' similar to the agricultural use notices utilized by some towns. Such a notice would specify that the zone is one in which aquaculture may be practiced, and that nearby residents may experience side-effects from this including impairment of visual quality, access across beachfront, etc. In agriculture this is often linked to state right-to-farm laws, but the inclusion of aquaculture under these provisions is a matter of legal interpretation-in other words, whether towns could link a use notice to the right to farm laws is for the lawyers to decide.[227]

- Designate some portions of town waterfronts as working waterfronts, and zone for retention of processing facilities and docks while discouraging possibly conflicting uses such as residences

Like the actions recommended in the previous section for the working waterfront, these planning and zoning tools would be implemented by towns, with input from the National Park Service and Cape Cod Commission.

Alternative Future Scenarios

It is instructive to consider alternative futures for the Outer Cape which "play out" specific premises, specifically to: allow *status quo* development, guide development to particular areas (e.g. infill sites), and/or advocate for specific types of increased protection for landscape resources. The landscape planning studio completed three alternative future scenarios for the Outer Cape which are briefly summarized below. All of these scenarios accept the inevitability of additional population growth on the Outer Cape. They differ with respect to the allocation of new residential land uses, and conversely with regard to the type, extent and location of new protected lands.

The landscape planning studio began by examining the future development capacity of each town through a "Buildout" analysis. A study of Net Usable Land Area indicates that 10 percent of the land area of the Outer Cape is still available for development (see Figure 7). The buildout is a compilation of six Outer Cape town-based analysis produced by the Massachusetts Executive Office of Environmental Affairs (EOEA) in 2002. The buildouts were calculated for every community in Massachusetts to provide a theoretical maximum development level allowable given existing zoning, public, and known regulatory and physical constraints. The EOEA buildout for the six Outer Cape towns identified the potential for a 22 percent growth in population, residing in 2,578 new housing units, resulting in a 1.4 million gallon-per-day increase in water usage. Since being released, these buildouts and their associated population impacts have been misunderstood by many. It is important to recognize that these buildouts are not predictions, or projections of expected growth. Simply, they are an analytic exercise designed to identify the amount of "buildable" land in a community, and then to analyze this "buildable" land according to the permitted type and density of development allowed under current regulations. The buildouts provide a useful starting point for a community to discuss alternative growth and development paths into the future. For example, the buildouts often identify lands within a community that are important but currently unprotected by current regulations or public ownership. A community might then explore alternative means of protecting these resources such as regulating the development potential, purchasing conservation restrictions, or purchasing the land outright. Similarly, a community can "read" the buildout to locate areas that may be suitable and desirable to accommodate future development. The town could encourage development in these areas by modifying zoning to allow a higher density of development, to provide flexibility in lot sizes and dimensions, and to make public investments in infrastructure to support the development, such as roads, sewer, and utilities.

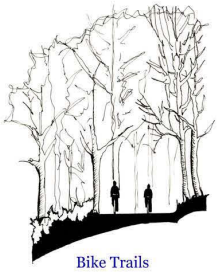
With this understanding of the available land and buildouts, not as a prediction or scare tactic, but as a baseline planning tool, the study produced three visions, or scenarios of alternative futures for the Outer Cape. Each of these scenarios started with a premise presented in the form of a "what-if" question. Just as the buildouts are not intended as predictions or plans, these scenarios are meant to be exploratory, and even provocative, to raise important questions relative to community attitudes towards growth and protection of land and landscapes. They all present alternative challenges the status quo, which is represented by the buildout analysis.

Conservation Scenario

What if a broad coalition of groups worked together to conserve more land in an effort to protect significant water, habitat, and cultural resources for future growth and management?

Key Assumptions:

- Conservation Criteria
  - Well Sites
  - Wetlands
  - Habitat for Flora and Fauna
  - Connectivity
- Encourage Environmental Awareness through Interpretive Education
- Improve Trail Corridor Network



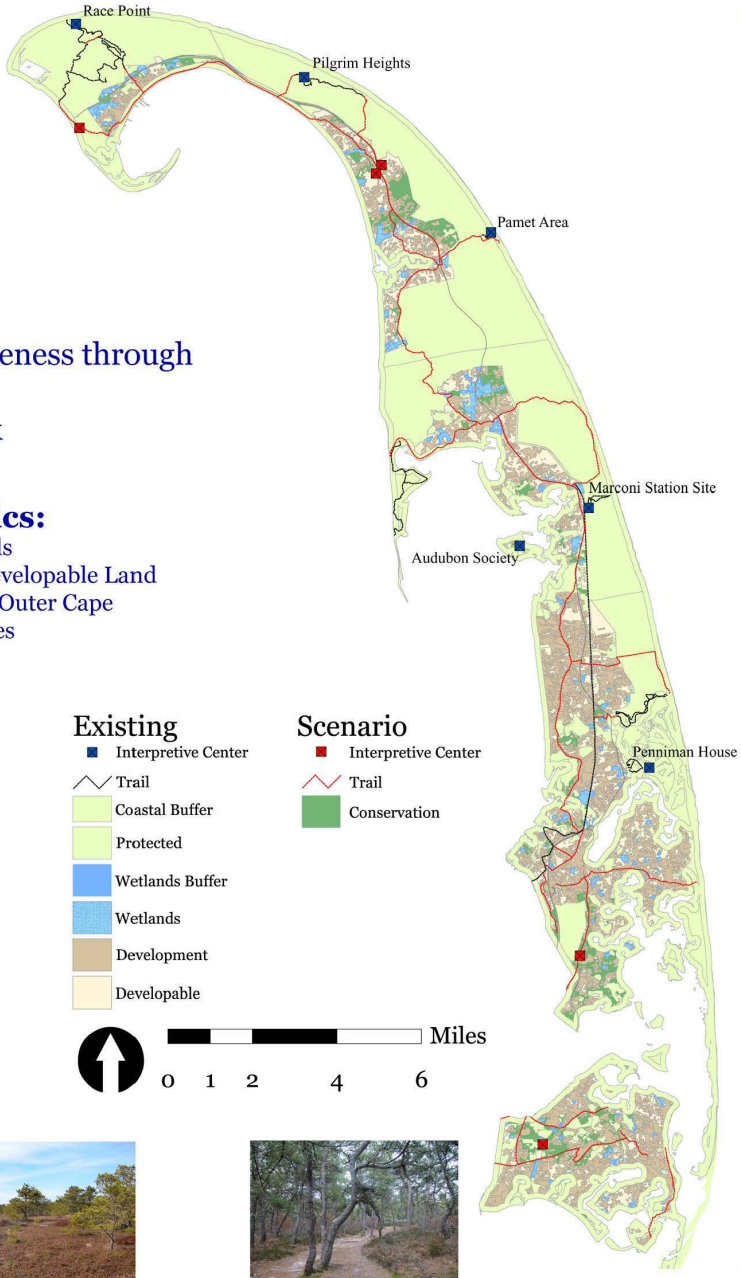
Bike Trails

Interpretive Center

Walking Trails

Statistics:

- 148 Parcels
- 32% of Developable Land
- 3% of the Outer Cape
- 2,130 Acres



Grassy Heaths

Heathlands

Pine Barrens

University of Massachusetts, Amherst
Department of Landscape Architecture & Regional Planning

Conservation Scenario

The first alternative to the buildout is the Conservation Scenario, which asks the question: "what if a broad coalition of groups worked together to conserve more land in an effort to protect significant water, wildlife habitat, recreational and cultural resources for future growth and management?" Just as the Cape Cod National Seashore made an unprecedented public investment in land protection in 1961, a broad coalition of contemporary groups might collaborate on an ambitious effort to place a substantial amount of currently "developable" land into some conservation status through tax abatement, conservation restrictions, or fee simple acquisition. The goals associated with the Conservation Scenario include: water resource protection, wildlife habitat linkage and protection, enhanced recreational trail access, and new opportunities for environmental education. Specific objectives in support of these goals would include:

- Protect fifty-two new well sites to assure future water supply for Outer Cape Communities.

- Protect key aquifer recharge areas to maintain a sustainable water supply through increased recharge.

- Maintain and build linkages between wildlife habitats, including three new safe road crossings (tunnels) for Rte. 6.

- Extend existing recreational trails into areas that are currently not served, ultimately providing trail linkage from South Wellfleet to Provincetown.

- Build five new environmental education facilities in conjunction with new conservation areas.

- Select areas that satisfy or contribute to more than one of the above objectives by recognizing the inherent compatibility of these conservation uses.

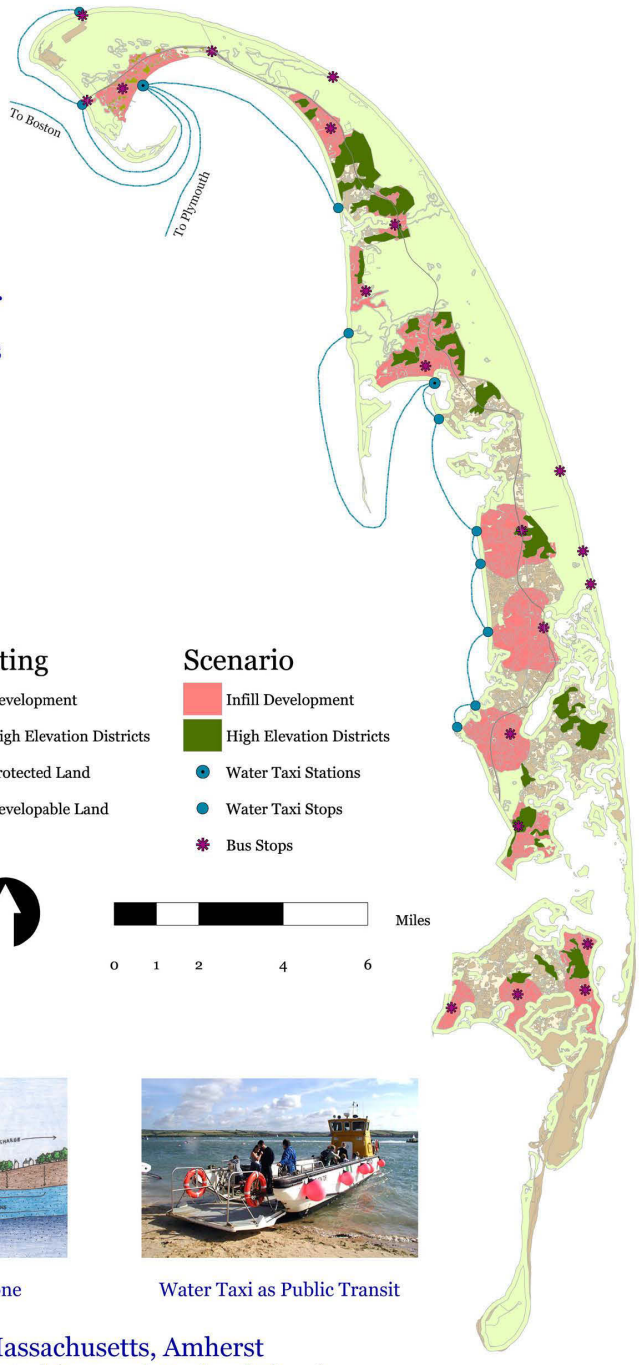
While perhaps appearing ambitious, this scenario would claim only an additional 3 percent of the total Outer Cape land area for the above conservation purposes. Most of the new potential conservation lands would be located in Truro and Wellfleet on non-Seashore land. However, since only 10 percent of the Outer Cape is currently available for new development, the 3 percent of new land required represents 33 percent of the remaining buildable land, thus requiring more concentrated development in the remaining lands.

Town-Centered Scenario

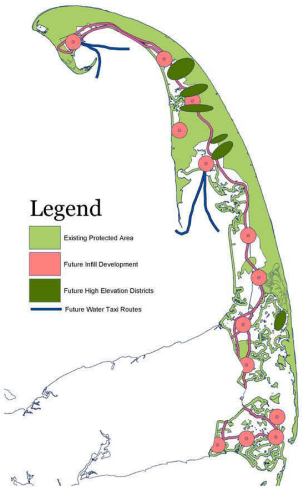
What if the communities of the Outer Cape encouraged concentrated development in already developed areas to enable the protection of landscape character in other places?

Scenario Premise:

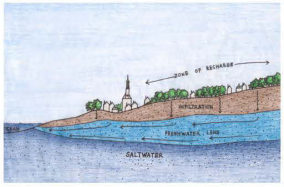
- Centralize development
  - Identify infill areas around town centers
- Centralize infrastructure
  - Integrate municipal water and sewage
- Implement public transit on land & water
  - Expand public bus system and water taxis
- Conserve natural and visual resources
  - Incorporate high elevation districts



Spatial Concept Diagram:



Town-Centered Development



Water Recharge Zone

Water Taxi as Public Transit

University of Massachusetts, Amherst
Department of Landscape Architecture & Regional Planning

Town-Centered Scenario

The Town-Centered Scenario asks the question: "what if future development on the Outer Cape is concentrated within and adjacent to existing village and town centers?" This scenario applies the contemporary planning strategy of "infill" development to appropriate existing town centers across the Outer Cape. It can be characterized as an anti-sprawl approach. It assumes that space is made available within existing centers to accommodate additional development, producing a higher density and greater population in these areas. It presumes that municipal water supply and waste disposal are provided to accommodate the additional population in a safe and sanitary manner. The scenario would require changes in zoning to reduce minimum lot size, to allow higher density on existing lots, and to provide flexibility in lot dimensions. The goals associated with the Town-Centered Scenario include: concentrated development, increased support for land conservation, housing affordability, and public transportation. Specific objectives in support of these goals would include:

- Provide affordable housing through smaller units in new construction, and in adapting existing structures.

- Expand public transportation to higher density areas including expanded bus service and seasonal water taxi service.

- Centralize infrastructure including municipal water and sewerage.

- Preserve the existing architectural character of Outer Cape villages through architectural guidelines, and site plan review.

- Use the transfer of development rights program to purchase development rights to out-of-town lands in return for the development benefit of higher in-town densities.

- Use the transfer of development rights program to conserve sensitive natural areas such as water supply protection districts and visually-important areas outside of towns including high elevation districts.

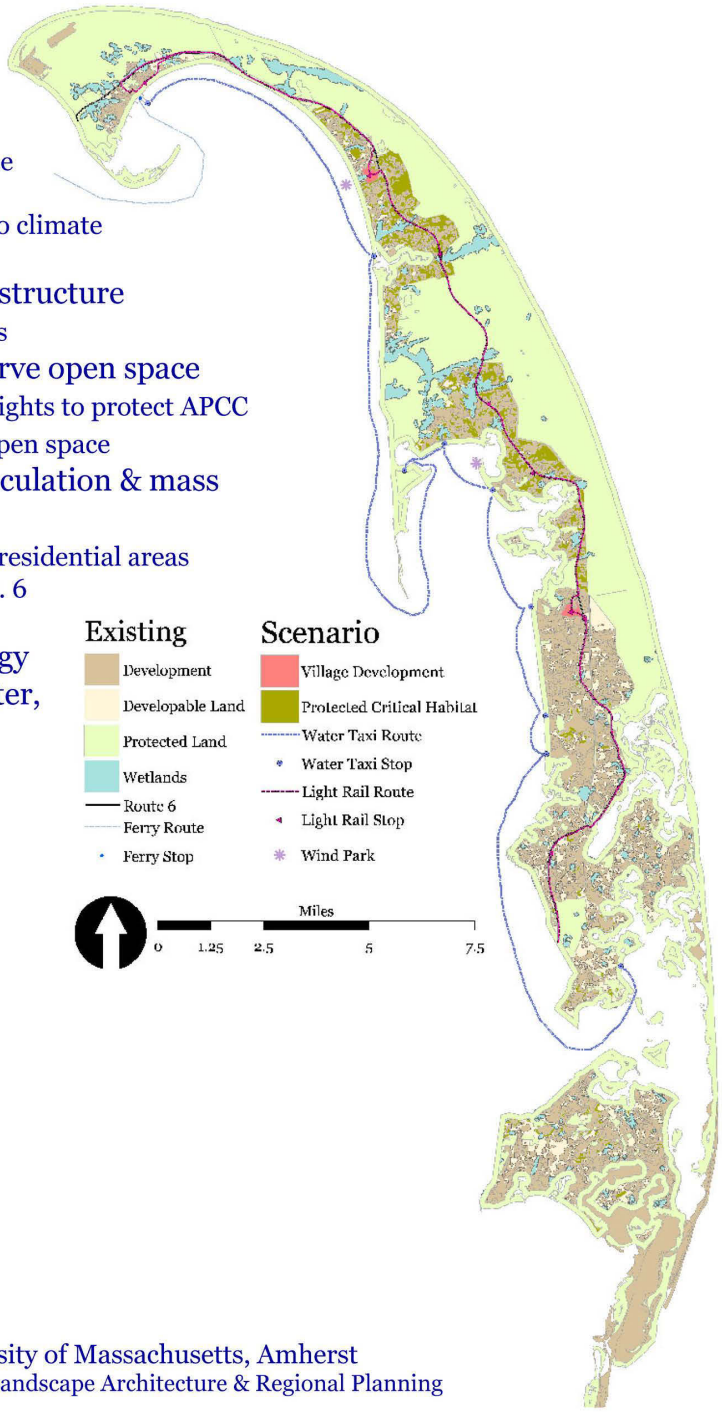
The landscape planning studio identified town centers on the Outer Cape that could potentially accommodate higher densities of infill development as well as sensitive areas such as high elevation districts that would be protected. Wellfleet Center would be the major infill zone, as would other existing centers in the Outer Cape including: Provincetown, Truro, Eastham, Orleans and Chatham. New high elevation protection districts in Truro and Wellfleet would complement the existing district in Provincetown.

New Villages Scenario

What if the Outer Cape concentrated development in new traditional-density village centers & conserved a significant amount of open space?

Scenario Premise:

- Maintain the Character of the Outer Cape
  - Mixed-Use Zoning & Village-Style Model Bylaw
  - Architecture a careful response to climate & culture
- Centralize development & infrastructure
  - Densely populated village centers
- Protect fragile habitats & conserve open space
  - Apply Tranfer of Development Rights to protect APCC Critical Habitat Areas & village open space
- Provide pedestrian-oriented circulation & mass transportation options
  - Village center within 1/4 mile of residential areas
  - Light Rail extending length of Rt. 6
  - Implement Water Taxi system
- Implement renewable technology for the managment of wastewater, stormwater & energy needs
  - Off-Shore wind farms
  - Constructed wetlands



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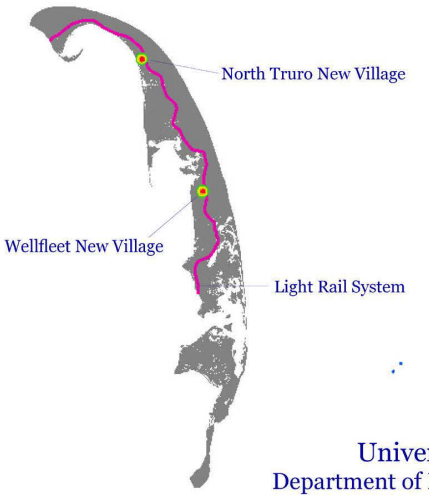

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New Villages Scenario

The New Villages Scenario asks: "what if the Outer Cape concentrated development in new traditional-density village centers and conserved a significant amount of new open space? This is a bold scenario in that it explores the creation new settlements, emulating traditional patterns of growth on the Outer Cape. The "New Villages" would be examples of the new urbanist communities that have been established around the United States. These "New Villages" would be situated where concentrated development could be supported environmentally and with existing infrastructure - thereby relieving development pressure from other lands. This scenario is progressive in that the higher density would enable the application of regenerative technology. The goals associated with the New Villages Scenario include: concentration of new growth, support for public transportation, employment of regenerative technology, and the creation of neo-traditional villages. Specific objectives in support of these goals would include:

- Site new villages on Route 6 to maximize the potential for a viable mass transit system.
- Provide a mix of commercial, institutional, and residential uses including affordable housing.
- Create a pedestrian-friendly compact community to reduce the dependence on auto travel.
- Provide a light rail spine parallel to Route 6 along the Outer Cape to link the new villages and other existing centers.
- Implement innovative stormwater management system to reduce off-site impacts and to maximize groundwater recharge.
- Employ constructed wetlands to create new wildlife habitat while accomplishing biological treatment of wastewater.

Using data represented by geographical information system map layers in combination with the NULA data, the landscape planning studio selected two locations for New Villages, one in Wellfleet and one in North Truro, with a light rail system serving the Outer Cape. Each New Village would be designed to optimize energy efficiency and renewable technology, by locating buildings for optimal solar orientation and wind protection. Waste would be processed with a biological wastewater treatment system, integrated with a stormwater management/ cleansing system.

Conclusion

These scenarios are not intended as plans for adoption. Rather they attempt to pose and explore specific "what if" questions regarding future development and land protection to raise awareness of alternatives to status quo development, and to explicitly attach likely consequences to planning, zoning, and land protection actions over time. In combination with the previous section of this report, the scenarios can be used to stimulate a dialogue within the Outer Cape community and individual citizens for active and informed decision-making to plan for the future.

ENDNOTES

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1 Brent Harold, *Wellfleet and the World: Themes of a Cherished and Threatened Place* (Wellfleet: Kinnacum Press, 2003), 210.

2 The term "Outer Cape" is used throughout this report to describe the six northernmost towns of Barnstable County, all of which have some land within the Cape Cod National Seashore boundaries. This region is also referred to as the "Lower Cape," which is an older and perhaps more correct usage, since the other towns of Barnstable County are often described as the "Upper Cape." "Outer Cape" is used here, however, for the sake of consistency; recent planning reports, including the park's *General Management Plan*, use the term.

3 National Park Service, U.S. Department of the Interior, *Forging a Collaborative Future: Cape Cod National Seashore General Management Plan* (1998).

4 Bill Doherty, Cape Conversations in Provincetown, June 17, 2003.

5 F. Heyer, *Preserving Rural Character: Planning Advisory Service Report No. 429* (Washington, DC: American Planning Association, 1990). Much exploration has also been done by rural sociologists to discover what "ruralness" means to local residents, but this research has focused on social relationships rather than on physical elements of the landscape. See: J.J. Beggs, V.A. Haines and J.S. Hurlbert, "Revisiting the Rural–Urban Contrast: Personal Networks in Non-Metropolitan and Metropolitan Settings," *Rural Sociology* 61, no. 2 (1996): 306–325.

6 Michelle Millage and Carol Tysdal from the University of British Columbia studied rural character in the Hazelmere Valley in the Frazer River Valley near Vancouver. They suggest that it is not enough to only preserve the physical features associated with rural character: "Politicians and bureaucrats may find themselves implementing the physical aspects of the plan and yet still not clearly understanding the concept of rural character retention and its importance…. Those features which make up rural character are inseparable from rural life; in preserving one we will preserve the other" (33). M. Millage and C. Tysdal, "Retention of Rural Character: the Role of the Landscape Architect," *Landscape Architectural Review* 7, no. 3 (1986): 31-33.

7 Historian David Glassberg suggests that a sense of place is derived from an intermingling of ones experience of a particular environment with personal psychological experiences and social and political values. Glassberg, "Sense of Place: A Report to the Massachusetts Foundation for the Humanities," June (1992).

8 Peter Smirniotopoulos discusses how the attachment of meaning to place is tied to both experience and memory: "The meaning of place has much more to do with substance and far less to do with style; yet stylistic concerns and imperatives continue to dominate discussion about place. This stylistic approach to place making fostered by a seemingly endless supply of design and real estate industry conferences, symposia and workshops, contrasts sharply with an understanding of the true meaning of place." P. T. Smirniotopoulos, "The Meaning of Place," *Urban Land* March (2001): 36-41. Geoffery Booth explores the dual nature of place making, both providing for everyday functions and increasing civic pride and appeal to the senses. G. Booth, "The New Sensory Law," *Urban Land* October (2000): 14-16. Most places that have a distinct sense of place not only serve as functional places for people to work and live in, but they also function as the "third place", the location where people can congregate to relax and connect. See L. Holst, "Place Making: Turning the Idea of Sense of Place into Reality," *Urban Land*, 60 no. 5 (2001) 136.

9 See Ervin H. Zube, James L. Sell and Jonathan G. Taylor, "Landscape Perception: Research, Application and Theory," *Landscape and Planning* 9, no. 1 (1982): 1-33, for an analysis of the paradigms that have been

followed in assessing perceived landscape values, and a discussion of underlying theoretical and conceptual foundations.

[10] Brush, Chenowith and Barman found significant differences in preference for roadside landscapes in Wisconsin, attributable to different knowledge levels of agricultural, woodland and urban edge landscapes. Urban tourists visiting the area favored forest landscapes over farm and urban edges. Similarly, forestry professionals and loggers valued wooded areas the most, while farmers desired to drive through farming areas. R. Brush, R.E. Chenoweth and T. Barman, "Group Differences in the Enjoyability of Driving Through Rural Landscapes," *Landscape and Urban Planning* 47, no.1-2 (2000): 39-45.

[11] Richard Florida delves into questions such as "What makes a place real?" and discusses the role of unpredictable outcomes of experience as a crucial aspect of places that are popular. R. Florida, "A New Sense of Place," *Urban Land*, March (2001): 39.

[12] James O'Connell, *Becoming Cape Cod: Creating a Seaside Resort* (University Press of New England, 2002), 135-136.

[13] Cape Cod Commission, Community Vision, 1998.

[14] Samuel Chamberlain, *Cape Cod in the Sun* (New York: Hastings House, 1937), 1.

[15] Paul Theroux, "Summertime on the Cape," in *Sunrise with Seamonsters: Travels and Discoveries*, *1964-1984* (Boston: Houghton Mifflin, 1985), 299, 302.

[16] In a 1992 study for the Massachusetts Foundation for the Humanities, David Glassberg and others noted that the sense of ownership and the notion of residents being land stewards that was strongly present in other Massachusetts communities was starkly absent on the Cape. "Discussions of place soon transmute into discussions of marketing" and "the sense of place on the Cape Cod is overwhelmingly shaped by efforts to supply the kinds of sensations that tourists expect to find there." Glassberg, "Sense of Place: A Report to the Massachusetts Foundation for the Humanities" (June 1992), 8.

[17] NPS, *Cape Cod National Seashore General Management Plan*, 90.

[18] Frank Szedlak Jr., Cape Conversations in Truro, June 26, 2003.

[19] Cape Cod Commission, *Cape Cod Regional Policy Plan (*Barnstable: Cape Cod Commission, 2001*)*, 16.

[20] Cape Cod Commission, *Cape Cod Regional Policy Plan.*

[21] Cape Cod Commission, *Outer Cape Capacity Study* (Barnstable MA: Cape Cod Commission, 1996), 2-3; O'Connell, *Becoming Cape Cod,* 133.

[22] Office of Federal Housing Enterprise Oversight, *Report House Price Index, Fourth Quarter 2002* (March 2003), 15.

[23] Summary from: Office of Federal Housing Enterprise Oversight Report: *House Price Index, Fourth Quarter 2002*, March 2003, 15.

[24] Cape Cod Commission, *Cape Cod Regional Policy Plan*, 43.

[25] S. X. Cadrin and J. King. *Stock Assessment of Yellowtail Flounder in the Cape Cod, Gulf of Maine Area.* (Woods Hole, National Marine Fisheries Service, Northeast Fisheries Science Center; Massachusetts Division of Marine Fisheries, Pocasset, MA, 2003). Also, J. Glasser, "Decline of the Cod Divides a New England Fishing Village," *U.S. News & World Report,* 134, no. 20, (June 2003), 44.

[26] Dramstad, Olson and Forman, *Landscape Ecology Principles in Landscape Architecture and Land-Use Planning.* (Washington, D.C.: Island Press, 1996), 22-23.

[27] Cape Cod Commission, *Cape Cod Regional Policy Plan*, 15.

[28] L. Martin, *Investigation of Effects of Ground Water Withdrawals from the Pamet and Chequessett Aquifers, Cape Cod National Seashore: Technical Report* 1987-91. (Fort Collins, CO: National Park Service, Water Resources Div., 1993); Provincetown Local Comprehensive Planning Committee, *Local Comprehensive Plan: Town of Provincetown* (2000).

[29] Barnstable County Coastal Resources Committee, *Coastal Resource Protection Update* (2002), 2.

[30] Robert N. Oldale, *Cape Cod Martha's Vineyard and Nantucket: the Geologic Story* (Yarmouthport, MA: On Cape Productions 1992), 37-38.

[31] Beth Schwarzman, *The Nature of Cape Cod* (Hanover, NH: University Press of New England, 2002), 17.

[32] Dorothy Sterling and Winifred Lubell*, The Outer Lands: A Natural History Guide to Cape Cod, Martha's Vineyard, Nantucket, Block Island and Long Island* (New York: Norton Press, 1978), 11.

[33] Sterling and Lubell, *The Outer Lands*, 16.

[34] Hurricanes in the past 100 years that have had major impacts on Cape Cod include the hurricane of 1938, in which winds reached 183 miles per hour. The hurricane of 1944 caused massive flooding and storm surges greater than 10 feet high. In 1954 a hurricane hit the east tip of Cape Cod, and most recently, Hurricane Bob struck on August 19, 1991. See David R. and Michael R. Dion, *Southern New England Tropical Storms and Hurricanes: A Ninety-eight Year Summary 1909-1997* (Taunton, MA: National Weather Service, 2001).

[35] Henry David Thoreau, *Cape Cod* (New York: Penguin Group 1987, first published in 1865), 225-226.

[36] O'Connell, *Becoming Cape Cod,* 8, 49. Cape Cod's population as a whole declined from about 36,000 in 1860 to almost 27,000 in 1920.

[37] O'Connell, *Becoming Cape Cod*, 63.

[38] Although World War II significantly reduced tourism and development on the Cape, several military installations, such as Camp Edwards, Woods Hole, Scorton Neck Beach, and Camp Wellfleet brought thousands of soldiers to the area. O'Connell observes that the troop buildup amounted to free advertising, as many soldiers returned to vacation on the Cape with their families after the war. James C. O'Connell, *Becoming Cape Cod,* 62.

[39] Lewis M. Alexander, "The Impact of Tourism on the Economy of Cape Cod, Massachusetts," *Economic Geography* 29, (1953): 325.

[40] O'Connell, *Becoming Cape Cod,* 98.

[41] Charles H.W. Foster, *The Cape Cod National Seashore: A Landmark Alliance* (Hanover, NH: University Press of New England, 1985), 4-5.

[42] Francis P. Burling, T*he Birth of the Cape Cod National Seashore* (Plymouth, MA: Leyden Press, Inc., 1977), 4. Page citations from Eastern National Press edition, 2000.

[43] Burling, *The Birth of the Cape Cod National Seashore*, 4.

[44] Massachusetts Department of Commerce, *Plan, [Past, Promise] in Barnstable County,* 1955, .n.p. in O'Connell, *Becoming Cape Cod,* 112-113.

[45] National Park Service, *Cape Cod National Seashore: A Proposal*, (Washington, D.C.: National Park Service, 1959).

[46] Burling, *The Birth of the Cape Cod National Seashore,* 5.

[47] National Park Service, *A report on our vanishing Shoreline*…, (Washington, D.C.: National Park Service, 1955), 33.

[48] Burling, *The Birth of the Cape Cod National Seashore*, 12-13.

[49] Burling, *The Birth of the Cape Cod National Seashore*, 16.

[50] [Public Law 87-126, Section 7 (b) (1)]; [Public Law 87-126, Section 7 (b) (1)]

[51] Burling, *The Birth of the Cape Cod National Seashore*, 22-27.

[52] The hearings were held by the Senate's Subcommittee on Public Lands of the Committee on Interior and Insular Affairs. The section that follows relies heavily on David Jenkins' digest of the 820 pages of hearings transcripts. David Jenkins, "Culture of Preservation: The Cape Cod National Seashore Hearings, 1959-1961," Draft Report, (Boston, MA: National Park Service Boston Support Office January 2003).

[53] Burling, *The Birth of the Cape Cod National Seashore*, 10.

[54] Burling, *The Birth of the Cape Cod National Seashore*, 26

[55] Jenkins, "Culture of Preservation," 21.

[56] Marise Fawsett, *Cape Cod Annals* (Bowie, MD: Heritage Books, 1990), 97.

[57] O'Connell, *Becoming Cape Cod*, 64.

[58] Jenkins, "Culture of Preservation," 23.

[59] Jenkins, "Culture of Preservation," 5.

[60] Jenkins, "Culture of Preservation," 25.

[61] Jenkins, "Culture of Preservation," 17.

[62] Burling, *The Birth of the Cape Cod National Seashore*, 45.

[63] Jenkins, "Culture of Preservation," 13

[64] Jenkins, "Culture of Preservation," 7, 8.

[65] Jenkins, "Culture of Preservation," 10.

[66] Robert Finch notes that "if there is one area in which the Cape has produced a nationally recognized literature, it has been what is loosely referred to as nature writing….At least two Cape-based books have achieved the status of classics." Robert Finch, ed., *A Place Apart: A Cape Cod Reader,* (New York: Norton 1993), 185.

[67] Burling, *The Birth of the Cape Cod National Seashore*, 28.

[68] Cape Cod's population doubled from 1950 to 1970, then doubled again by 1990, jumping from 96,656 to 186,605. With the rise in the permanent population, the real estate and the service economy have eclipsed tourism as the primary economic force on the Cape. O'Connell, *Becoming Cape Cod,* 126, 128.

[69] G.H. Sanders, *Developing National Parks in Densely Populated Areas: Two Case Studies*. Master's Thesis UMass Amherst, 1987.

[70] For further information on issues related to off road vehicular use at CCNS see: Eileen Mueller "Surfcasters and Off Road Vehicle Use at Cape Cod National Seashore," (Boston MA: National Park Service, Northeast Ethnography Program, 2001).

[71] Foster, *The Cape Cod National Seashore*, *A Landmark,* 33.

[72] Cape Cod Commission, *Cape Cod Regional Policy Plan,* 2.

[73] Cape Cod Commission, *Cape Cod Regional Policy Plan,* 4.

[74] Cape Cod Commission, *Cape Cod Regional Policy Plan,* iii.

[75] Philip Herr, "The Cape Cod Village: An Endangered Species," (Cambridge, MA: Design and Development Program, Department of Urban Studies and Planning, Massachusetts Institute of Technology, 1991), 2.

[76] The Town of Orleans has recently replaced its Official Town Plan of 1991, with its Local Comprehensive Plan of 1999. Similarly the town of Provincetown expanded on its 1988 Master Plan by approving its local comprehensive plan in April of 2000. Orleans Local Comprehensive Plan Committee, *Orleans Local Comprehensive Plan*, (1999) Provincetown Local Comprehensive Plan Committee, Provincetown Local Comprehensive Plan, (1999).

[77] Cape Cod Commission, Transportation Staff, *Cape Cod Traffic Counting Report,* prepared in cooperation with the Massachusetts Highway Department and the United States Department of Transportation- Federal Highway Administration, (1993). Gives a summary of traffic counts between 1984-1993. Volpe National Transportation Systems Center for the Cape Cod Regional Transit Authority, Cape Cod Transit Task Force*,* U.S. Department of Transportation, *Five Year Public Transportation Plan (Draft)*, (2001).

[78] For example, in response to increasing development on the Cape in the 1980s, the Association for the Preservation of Cape Cod, the nonprofit organization, produced a planning document titled *Options for Cape Cod's Future: APCC's Growth Report, 1985*. This document includes growth forecasts and threats to the Cape's natural resources and visual character and suggests techniques for managing growth. Woods Hole Oceanographic Institute often conducts studies and produces reports that provide information about the natural resources of the Outer Cape, such as *Beach Changes and Management Options for Nauset Barrier Beach and Orleans Town Beach, Cape Cod, MA,* (Woods Hole, MA: 1998). The NPS also benefits from studies conducted by academic institutions, such as the 1996 report from the Massachusetts Institute of Technology titled, *Cape Cod National Seashore Rapid Ethnographic Assessment Report* investigating the Wampanoag, Portuguese and Portuguese-American, and Cape Verdean cultures on Cape Cod. In 1989 the University of Massachusetts Department of Landscape Architecture and Regional Planning and the Center for Rural Massachusetts produced the *Eastham/Wellfleet Route 6 Corridor Management Study,* which addressed traffic, parking and land-use problems associated with Route 6. In 1994 the School of Natural Resources at the University of Vermont conducted the *Cape Cod National Seashore Visitor and Resident Study* to learn more about the habits, attitudes and socio-economic status of park visitors and residents and to quantify the economic impact of the park on the region.

[79] See for example, National Park Service, Department of the Interior, *Assessment of Alternatives for a Development Concept Plan: Eastham Area, Cape Cod National Seashore* (Denver Service Center, 1978); National Park Service, Department of the Interior, *Eastham Area Development Concept Plan and Transportation Analysis, Cape Cod National Seashore*, (Denver Service Center, 1981). National Park Service, Department of the

Interior, *Water Resources Management Plan for Cape Cod National Seashore.* (1999). This plan is an update of an earlier 1981 plan, and it focuses on the most important water resource issues facing the park including the impacts of groundwater withdrawal and cultural impacts to pond water quality.

[80] Department of the Interior, National Park Service, *Resource Management Plan, Cape Cod National Seashore.* (prepared by David Manski and Michael Whatley, 1992).

[81] Department of the Interior, National Park Service, *The Strategic Plan for Cape Cod National Seashore: Fiscal Year 2000 – 2005 (October 1, 1999 – September 30, 2005)*, (Wellfleet MA, 1999).

[82] See L. Martin, J. Portnoy, and C. Roman, *Water Quality Monitoring and Research Plans for Kettle Ponds, Cape Cod National Seashore: Technical report of a workshop on March 2-3, 1992* (Fort Collins, CO: National Park Service, Water Resources Division, 1993). The 2-day workshop held on March 2-3, 1992 workshop involved numerous scientists and resource managers. It covered pond ecological processes and human use impacts with the intention of aiding in the creation of a kettle pond monitoring program for Cape Cod National Seashore.

[83] National Park Service, *Baseline Water Quality Data Inventory and Analysis: Cape Cod National Seashore, Technical Report, (*Fort Collins, CO, National Park Service Water Resources Division, 1995).

[84] U.S. Department of the Interior, National Park Service, Natural Resource Information Division, Inventory and Monitoring Program*, Inventory and Prototype Monitoring of Natural Resources in Selected National Park System Units 1999-2000*. In 1999, the seashore and the Biological Resources Division of the U.S. Geological Survey at the University of Rhode Island produced a conceptual plan for monitoring of natural resources in the CCNS.

[85] U.S. Department of the Interior, National Park Service, Division of Cultural Resources, North Atlantic Regional Office, *Archeological Survey of Cape Cod National Seashore* (1980).

[86] U.S. Department of the Interior, National Park Service, Olmsted Center for Landscape Preservation*, Cultural Landscape Report for Truro Highlands Historic District (*Boston: 1995).

[87] R. D. Holmes, C. D. Hertz and M. T. Mulholland, *Historic Cultural Land Use Study of Lower Cape Cod: A Study of the Historical Archeology and History of the Cape Cod National Seashore and the Surrounding Region* (Amherst MA: Environmental Institute, University of Massachusetts, Amherst, MA, and Lowell, MA: Archeology Branch, National Park Service, 1998).

[88] NPS, *Cape Cod National Seashore General Management Plan.*

[89] NPS, *Cape Cod National Seashore General Management Plan*, 17.

[90] NPS, *Cape Cod National Seashore General Management Plan*, 8.

[91] Frank Szedlak Jr., Cape Conversations in Truro, June 26, 2003.

[92] Ruth Sprague, Cape Conversations in Truro, June 26, 2003.

[93] Robert N. Oldale, *Cape Cod, Martha's Vineyard and Nantucket, The Geologic Story, revised edition* (Yarmouthport, MA: On Cape Publications, 2001), 151-158.

[94] John Hay, "Dune Country," in *A Place Apart: A Cape Cod Reader,* ed. Robert Finch (New York: Norton 1993), 222.

[95] Patrick, Oona Hyla, "The Shack of Art and Healing" in *Post Road Magazine* [online magazine]. Provincetown, MA: 2003. Accessed April 5, 2003. Available from world wide web: http://www.postroadmag.com/HTMLPages/PostRoad/Issue_4/Nonfiction4/Patrick.htm.

[96] Paul Schneider, *The Enduring Shore: A History of Cape Cod, Martha's Vineyard and Nantucket.* (New York: Henry Holt and Company, 2000), 87.

[97] Thoreau, *Cape Cod*, 41, 235.

[98] Henry C. Kittredge, *Cape Cod: Its People and Their History*, second edition (Boston: Houghton Mifflin Co., 1968), 230.

[99] George Rockwell Putnam, *Lighthouses and Lightships of the United States.* (Boston: Houghton Mifflin, 1933).

[100] National Park Service, Department of the Interior, *Heritage: Lifesavers on Cape Cod* [online], National Seashore Website, Wellfleet MA: Department of the Interior, 2003. Accessed March, 20 2003. Available from world wide web: http//:www.nps.gov/caco/heritage/lifesavers.html.

[101] Paul Schneider, *The Enduring Shore,* 206.

[102] Thoreau, *Cape Cod*, 67.

[103] O'Connell, *Becoming Cape Cod,* 33, 41, 53, 98, 105.

[104] Edward Sabin, Cape Conversations in Eastham, June 22, 2003.

[105] Frank Szedlak Jr., Cape Conversations in Truro, June 26, 2003.

[106] The 1981 ORV Management Plan was challenged in U.S. District Court, but the amended plan in 1985, which established an 8.5 mile ORV corridor on the 40 miles of outer beach within the Seashore (50 FR 31181), was upheld by the U.S. Court of Appeals in 1989. National Park Service, Department of the Interior, ORV Management Plan, Cape Cod National Seashore (1981, Amended 1985) (50 FR 31181).

[107] Mueller, "Surfcasters and Off Road Vehicle Use," 11.

[108] Mueller, "Surfcasters and Off Road Vehicle Use" 9-15.

[109] Kittredge, *Cape Cod: Its People and Their History.*

[110] United States Fish and Wildlife Service, Piping Plover Critical Habitat, [online]. U.S. Fish and Wildlife Service Piping Plover Critical Habitat. Washing D.C.: US Department of the Interior, 2001. Accessed August 20, 2003. Available from world wide web: http://plover.fws.gov/q&a.html.

[111] John Meisel, "Piping Plover Monitoring Report for 1991" unpublished CACO Natural Resource Report 9101 (South Wellfleet, MA: 1991).

[112] Mueller, "Surfcasters and Off Road Vehicle Use," 17.

[113] Henry Beston, *The Outermost House.* 10 (Garden City, NJ: Doubleday, Doran and Co., 1928). (page citations are to the Viking Compass Edition, 1970).

[114] John Thomas, Writer and Provincetown resident, interview by Bill Burke, Cape Cod National Seashore, NPS, March 19, 2003.

[115] Paul Rosen, interview by Bill Burke, Cape Cod National Seashore, NPS, March 10, 2003.

[116] Donald B. Sparrow, *Growing Up on Cape Cod: Four Brothers Learning to Stand Tall* (Eastham: Great Oaks Publishing, 1999), 95.

[117] Woods Hole Research Center, "Critical Habitats of Cape Cod". In *An Electronic Atlas of the Cape Cod Environment* [online]. Woods Hole, MA: Woods Hole Research Center, 1998. Accessed March 30, 2003. Available from World Wide Web: http://www.whrc.org/CCAtlas/habitats/crit_habs.htm.

[118] National Park Service, Department of the Interior, *Water Resources Management Plan for Cape Cod National Seashore* [online]. Wellfleet, MA: CCNS, 1999. Accessed June 6, 2003. Available from World Wide Web: http://www.nps.gov/caco/management/water_resources_plan.

[119] Kurt S. Pregitzer,"The Ecology of Northern White-Cedar," in *Workshop Proceedings Northern White Cedar in Michigan, February 21-22 1990,* ed. D. O. Lantagne (Sault St. Marie, MI: Agricultural Experiment Station, Michigan State University, 1990).

[120] Robert Finch, Special Places on the Cape and the Islands (Beverly: Commonwealth Editions, 2003), 134.

[121] Natural Heritage and Endangered Species Program, Massachusetts Division of Fisheries and Wildlife, *Rare Species Occurrence Lists by Town* [online]. Massachusetts Division of Fisheries and Wildlife, 2003. Accessed March 3, 2003. Available from World Wide Web: http://www.state.ma.us/dfwele/dfw/nhesp/nhtown.htm.

[122] Cindy Moe, Cape Conversations in Eastham, June 22, 2003.

[123] For further discussion see, Anthony Flint, "Battle Over the Beachfront: Cape shellfishermen beat back homeowner's bid to ban them," *Boston Globe,* August 31 2003, Section A.

[124] Jim Coogan and Jack Sheedy, Chapter 3 excerpt, "Oysters, Iron Ore and Oxcarts" in Cape Cod Companion: The History and Mystery of Old Cape Cod [online]. Hyannis, MA: The Barnstable Patriot, 2003. Accessed October 14, 2003. Available on the World Wide Web, http://www.barnstablepatriot.com/cccompanion/chapter3.html.

[125] Eleanor Dumais, Cape Conversations in Truro, June 26, 2003.

[126] Diana Worthington, North Truro Resident, interview by Hope Morrill, Cape Cod National Seashore, NPS, March 3, 2003.

[127] David Jenkins, "Culture of Preservation," 32.

[128] Fawsett, *Cape Cod*, 89.

[129] Fawsett, *Cape Cod*, 90.

[130] Fawsett, *Cape Cod*, 90-91.

[131] Mary Rogers Bangs, Old Cape Cod (Cambridge, MA: Riverside Press, 1920), 172.

[132] Fawsett, *Cape Cod*, 93-95.

[133] Seth Rolbein, "An Historic Kind of Drag: Trawling within Site of Land," *The Cape Cod Voice,* (June 19, 2003), vo1. 3, no. 4, 6.

[134] O'Connell, *Becoming Cape Cod*, 81-84.

[135] O'Connell, *Becoming Cape Cod*, 90.

[136] O'Connell, *Becoming Cape Cod,* 90.

[137] Cathy Skowron interview by Hope Morrill, NPS, March 10, 2003, Cape Cod National Seashore.

[138] Jenkins, "Culture of Preservation," 37.

[139] D. Lombardo, *Images of America: Wellfleet A Cape Cod Village*, (Charleston SC: Arcadia Publishing, 2000), 34.

[140] Two of the more famous wharves are Commercial Wharf, built in 1835 by Paine Atwood and Elisha Perry, and Mercantile Wharf, erected in 1870 at west end of Mayo Beach. Judy Stetson, (*Wellfleet A Pictorial History* Wellfleet: The Wellfleet Historical Society Incorporated, 1963) 23.

[141] Harold, *Wellfleet and the World,* 48.

[142] Jeremiah Digges, *Cape Cod Pilot* (American Guide Series – Federal Writer's Project, Works Progress Administration), (Provincetown and New York: Modern Pilgrim Press and the Viking Press, 1937) 1.

[143] David Jenkins, "Culture of Preservation," 29.

[144] Frank Szedlak, Jr., Cape Conversations in Truro, June 26, 2003.

[145] Massachusetts Department of Environmental Affairs *Community Profiles: Wellfleet* [online] Accessed March 12, 2003, Available on world wide web: http://commpres.env.state.ma.us/community/cmty_main.asp?communityID=318.

[146] Cindi Moe, Cape Conversations in Eastham, June 22, 2003.

[147] US Department of Commerce, *Census 2000*. Data for Outer Cape Towns. Washington D.C.: US Department of Commerce, 2000.

[148] Jenkins, "Culture of Preservation", 5.

[149] Schwarzman, *The Nature of Cape Cod,* 32.

[150] Mario Di Gregorio and Jeff Wallner, *A Vanishing Heritage: Wildflowers of Cape Cod* (Missoula, MT: Mountain Press, 1989).

[151] G. Motzkin, R. Eberhardt, B. Hall, D. R. Foster, J. Harrod, and D. MacDonald, "Vegetation variation across Cape Cod Massachusetts: Environmental and Historical Determinants," *Journal of Biogeography* 29 (2002):1440.

[152] G.M. Day, "The Indian as an Ecological Factor in the Northeastern Forest," Ecology, 34, no.2 (1953): 329-346.

[153] W.L. Grant, ed., *Voyages of Samuel de Champlain 1604-1618* (New York: 1907, 61-72, 95), from H.S Russell, *A Long, Deep Furrow: three centuries of farming in New England* (Hanover: University Press of New England, 1976), 4.

[154] G.P. Winship ed., *Sailors' Narratives of Voyages along the New England Coast 1524-162 (*Boston: 1905), 240. from H.S Russell, *A Long, Deep Furrow: three centuries of farming in New England* (Hanover: University Press of New England, 1976).

[155] Russell, *A Long Deep Furrow*, 135.

[156] Fawsett, *Cape Cod Annals,* 81.

[157] Joyce Johnson, Sculptor in Eastham, Interview by Bill Burke, Cape Cod National Seashore, NPS, March 19, 2003.

[158] R.L. Friedman, "Governing the Land: an Environmental History of Cape Cod, Massachusetts" (Ph. D. diss., Brandeis University, Waltham, MA, 1993), 42.

[159] Hall, B., G. Motzkin, D.R. Foster, M. Syfert and J. Burk. "Three Hundred Years of Forest and Land-Use Change in Massachusetts." *Journal of Biogeography* 29 (2002): 1319-1335.

[160] Fawsett, *Cape Cod*, 81.

[161] James C. O'Connell, *Becoming Cape Cod,* 73.

[162] National Park Service, U.S. Department of the Interior, *Vegetative Cover Type Report Cape Cod National Seashore* by W. E. Randall, (South Wellfleet, MA, 1962).

[163] Woods Hole Research Center, "Critical Habitats" and Carlson, L., M. Babione, P.J. Godfrey and A. Fowler. *Ecological Survey of Heathlands in Cape Cod National Seashore* (South Wellfleet MA: National Park Service, 1991).

[164] Holmes, Hertz and Mulholland, *Historic Cultural Land Use Study of Lower Cape Cod,* 22-29.

[165] Fawsett, *Cape Cod*, 84.

[166] Sparrow, *Growing Up on Cape Cod*, 37.

[167] Ed Sabin, Cape Cod Conversations in Eastham, June 22, 2003.

[168] See G. Motzkin, R. Eberhardt, B. Hall, D. R. Foster, J. Harrod, and D. MacDonald, "Vegetation variation across Cape Cod Massachusetts: Environmental and Historical Determinants," *Journal of Biogeography* 29 (2002):1439-1454, for a complete discussion of the effects of past land use practices on present day vegetation on the Cape.

[169] W.A. Patterson and J.F. O'Keefe, *The Vegetation History of the Pamet Cranberry Bog, North Truro, Massachusetts* (Amherst, MA: Department of Forestry and Wildlife Management, University of Massachusetts, 1980).

[170] T.A. Stone, "The Land Cover and Land Use of Cape Cod 1951 to 1990". *Environment Cape Cod*, (1, 1999), 35-49.

[171] Motzkin et al, "Vegetation variation across Cape Cod Massachusetts," 2002.

[172] Jenkins, "Culture of Preservation," 4.

[173] National Park Service, Department of the Interior, *Cultural Landscape Report for Fort Hill, Cape Cod National Seashore*, by Lynn Kneedler-Schad, Katherine Lacy and Larry Lowenthal, Olmsted Center for Landscape Preservation (Boston: 1995), 1-56.

[174] NPS, Department of the Interior, *Cultural Landscape Report for Fort Hill*, 98.

[175] Patricia Crow, Cape Conversations in Provincetown, June 17, 2003.

[176] National Park Service, Department of the Interior, *Cultural Landscape Report for Truro Highlands, Cape Cod National Seashore*, Olmstead Center for Landscape Preservation (Boston: 1995) 1-56.

[177] Eleanor Dumais, Cape Conversations in Truro, June 26, 2003.

[178] Cape Cod Cranberry Growers' Association, *Cranberries: A Taste of America; Cranberries: the Splendor of the Crimson Fruit,* [online]. East Wareham, MA: 2002. Accessed 28, April 2003. Available from world wide web: http://www.cranberries.org/thecranberry/tframeset.html.

[179] Patricia Crow, Cape Cod Conversations in Provincetown, June 17, 2003.

[180] "Growing up with Cranberries," *Cape Code Life*, Vol.12, Number Five, Oct/Nov 1990) (no author)

[181] Bill Doherty, Cape Conversations in Provincetown, June 17, 2003.

[182] J. D. Thomas, *Cranberry Harvest, A History of Cranberry Growing in Massachusetts (*New Bedford MA: Spinner, 1990).

[183] Cape Cod Cranberry Growers' Association, *Cranberries: A Taste of America*.

[184] Patterson and O'Keefe, *The Vegetation History*.

[185] Hillary Quarles, Olmsted Center for Landscape Preservation "Cultural Landscape Inventory Summary Report: Pamet Cranberry Bog" (1995). 5-8.

[186] Kaimi Rose Lum, Cape Conversations in Provincetown, June 17, 2003.

[187] Jenkins, "Culture of Preservation," 6.

[188] Jenkins, "Culture of Preservation," 6.

[189] Joyce Johnson, Sculptor in Eastham, Interview by Bill Burke, Cape Cod National Seashore, NPS, March 19, 2003.

[190] Necee Regis, "Seven Days in the Dunes," *Boston Sunday Globe*, August 24, 2003, N.E. Travel Section, M9.

[191] Harold, *Wellfleet and the World,* 66.

[192] Exchange between Cyndi Moe of Wellfleet and Edward Sabin of Eastham, Eastham Cape Conversations, June 22, 2003.

[193] Kittredge, *Cape Cod, Its People*, 154.

[194] William D. Hershey, *Cape Cod: 17th and 18th Century Roads, with particular attention to the King's Highway,* Courtesy of National Park Service, Wellfleet, MA 1962, 13-14, 57.

[195] L. Loparto and M Steinitzm, "Settlement and Social Development," in *Historic and Archaeological Resources of Cape Cod and the Islands,* ed. J.W. Bradley. (Boston: Massachusetts Historical Commission, 1987), 80.

[196] O'Connell, *Becoming Cape Cod*, 29, 47, 52-53.

[197] W.H. Bartlett, *The Pilgrim Fathers of the Founders of New England in the Reign of James the First* (London: Arthur Hall, Virtue and Co., 1853), 190.

[198] Holmes et al, *Historic Cultural Land Use*, 128.

[199] Jenkins, "Culture of Preservation," 5.

[200] Jenkins, "Culture of Preservation," 9.

[201] James Hadley, Cape Conversations in Provincetown, June 17, 2003.

[202] Henry David Thoreau, "A Cape Cod House," in *A Place Apart: A Cape Cod Reader, ed. Robert Finch* (New York: Norton, 1993), 40.

[203] O'Connell, *Becoming Cape Cod*, 3.

[204] Henry James, *The Bostonians*, 356, (London and New York: Macmillan and Co., 1886), (page citation is to Random House Modern Library Edition, 1956).

[205] Judy Stetson, *Wellfleet: A Pictorial History*, 59.

[206] "A Genuine Cape Cod House", *Better Homes & Garden*, January 1938 (no author listed).

[207] Wesley Reid and Michael Ulrich, interview by Nidhi Madan and Anna Ryan, UMass/Larp, telephone interview, April 4, 2003.

[208] Henry Beston, *The Outermost House*, 14.

[209] Joyce Johnson, interview by Emily Clarke and Laurice Ellsworth, Umass/Larp, telephone interview, April 2003.

[210] Dana Eldrige, interview by Emily Clarke and Laurice Ellsworth, Umass/Larp, telephone interview, April 2003.

[211] Beston, *Outermost House*, 157.

[212] Joyce Johnson, interview by Emily Clarke and Laurice Ellsworth, Umass/Larp, telephone interview, April 2003.

[213] Harry Kemp, Cape's End, *The Sea and the Dunes*, 10.

[214] Kevin Lynch, *The Image of the City* (Cambridge: MIT Press, 1960), 4.

[215] Bill Doherty, Cape Conversations in Provincetown, June 17, 2003.

[216] James Hadley, Cape Conversations in Provincetown, June 17, 2003.

[217] Frank Szedlak, Jr., Cape Conversations in Truro, June 26, 2003.

[218] A developer intended the new Post Office to anchor a strip of stores that might have constituted a new commercial center for Wellfleet, but the stores never materialized, leaving the Post Office relatively isolated on the highway.

[219] Cyndi Moe, Cape Conversations in Eastham, June 22, 2003.

[220] Cyndi Moe, Cape Conversations in Eastham, June 22, 2003.

[221] Senator Leverett Saltonstall, quoted in David Jenkins, "Culture of Preservation," 17.

[222] Bill Doherty, Cape Conversations in Provincetown, June 17, 2003.

[223] Robert B. Riley, "Attachment to the Ordinary Landscape," in *Place Attachment,* ed. Irwin Altman and Setha Low (New York: Plenum, 1992), 20.

[224] Patricia Crow, Cape Conversations in Provincetown, June 17, 2003.

[225] Cape Cod Commission, "An Introduction to the Cape Cod Commission Model Regulations and Bylaws Project." In *The Official Website of the Cape Cod Commission* [online], Barnstable, MA, November 5, 2003

[Accessed September 2003]. Available from World Wide Web: http://www.capecodcommission.org/bylaws/.

[226] Massachusetts Department of Conservation and Recreation recently published, *Reading the Land: Massachusetts Heritage Landscapes, A Guide to Identification and Protection.* April 2003.

[227] Regarding agricultural use notices see, Tom Daniels and Deborah Bowers, *Holding Our Ground: Protecting America's Farms and Farmland* (Washington D.C.: Island Press, 1997).

LIST OF FIGURES

Preface

1: Corn Hill, Truro, MA, 2003. (Photo: UMass)

2: Two women walking on beach. (Courtesy: Cape Cod National Seashore)

Methodology

3: Artistic view of Wellfleet, MA, 2003. (Photo: UMass)

4: Landscape character public meeting, Wellfleet public library, 2003. (Photo: UMass)

Part I: Character, Current Trends, and History

5: Cape Cod, 1795. (Courtesy: Wellfleet Public Library)

6: Physiographic regions of the Outer Cape. (Source: UMass/MassGIS)

7: Net usable land area on Outer Cape today (Source: UMass/MassGIS)

8: Photographic simulation of housing redevelopment, Eastham, MA, 2003. (Photo: UMass)

9: Housing construction, Truro, MA, 2003. (Photo: UMass)

10: Land for sale, Truro, MA, 2003. (Photo: UMass)

11: Aerial view of shellfishing beds, Wellfleet, MA, 2003. (Copyright: PANDION)

12: Cape Cod population change, 1950-1990. (Source: Thomas A. Stone, *Losing Cape Cod: Landscape Change over 40 Years*, Woods Hole, MA: Woods Hole Research Center, 1991)

13: Glacial retreat. (Source: UMass from Dorothy Sterling and Winifred Lubell, *The Outer Lands*)

14: Provincetown fleet. (Courtesy: Cape Cod National Seashore)

15: Cars at Nauset Light parking lot. (Courtesy: Eastham Historical Society)

16: Swimmers, ca. 1920. (Courtesy: Cape Cod National Seashore)

17: Clambake, Billingsgate Island, Wellfleet, MA, ca. 1915. (Courtesy: Cape Cod National Seashore)

18: Ford and trailer, Cove Road, Wellfleet, MA, 1944. (Courtesy: Bob Arnold, Photo by Carey E. Melville)

19: Day's cottages, Truro, MA, 2003. (Photo: UMass)

20: Pres. John F. Kennedy signing the Cape Cod National Seashore into law, 1961. (Courtesy: Cape Cod National Seashore)

21: Cars at Coast Guard Beach, Eastham, MA, 1966. (Courtesy: Cape Cod National Seashore)

22: Coast Guard Beach, Eastham, MA, ca. 1965. (Courtesy: Cape Cod National Seashore)

23: Man in catboat. (Courtesy: Cape Cod National Seashore)

24: Thanksgiving dinner at Ed Knowles house, Eastham, MA, ca. 1920.
(Courtesy: Cape Cod National Seashore)

25: Captain Penniman with gun and birds, Eastham, MA.
(Courtesy: Cape Cod National Seashore)

26: Sunset view of the ocean from Wellfleet bluffs, 2003. (Photo: UMass)

27: Park Ranger teaching surfcasting, 2003. (Courtesy: Cape Cod National Seashore)

28: Boardwalk in red maple forest, Fort Hill, MA. (Photo: UMass)

29: Map indicating area of heaviest nude sunbathing.
(Source: 1974 National Park Service study, *Management Alternatives to Nude Bathing and Related Concerns*)

Part II: The Cultural Landscape: Landscape Headings

30: Rock Harbor, Orleans, MA, 2003. (Photo: UMass)

31: Bicyclists on trail, 2003. (Photo: UMass)

32: Beach architecture, Truro, MA, 2003. (Source: UMass)

GREAT BEACH

33: Aerial view, Great Beach, 2003. (Copyright: PANDION)

34: Cliffs along Great Beach, 2003. (Source: UMass)

35: Beach grass, Great Beach, 2003. (Photo: UMass)

36: Cliffs, Great Beach, 2003. (Photo: UMass)

37: Parabolic dunes, Provincetown, MA, 2003. (Source: UMass)

38: On the Great Beach, 2003. (Photo: UMass)

39: Access to Meadow Beach, Truro, MA, 2003. (Photo: UMass)

40: Erosion, Great Beach, 2003. (Photo: UMass)

41: Sketch and map indicating existing lighthouses on the Outer Cape, 2003. (Source: UMass)

42: Shipwreck. (Courtesy: Cape Cod National Seashore)

43: Race Point Lighthouse, Provincetown, MA, 2003. (Photo: UMass)

44: Postcard, Race Point Life Saving Station. (Source: James O'Connell, *Becoming Cape Cod*)

45: Marconi Beach, Wellfleet, MA, 2003. (Photo: UMass)

46: Town beaches, 2003. (Source: UMass based on sources provided by the National Park Service)

47: Race Point, Provincetown, MA, 2003. (Photo: UMass)

48: Surfcasting, Race Point, Provincetown, MA, 2003. (Photo: UMass)

49: Off-road vehicle route map, 2003. (Source: UMass based on National Park Service sources)

50: Race Point, Provincetown, MA, 2003. (Photo: UMass)

51: Protection enclosures surround the nests of piping plovers, reducing predation and preventing people from trampling on them, Race Point, Provincetown, MA, 2003. (Photo: UMass)

52: Piping plover distribution, Outer Cape Cod, 1988-1993. (Source: UMass/MassGIS)

53: Aerial view, dunes in Provincetown, MA, 2003. (Copyright: PANDION)

WATERWAYS

54: Aerial view, Nauset Marsh, Eastham, MA, 2003. (Copyright: PANDION)

55: Distinctive hydrography of the Outer Cape. (Source: UMass/MassGIS)

56: Rock Harbor, Orleans, MA, 2003. (Photo: UMass)

57: Wellfleet marsh, Duck Creek, Wellfleet, MA, 2003. (Photo: UMass)

58: Salt Marsh, 2003. (Photo: UMass)

59: Aerial view, kettle ponds in Wellfleet, MA, 2003. (Copyright: PANDION)

60: Woman floating in kettle pond, Wellfleet, MA, 2003. (Photo: UMass)

61: Tannin stained water, Atlantic white cedar swamp, Cape Cod National Seashore, Wellfleet, MA, 2003. (Photo: UMass)

62: Birdwatchers, 2003. (Courtesy: Cape Cod National Seashore)

63: Clam diggers, Provincetown, MA. (Courtesy: Cape Cod National Seashore)

64: Shellfishing leases, Wellfleet, MA, 2003. (Source: UMass/Wellfleet Shellfishing Department)

65: The fish man, Wellfleet, MA, 1948. (Courtesy: Carey E. Melville)

66: On the flats. (Copyright: ORION Photos Production, Photo by Nathan Johnson)

67: Aerial view, shellfishing leases, Wellfleet, MA, 2003. (Copyright: PANDION)

68: Aerial view, Provincetown and Pilgrim Lake, 2003. (Copyright: PANDION)

TOWN CENTERS AND HARBORS

69: Aerial view of Wellfleet Harbor, Wellfleet, MA, 2003. (Copyright: PANDION)

70: Fishing flakes, Provincetown, MA. (Courtesy: Cape Cod National Seashore)

71: Pilot whales on the beach. (Source: D. Lombardo, *Images of America: Wellfleet A Cape Cod Village*, Charleston SC: Arcadia Publishing, 2000)

72: Fishing boat, Wellfleet Harbor, Wellfleet, MA, 2003. (Photo: UMass)

73: Commercial Street, Provincetown, MA. (Courtesy: Pilgrim Monument Association)

74: Commercial Street, Provincetown, MA, 2003. (Photo: UMass)

75: Aerial view, Provincetown, MA, 2003. (Copyright: PANDION)

76: Wellfleet center, view over Duck Creek. (Photo: UMass)

77: Postcard, oyster shacks, Wellfleet, MA. (Courtesy: Cape Cod National Seashore)

78: Main Street, Wellfleet, MA, 2003. (Source: UMass)

79: Fish market, Wellfleet, MA, 2003. (Photo: UMass)

80: Main Street, Wellfleet, MA, 2003. (Photo: UMass)

81: Jacob Fanning Gallery, Wellfleet, MA, 2003. (Photo: UMass)

82: Wellfleet Harbor snack shack, Wellfleet, MA, 2003. (UMass)

83: Wellfleet Post Office, Wellfleet, MA, 2003. (Photo: UMass)

84: Wellfleet Town Hall, Wellfleet, MA, 2003. (Photo: UMass)

FARMS AND FORESTS

85: Pamet Bog house and bog, Truro, MA, 2003. (Photo: UMass)

86: The soil horizon shows podzolic soils. (Photo: UMass)

87: Pennimen chickens, Eastham, MA. (Courtesy: Cape Cod National Seashore)

88: Truro landscape. (Courtesy: Cape Cod National Seashore)

89: Haying, Eastham, MA. (Courtesy: Cape Cod National Seashore)

90: Saltworks, Provincetown, MA, ca. 1840. (Source: William F. Robinson, *Henry David Thoreau's Complete Text with the Journey Recreated in Pictures*, Boston: Little, Brown and Co. 1985, 175)

91: Windmill, Eastham, MA, 2003. (Photo: UMass)

92: Heathland vegetation, Outer Cape. (Source: UMass/MassGIS)

93: House in the heathlands, Truro, MA, 2003. (Photo: UMass)

94: Horse and plow, Eastham, MA. (Courtesy: Cape Cod National Seashore)

95: Farm loss, Outer Cape, 1940 – 1990. (Source: UMass/MassGIS.)

96: Pitch pine forest, Outer Cape, 2003. (Photo: UMass)

97: Windy Willows estate, 1900 and 1993. (Courtesy: Truro Historical Society and CCNS/NPS)

98: Vegetative succession. (Source: UMass)

99: Forest cover, Outer Cape, 2003 and 1848. (Source: UMass/MassGIS)

100: Fort Hill site plan, Eastham, MA.
(Source: *Cultural Landscape Report for Fort Hill: Cape Cod National Seashore*)

101: Postcard, Pennimen house, Eastham, MA. (Courtesy: Cape Cod National Seashore)

102: Fort Hill, Eastham, MA, 2003. (Photo: UMass)

103: Fort Hill, Eastham, MA, 2003. (Photo: UMass)

104: Highland Light, Truro, MA. (Courtesy: Truro Historical Museum)

105: Highland Light and buildings, Truro, MA, 2003. (Photo: UMass)

106: Postcard, "Placing Cranberries in Trays." (Courtesy: Cape Cod National Seashore)

107: Cranberry screening. (Courtesy: Truro Historical Society)

108: Postcard, Cranberry Workers, UMass Experimental Station, East Wareham, MA. (Courtesy: CCNS)

109: Children harvesting cranberries. (Courtesy: Truro Historical Museum)

110: Postcard, "Harvesting Cranberries on Cape Cod." (Courtesy: Cape Cod National Seashore)

111: Pamet cranberry bog site plans, 1840's and 1940's. (Source: UMass/National Park Service)

112: Pamet bog, Truro, MA, 2003. (Photo: UMass)

113: Pamet bog site plan, Truro, MA, 1990's. (Source: UMass based on National Park Service documents)

114: Pamet cranberry bog house, Truro, MA, 1912.
(Courtesy: Elizabeth Haskell as depicted in *Images of America, Truro*)

115: Pamet bog, Truro, MA, 2003. (Photo: UMass)

116: Woman with berries, Hawk Mountain. (Courtesy: Hawk Mountain Sanctuary)

117: Jam stand, Wellfleet, MA, 2003. (Photo: UMass)

GETTING AROUND

118: Aerial view, Route 6, Eastham, MA, 2003. (Copyright: PANDION)

119: Wellfleet, MA, 1893. (Source: UMass based on 1893 USGS Map, University New Hampshire, Government Documents Collection)

120: Name signs on Thoreau Way, Wellfleet, MA, 2003. (Photo: UMass)

121: Sand drive, Wellfleet, MA, 2003. (Photo: UMass)

122: Sand road, Wellfleet, MA, 2003. (Photo: UMass)

123: Shell driveway, Wellfleet, MA, 2003. (Photo: UMass)

124: Railroad, Truro, MA, 1910. (Courtesy: Diana Worthington as depicted in *Images of America, Truro*)

125: Eastham roads, 1910. (Source: UMass based on map in Barnstable County Atlas)

126: County road, North Truro, MA, ca. 1890. (Courtesy: Cape Cod National Seashore)

127: Postcard, "Mid-Cape Highway."
(Source: James O'Connell, *Becoming Cape Cod: Creating a Seaside Resort*)

128: Route 6, Eastham, MA, 2003. (Source: UMass)

129: Route 6, Eastham, MA, 2003. (Source: UMass)

130: Route 6, Eastham, MA, 2003. (Courtesy: Cape Cod National Seashore)

131: Building set backs, Route 6, Eastham, MA, 2003. (Source: UMass)

132: Sheraton Four Points Hotel, Eastham, MA, 2003. (Photo: UMass)

HOMES ON THE OUTER CAPE

133: Aerial view of houses on bay shore, 2003. (Copyright: PANDION)

134: Cape Cod cottage, Wellfleet, MA, 2003. (Photo: UMass)

135: Residential development, Cape Cod, 1951 and 1999. (Source: UMass/MassGIS)

136: Land use change, Orleans, 1880 and 1999. (Source UMass/MassGIS)

137: Highland House, Truro, MA. (Courtesy: Truro Historical Museum)

138: An outdoor shower, Wellfleet, MA, 2003. (Photo: UMass)

139: Aerial view, Day's cottages, North Truro, MA. (Copyright: PANDION)

140: Ocean View Drive, Wellfleet, MA, 1999. (Source: UMass based on 1999 USGS Map, University of New Hampshire, Government Documents Collection)

141: House, Ocean View Drive, Wellfleet, MA, 2003. (Photo: UMass)

142: Ocean View Drive, Wellfleet, MA, 2003. (Photo: UMass)

143: House, Ocean View Drive, Wellfleet, MA, 2003. (Photo: UMass)

144: Area plan, Surfside and Wellfleet-by-the-Sea, Wellfleet, MA, 2003. (Source: UMass/MassGIS)

145: Sketch, Surfside, Wellfleet, MA, 2003. (Source: UMass)

146: Surfside cottage, Wellfleet, MA, 2003. (Photo: UMass)

147: Wellfleet-by-the-Sea cottage, Wellfleet, MA. (Source: UMass)

148: Surfside section, Wellfleet, MA, 2003. (Source: UMass)

149: Wellfleet-by-the-Sea, Wellfleet, MA, 2003. (Photo: UMass)

150: Wellfleet-by-the-Sea section, Wellfleet, MA, 2003. (Source: UMass)

151: Area plan, dune shacks, Provincetown, MA, 2003. (Source: UMass/National Park Service)

152: Harry Kemp at his dune shack. (Source: *Images of America*, *Truro*)

153: Found art, Race Point Beach, Provincetown, MA, 2003. (Photo: UMass)

154: "The Dunes" by Katherine Baltivik. (Courtesy: Charles-Baltivik Gallery, Provincetown, MA)

155: "In Late Afternoon Haze" by Sheila Benzer. (Courtesy: Lyman-Ayer Art Gallery, Provincetown, MA)

156: Dune shacks, Provincetown, MA, 2003. (Source: UMass)

157: Euphoria dune shack, Provincetown, MA, 2003. (Source: UMass)

158: Restored dune shack, Provincetown, MA, 2003. (Photo: UMass)

159: Nauset Spit, Eastham and Orleans, MA, Orthographic image. (Courtesy: MassGIS)

160: Henry Beston's beach camp, "Fo'castle", Nauset Spit, Eastham, MA. (Courtesy: Cape Cod National Seashore)

161: Beach camp, Nauset Spit, Eastham, MA, 2003. (Photo: UMass)

162: Heading to the dune shacks, Provincetown, MA, 2003. (Photo: UMass)

Part III: Cape Conversations

163: Trap fishermen, Truro, MA, ca. 1940. (Courtesy: Truro Historical Museum)

164: Houses, Mayo Beach, Wellfleet, MA, 2003. (Photo: UMass)

165: Bicyclists, Wellfleet center, Wellfleet, MA, 2003. (Photo: UMass)

Part IV: Conclusions and Challenges

166: House, Truro, MA, 2003. (Photo: UMass)

167: Photo simulation of potential housing redevelopment, Wellfleet, MA, 2003. (Source: UMass)

168: Photo simulation of potential housing redevelopment, Wellfleet, MA, 2003. (Source: UMass)

BIBLIOGRAPHY

"A Genuine Cape Cod House." *Better Homes & Garden* (January 1938).

Alexander, Lewis M. "The Impact of Tourism on the Economy of Cape Cod, Massachusetts," *Economic Geography* 29, (1953).

Association for the Preservation of Cape Cod. *Options for Cape Cod's Future: Association for the Preservation of Cape Cod's Growth Report.* West Barnstable: Crane Duplicating Service, 1985.

Bangs, Mary Rogers. *Old Cape Cod.* Cambridge: Riverside Press, 1920.

Barnstable County Coastal Resources Committee. *Coastal Resource Protection Update.* Barnstable: Barnstable County Coastal Resources Committee, 2002.

Bartlett, W.H. *The Pilgrim Fathers of the Founders of New England in the Reign of James the First.* London: Arthur Hall, Virtue and Co. 1853.

Beston, Henry. *The Outermost House.* Garden City: Doubleday, Doran and Co., 1928. (page citations are to the Viking Press Edition, 1970.)

Beggs, J.J., V.A. Haines and J.S. Hurlbert. "Revisiting the Rural–Urban Contrast: personal networks in non-metropolitan and metropolitan settings." *Rural Sociology* 61, no. 2 (1996): 306–325.

Booth, G. "The New Sensory Law." *Urban Land* October (2000): 14-16.

Brush, R., R. E. Chenoweth and T. Barman. "Group Differences in the Enjoyability of Driving Through Rural Landscapes." *Landscape and Urban Planning* 47, no. 1-2 (2000): 39-45.

Burling, Francis P. *The Birth of the Cape Cod National Seashore.* Plymouth: Leyden Press, Inc., 1977. (page citations from Eastern National Press edition, 2000)

Cadrin, S. X., and J. King. *Stock Assessment of Yellowtail Flounder in the Cape Cod, Gulf of Maine Area.* Pocasset: Woods Hole, National Marine Fisheries Service, Northeast Fisheries Science Center; Massachusetts Division of Marine Fisheries, 2003.

Cape Cod Commission. *Cape Cod Regional Policy Plan.* Barnstable: Cape Cod Commission, 2001.

Cape Cod Commission. *Outer Cape Capacity Study.* Barnstable: Cape Cod Commission, 1996.

Cape Cod Commission and Community Vision Inc. in cooperation with the Center for Rural Massachusetts at the University of Massachusetts Amherst. *Designing the Future to Honor the Past: Design Guidelines for Cape Cod.* Barnstable: Cape Cod Commission, 1998.

Cape Cod Commission. 2003. "An Introduction to the Cape Cod Commission Model Regulations and Bylaws Project." In *The Official Website of the Cape Cod Commission* [online]. Barnstable, MA, 2003 [cited September 2003]. Available from World Wide Web: <http://www.capecodcommission.org/bylaws/>

Cape Cod Cranberry Growers' Association. 2002. Cranberries: A Taste of America; Cranberries: the Splendor of the Crimson Fruit [online]. East Wareham, MA: Cape Cod Cranberry Growers' Association, 2002 [cited 28, April 2003]. Available from World Wide Web: <http://www.cranberries.org/thecranberry/tframeset.html>

Carlson, L., M. Babione, P.J. Godfrey and A. Fowler. *Ecological Survey of Heathlands in Cape Cod National Seashore*. South Wellfleet: National Park Service, 1991.

Chamberlain, S. *Cape Cod in the Sun*. New York: Hastings House, 1937.

Chamberlain, Tony. "Pheasants, hunters targeted." *Boston Globe*, September 27, 2002, E16.

Coogan, Jim and Jack Sheedy. 1999. Chapter 3 excerpt, "Oysters, Iron Ore and Oxcarts" in Cape Cod Companion: The History and Mystery of Old Cape Cod [online]. Hyannis, MA: The Barnstable Patriot, 1999 [cited October 14, 2003]. Available from the World Wide Web: <http://www.barnstablepatriot.com/cccompanion/chapter3.html>

Daniels, Tom, and Deborah Bowers. *Holding Our Ground: Protecting America's Farms and Farmland*. Washington D.C.: Island Press, 1997.

Day, G.M. "The Indian as an Ecological Factor in the Northeastern Forest." *Ecology* 34, no.2 (1953): 329-346.

Department of Landscape Architecture and Regional Planning and the Center for Rural Massachusetts at the University of Massachusetts. *Eastham/Wellfleet Route 6 Corridor Management Study*. Amherst: Center for Rural Massachusetts, 1989.

Digges, Jeremiah. *Cape Cod Pilot, American Guide Series – Federal Writer's Project, Works Progress Administration*. Provincetown and New York: Modern Pilgrim Press and the Viking Press, 1937.

Di Gregorio, Mario and Jeff Wallner. *A Vanishing Heritage: Wildflowers of Cape Cod*. Missoula: Mountain Press, 1989.

Dion, Michael R. and David R.Vallee, *Southern New England Tropical Storms and Hurricanes: A Ninety-eight Year Summary 1909-1997*. Taunton: National Weather Service, 2001.

Dramstad, Olson and Forman. *Landscape Ecology Principles in Landscape Architecture and Land-Use Planning*. Washington, D.C.: Island Press, 1996.

Eldrige, Dana. Interview by Emily Clarke and Laurice Ellsworth. Telephone interview. University of Massachusetts at Amherst Department of Landscape Architecture and Regional Planning, April 2003.

Fawsett, Marise. *Cape Cod Annals*. Bowie: Heritage Books, 1990.

Finch, Robert. *Special Places: On the Cape and the Islands*. Beverly: Commonwealth Editions, 2003.

Flint, Anthony. "Battle Over the Beachfront: Cape Shell Fishermen Beat Back Homeowner's Bid to Ban Them," *Boston Globe,* August 31, 2003, Section A.

Florida R. "A New Sense of Place." *Urban Land* (March 2001): 39.

Foster, Charles H.W. *The Cape Cod National Seashore: A Landmark Alliance*. Hanover: University Press of New England, 1985.

Friedman, R.L. "Governing the Land: an Environmental History of Cape Cod, Massachusetts." Ph.D. dissertation. Brandeis University, 1993.

Glassberg, David. "Sense of Place: A Report to the Massachusetts Foundation for the Humanities." Unpublished report. Northampton, MA: Massachusetts Foundation for the Humanities, 1992.

Glasser, J. "Decline of the Cod Divides a New England Fishing Village." *U.S. News & World Report,* 134 no. 20 (June 9 2003): 44.

"Growing up with Cranberries." *Cape Cod Life* 12, no. 5 (Oct/Nov 1990).

Hall, B., G. Motzkin, D.R. Foster, M. Syfert and J. Burk. "Three Hundred Years of Forest and Land-Use Change in Massachusetts." *Journal of Biogeography* 29 (2002): 1319-1335.

Harold, Brent. *Wellfleet and the World: Themes of a Cherished and Threatened Place*. Wellfleet: Kinnacum Press, 2003.

Hay, John. "Dune Country," in *A Place Apart: A Cape Cod Reader,* ed. Robert Finch. New York: W.W. Norton & Company Inc., 1993.

Herr, P. *The Cape Cod Village: An Endangered Species*. Cambridge: MIT Department of Urban Studies and Planning, Design and Development Program, October 1991.

Hershey, William D. *Cape Cod: 17th and 18th Century Roads, with Particular Attention to the King's Highway*." Unpublished manuscript held in CACO archives. Wellfleet, 1962.

Heyer, F. *Preserving Rural Character: Planning Advisory Service Report No. 429*. Washington, DC: American Planning Association, 1990.

Holst, L. "Place Making: Turning the Idea of Sense of Place into Reality." *Urban Land* 60, no. 5 (2001): 136.

Holmes, R.D, C.D. Hertz, and M. T. Mulholland. National Park Service, U.S. Department of the Interior. *Historic Cultural Land Use Study of Lower Cape Cod*. Lowell: University of Massachusetts Archaeological Services, 1998.

James, Henry. *The Bostonians*. London and New York: Macmillan and Co., 1886. (page citations are to Random House Modern Library Edition, 1956.)

Jenkins, David. *Culture of Preservation: The Cape Cod National Seashore Hearings, 1959-1961 Draft Report*. Boston: National Park Service, Boston Support Office, January, 2003.

Kemp, Harry. *The Sea and the Dunes and Other Poems*. New York: Brentano's, 1926.

Kittredge, H.C. *Cape Cod: Its People and Their History,* 2nd ed. Boston: Houghton Mifflin Co., 1968.

Kneedler-Schad, L., K. Lacy and L. Lowenthal. *Cultural Landscape Report for Fort Hill: Cape Cod National Seashore*. Boston: NPS, Olmsted Center for Landscape Preservation, 1995.

Lombardo, D. *Images of America: Wellfleet, A Cape Cod Village*. Charleston: Arcadia Publishing, 2000.

Loparto L. and M. Steinitzm. "Settlement and Social Development," in *Historic and Archaeological Resources of Cape Cod and the Islands,* ed. J.W. Bradley 54-162. Boston: Massachusetts Historical Commission, 1987.

Lynch, Kevin. *The Image of the City*. Cambridge: MIT Press, 1960.

Manning, Robert. *Cape Cod National Seashore Visitor and Resident Study*. Burlington: The School of Natural Resources at The University of Vermont, 1994.

Manski, David and Michael Whatley, National Park Service, U.S. Department of the Interior, *Resource Management Plan Cape Cod National Seashore*. 1992.

Martin, L. *Investigation of Effects of Ground Water Withdrawals from the Pamet and Chequessett Aquifers, Cape Cod National Seashore: Technical report 1987-91*. Fort Collins: National Park Service, Water Resources Division, 1993.

Martin, L., J. Portnoy, and C. Roman. *Water Quality Monitoring and Research Plans for Kettle Ponds, Cape Cod National Seashore: Technical report of a workshop on March 2-3, 1992*. Fort Collins: National Park Service, Water Resources Division, 1993.

Massachusetts Department of Environmental Affairs. *Community Profiles: Wellfleet*. Boston, MA: Massachusetts Department of Environmental Affairs [cited March 12, 2003]. Available on World Wide Web: <http://commpres.env.state.ma.us/community/cmty_main.asp?communityID=318>

Massachusetts Institute of Technology. *Cape Cod National Seashore Rapid Ethnographic Assessment Report*. Cambridge: MIT Press, 1996.

Meisel, John. "Natural Resource Report 9101: Piping Plover Monitoring Report for 1991." Unpublished Report. South Wellfleet: Cape Cod National Seashore, 1991.

Millage, M. and C. Tysdal. "Retention of Rural Character: the Role of the Landscape Architect." *Landscape Architectural Review* 7, no. 3 (1986): 31, 33.

Motzkin, G., R. Eberhardt, B. Hall, D.R. Foster, J. Harrod, and D. MacDonald. "Vegetation Variation Across Cape Cod Massachusetts: Environmental and Historical Determinants." *Journal of Biogeography* 29 (2002): 1439-1454.

Mueller, Eileen. *Surfcasters and Off Road Vehicle Use at Cape Cod National Seashore*. Boston: NPS Northeast Ethnography Program, National Park Service, U.S. Department of the Interior, 2001.

National Park Service, U.S. Department of the Interior, Division of Cultural Resources North Atlantic Regional Office. *Archaelogical Survey of Cape Cod National Seashore-1980,* unpublished report. South Wellfleet: Division of Cultural Resources North Atlantic Regional Office, 1980.

National Park Service, U.S. Department of the Interior. *Assessment of Alternatives for a Development Concept Plan, Eastham Area, Cape Cod National Seashore*. Denver: Denver Service Center, 1978.

National Park Service, U.S. Department of the Interior. *Baseline Water Quality Data Inventory and Analysis: Cape Cod National Seashore, Technical Report.* Fort Collins: National Park Service Water Resources Division, 1995.

National Park Service, U.S. Department of the Interior. *Cape Cod National Seashore, a Proposal.* Washington D.C.: National Park Service, 1959.

National Park Service, U.S. Department of the Interior, Natural Resources Information Division, Inventory and Monitoring Program. *Inventory and Prototype Monitoring of Natural Resources in Selected National park System Units 1999-2000*. Washington D.C.: National Park Service Water Resources Division, 2001.

National Park Service, U.S. Department of the Interior, Olmsted Center for Landscape Preservation. *Cultural Landscape Report for Truro Highlands, Cape Cod National Seashore.* Boston: Olmsted Center for Landscape Preservation, 1995.

National Park Service, U.S. Department of the Interior. *Eastham Area Development Concept Plan and Transportation Analysis*. South Wellfleet: Cape Cod National Seashore, 1981.

National Park Service, U.S. Department of the Interior. *Forging a Collaborative Future: General Management Plan*. South Wellfleet: Cape Cod National Seashore, 1998.

National Park Service, Department of the Interior, 2003. *Heritage: Lifesavers on Cape Cod National Seashore* [online]. Wellfleet, MA: National Park Service, Department of the Interior, 2003 [cited March, 20 2003]. Available from World Wide Web: <http//:www.nps.gov/caco/heritage/lifesavers.html>

National Park Service, U.S. Department of the Interior. *Management Alternatives Addressed to Nude Bathing and Related Concerns*. Boston: Cape Cod National Seashore, North Atlantic Regional Office, 1974.

National Park Service, U.S. Department of the Interior. *Off-Road Vehicle Management Plan, Cape Cod National Seashore*. South Wellfleet: Cape Cod National Seashore, 1981.

National Park Service, U.S. Department of the Interior. *Resource Management Plan, Cape Cod National Seashore*. South Wellfleet: Cape Cod National Seashore, 1992.

National Park Service, U.S. Department of the Interior. *A Report on our Vanishing Shoreline*. Washington D.C.: National Park Service, 1955.

National Park Service, U.S. Department of the Interior. *Strategic Plan for Cape Cod National Seashore Fiscal Year 2000 – 2005 (October 1, 1999 – September 30, 2005)*. South Wellfleet: Cape Cod National Seashore, 1999.

National Park Service, Department of the Interior. *Water Resources Management Plan for Cape Cod National Seashore*. Wellfleet: Cape Cod National Seashore, 1999 [cited June 6, 2003]. Available from World Wide Web: <http://www.nps.gov/caco/management/water_resources_plan>

Natural Heritage and Endangered Species Program, Massachusetts Division of Fisheries and Wildlife. *Rare Species Occurrence Lists by Town* [online]. Boston, MA: Massachusetts Division of Fisheries and Wildlife, 2003 [cited March 3, 2003]. Available from World Wide Web: <http://www.state.ma.us/dfwele/dfw/nhesp/nhtown.htm>

O'Connell, James C. *Becoming Cape Cod, Creating a Seaside Resort*. Hanover: University Press of New England, 2003.

Office of Federal Housing Enterprise Oversight. *Fourth Quarter 2002 House Price Index (HPI)*[cited March 3, 2003]. Available from the World Wide Web: <http://www.ofheo.gov>

Oldale, Robert N. *Cape Cod, Martha's Vineyard and Nantucket: the Geologic Story*. Yarmouthport: On Cape Productions, 1992.

Orleans, Town of, Local Comprehensive Plan Committee. *Orleans Local Comprehensive Plan*. Orleans: Town of Orleans, 1999.

Page, Robert R., Cathy A. Gilbert and Susan A. Dolan. *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques*. Washington DC: Government Printing Office, 1998.

Patrick, Oona Hyla.The Shack of Art and Healing. In *Post Road Magazine* [online]. Newton Center, MA: 2003 Post Road Magazine [cited April 25 2003]. Available from World Wide Web: <http://www.postroadmag.com/HTMLPages/ PostRoad/Issue_4/ Nonfiction4/Patrick.htm>

Patterson, W.A. and J.F. O'Keefe. *The Vegetation History of the Pamet Cranberry Bog, North Truro, Massachusetts*. Amherst: Department of Forestry and Wildlife Management, University of Massachusetts at Amherst, 1980.

Pregitzer, Kurt. S. "The Ecology of Northern White-Cedar." In *Workshop Proceedings Northern White Cedar in Michigan, February 21-22 1990,* ed. Douglas O. Lantagne. Sault St. Marie: Agricultural Experiment Station, Michigan State University, 1990.

Provincetown, Town of, Local Comprehensive Planning Committee. *Local Comprehensive Plan: Town of Provincetown, 2000*. Provincetown: town of Provincetown, 2000.

Putnam, George Rockwell. *Lighthouses and Lightships of the United States.* Boston: Houghton Mifflin, 1933.

Quarles, Hillary. NPS, Olmsted Center for Landscape Preservation. *Cultural Landscape Inventory Summary Report for Atwood Higgins Complex Complex, North Truro Air Force Station, Pamet Cranberry Bog, Provincetown Lands Dune Shacks.* Boston: North Atlantic Regional Office, 1995.

Randall, W. E. *Vegetative Cover Type Report Cape Cod National Seashore.* South Wellfleet: Cape Cod National Seashore, 1962.

Regis, Necee. "Seven Days in the Dunes." Boston Sunday Globe, N.E. Travel Section, August 24, 2003: M9.

Riley, Robert B. "Attachment to the Ordinary Landscape," in *Place Attachment*, ed. Irwin Altman and Setha Low. New York: Plenum, 1992.

Reid, Wesley and Michael Ulrich. Interview by Nidhi Madan and Anna Ryan. Telephone interview. University of Massachusetts at Amherst Department of Landscape Architecture and Regional Planning, April 4, 2003.

Rolbein, Seth. "An Historic Kind of Drag: Trawling within Site of Land." *The Cape Cod Voice* 3, no. 4 (June, 19 2003): 6-9.

Russell, H.S. *A Long, Deep Furrow: Three Centuries of Farming in New England.* Hanover: University Press of New England, 1976.

Sanders, Gretchen H. "Developing National Parks in Densely Populated Areas: Two Case Studies." Masters Thesis, University of Massachusetts at Amherst, 1987.

Schaefer, William. *Eastham/Wellfleet Route 6 Corridor Management Study.* Amherst: Department of Landscape Architecture and Regional Planning and the Center for Rural Massachusetts at the University of Massachusetts at Amherst, 1989.

Schneider, Paul. *The Enduring Shore: A History of Cape Cod, Martha's Vineyard and Nantucket.* New York: Henry Holt and Company, 2000.

Schwarzman, Beth. *The Nature of Cape Cod.* Hanover: University Press of New England, 2002.

Smirniotopoulos, P.T. "The Meaning of Place." *Urban Land* (March 2001): 36-41.

Sparrow, Donald B. *Growing Up on Cape Cod: Four Brothers Learning to Stand Tall.* Eastham: Great Oaks Publishing, 1999.

Sterling, Dorothy and Winifred Lubell. *The Outer Lands: A Natural History Guide to Cape Cod, Martha's Vineyard, Nantucket, Block Island and Long Island.* New York: Norton Press, 1978.

Stetson, Judy. *Wellfleet, A Pictorial History*. Wellfleet: The Wellfleet Historical Society, 1963.

Stilgoe, John R. *Alongshore*. New Haven: Yale University Press, 1994.

Stone T.A. "The Land Cover and Land Use of Cape Cod 1951 to 1990." *Environment Cape Cod* 1 (1999): 35-49.

Thomas, J.D. *Cranberry Harvest, A History of Cranberry Growing in Massachusetts.* New Bedford: Spinner, 1990.

Thoreau, Henry David. *Cape Cod.* New York: Penguin Group, 1987. (first published in 1865)

Thoreau, Henry David. "A Cape Cod House," in *A Place Apart: A Cape Cod Reader,* ed. Robert Finch. New York: Norton, 1993.

Theroux, Paul. "Summertime on the Cape," in *Sunrise with Seamonsters: Travels and Discoveries, 1964-1984*. Boston: Houghton Mifflin, 1985.

U.S. Department of Commerce. *Census 2000*. Washington D.C. U.S. Department of Commerce, 2000.

U.S. Fish and Wildlife Service. 2001. "Piping Plover Critical Habitat", *U.S. Fish and Wildlife Service Piping Plover Critical Habitat* [online]. U.S. Fish and Wildlife Service, 2001 [cited August 20 2003]. Available from World Wide Web: <http://plover.fws.gov/q&a.html>

Volpe National Transportation Systems Center for the Cape Cod Regional Transit Authority, Cape Cod Transit Task Force, U.S. Department of Transportation. *Five Year Public Transportation Plan (Draft)*. Cambridge: U.S. Department of Transportation, 2001.

Woods Hole Research Center. 1998. "Critical Habitats of Cape Cod." In *An Electronic Atlas of the Cape Cod Environment* [online]. Woods Hole, MA: Woods Hole Research Center, 1998 [cited March 30 2003]. Available from World Wide Web: <http://www.whrc.org/CCAtlas/habitats/crit_habs.htm>

Woods Hole Research Center, "Critical Habitats" *Ecological Survey of Heathlands in Cape Cod National Seashore.* South Wellfleet: National Park Service, 1991.

Woods Hole Oceanographic Institute. *Beach Changes and Management Options for Nauset Barrier Beach and Orleans Town Beach, Cape Cod, MA.* Woods Hole: Woods Hole Oceanographic Institute, 1998.

Worthington, Diana, North Truro Resident. Interview by Bill Burke, Cape Cod National Seashore, NPS, March 3, 2003.

Zube, E.H., J. L. Sell and J.G. Taylor. "Landscape Perception: Research, Application and Theory." *Landscape and Planning* 9, no.1 (1982): 1-33.

INTERVIEWS

Johnson, Joyce, sculptor in Eastham. Interview by Bill Burke.
Cape Cod National Seashore, NPS, March 19, 2003.

Johnson, Joyce, sculptor in Eastham. Interview by Emily Clarke and Laurice Ellsworth. Telephone interview. University of Massachusetts at Amherst Department of Landscape Architecture and Regional Planning, April 2003.

Rosen, Paul. Interview by Bill Burke. Cape Cod National Seashore, NPS, March 10, 2003.

Skowron, Cathy. Interview by Bill Burke. Cape Cod National Seashore, NPS, March 10, 2003.

Thomas, John, Writer and Provincetown resident. Interview by Bill Burke.
Cape Cod National Seashore, NPS, March 19, 2003.

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