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**TECHNICAL REPORT**

**ARCHAEOLOGICAL RECONNAISSANCE SURVEY  
TOWN OF CHATHAM**

**Chatham, Massachusetts**

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March 2009

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## MANAGEMENT ABSTRACT

PAL has completed an archaeological reconnaissance survey of the Town of Chatham, Massachusetts. The project was funded by and coordinated through the Town of Chatham through an allocation under the Community Preservation Act.

The main goals of the survey were to identify known and potential pre-contact and post-contact archaeological sites in Chatham; develop town-wide archaeological sensitivity maps and an accompanying guide to understanding and using these maps; develop management recommendations for the protection of cultural resources and sensitive areas; and present the information in a format that would be useful to state and local planning and review agencies.

The reconnaissance survey included archival research, informant interviews, and field survey that allowed for the collection of information about known and potential archaeological resource areas. This information was then used to compile environmental and cultural contexts for Chatham, and to develop predictive models for undocumented archaeological sites.

The survey resulted in the documentation of 12 previously unrecorded archaeological sites (four pre-contact and eight post-contact sites). The predictive model developed for the survey indicates that Chatham contains a wide diversity of natural resources including extensive wetland networks, limited modern period development, and a documented human presence spanning at least 8,000 years. These conditions, taken together, give the town a generally high archaeological sensitivity. Pre-contact archaeological sensitivity is highest along the major wetland margins, including those associated with Pleasant Bay and Stage Harbor and in proximity to smaller streams, swamps, and ponds. Post-contact sensitivity is highest in the town's historic villages, along established transportation corridors, and along the coastline where maritime activities have been documented from the mid-seventeenth century to the present.

Management recommendations developed for the survey focus on a coordinated development review through local and regional planning agencies. Partnerships with preservation and conservation advocates, Native American groups, land owners, and the general public are suggested as ways in which Chatham can help to document, protect, and preserve important cultural resources.

## EXECUTIVE SUMMARY

The reconnaissance survey of Chatham attempted to bring together the broad spectrum of resources that the town contains to better understand the past history of this community, to document known archaeological sites within Chatham, and predict what types of archaeological deposits may be present and where they can be expected. The most likely locations for pre-contact Native American sites to be present are along wetland margins (both interior and coastal) which extend across almost every portion of the town. Post-contact Native American archaeological sensitivity is highest near the documented site of the Indian Meeting House, near the coastline and in near-interior sections of town, especially in proximity to Pleasant Bay and Stage Harbor. Euro American sensitivity is highest in and around the town's village centers, along historic roads and paths, in proximity to documented historic structures and/or businesses, and along the shoreline where maritime industries, salt making, and milling likely occurred.

Collecting information about the cultural heritage of the town must be an ongoing process. The survey was most useful for compiling a database that can grow with the needs of the town. Included in this report are research contexts, local contact names, and predictive statements that can guide planning projects. In order for the reconnaissance survey to be effective for the future management of archaeological resources, new and updated information must be added. This information includes the recordation of new archaeological sites identified through excavation or accidental discovery; the collection of additional information from knowledgeable local residents and historians, avocational archaeologists, and Native groups; and the documentation of activities that generally affect archaeological sensitivity (e.g., development, erosion). By viewing the reconnaissance report as a resource to be utilized and improved upon, the town can take a more active role in its own history. The Chatham Historical Commission (CHC) has taken a lead role in funding the survey. The CHC should continue to serve as a clearinghouse for information about archaeological resources.

As part of the reconnaissance survey, a review of existing town bylaws or ordinances regarding the protection of archaeological resources in Chatham and elsewhere in the region was undertaken (see Appendix G). Chatham currently has several local cultural resource review procedures, most notably a demolition delay bylaw enforced by the CHC. This regulatory device provides a public review process to identify and protect standing structures located in designated historic districts, but at present appears to be confined to aboveground historic resources. Federal, state and local jurisdiction also affords review authority to impacts planned in most of Chatham's wetland areas and watersheds.

The most effective regional models come from the Martha's Vineyard and Cape Cod Commissions, both of which review projects that meet certain criteria or thresholds in consultation with the Massachusetts Historical Commission (MHC). The standards include a provision that any development proposed for an area with known archaeological resources, or considered to have a high archaeological sensitivity requires additional review and/or archaeological investigations during the site planning phase. Importantly, this provision gives jurisdiction over this provision to the Massachusetts Historical Commission and the Local Historical Commission. The CCC and the MHC provide technical assistance with this process and should be considered important resources for the CHC to consult in situations of cultural resource review.

Careful consideration should be given to the threshold used to trigger local review for archaeological resources (e.g., single-family homes, subdivisions of a specific size), and the source of funding for the archaeological investigations. Reasonable thresholds for the local review of archaeological resources could be established in consultation with the CHC, CCC, MHC and interested Native American groups (in the case of Native American archaeological sites). Laws within Massachusetts protect the accidental discovery of human remains and provide for consultation with descendant communities, if identifiable (see Appendix H).

Other types of land use protection programs that could help identify and protect Chatham's historic and archaeological resources may include: establishment of districts of critical planning concern (DCPC) in sections of the town that contain important archaeological sites and sensitive natural and cultural areas; acquisition of open spaces that contain important archaeological sites and sensitive areas; the support of private property preservation restrictions; and perhaps most importantly public education and partnership/constituency building. The process by which significant archaeological resources are identified, primarily through cultural resource management surveys and investigations conducted by qualified professionals, should be included in all aspects of public outreach sponsored by the town.

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## CHAPTER ONE

### INTRODUCTION

The following report presents the results of an archaeological reconnaissance survey of the Town of Chatham, Massachusetts (Figure 1-1). The community-wide survey was conducted by PAL and funded by and coordinated through the Town of Chatham through an allocation under the Community Preservation Act (CPA). The survey was conducted for the entire town of Chatham, located in Barnstable County on Cape Cod (Figure 1-2).

The primary objectives of the project were to identify the patterns of pre-contact (prehistoric) and post-contact (historic) period occupation and activity in Chatham and to determine known and probable locations of archaeological resources associated with these patterns. The information collected during the survey and the recommendations produced as a result of the project will be used to facilitate more effective protection of significant archaeological resources in the town, through existing and potential future public permitting and approval processes and through ongoing public and private efforts at land acquisition and protection.

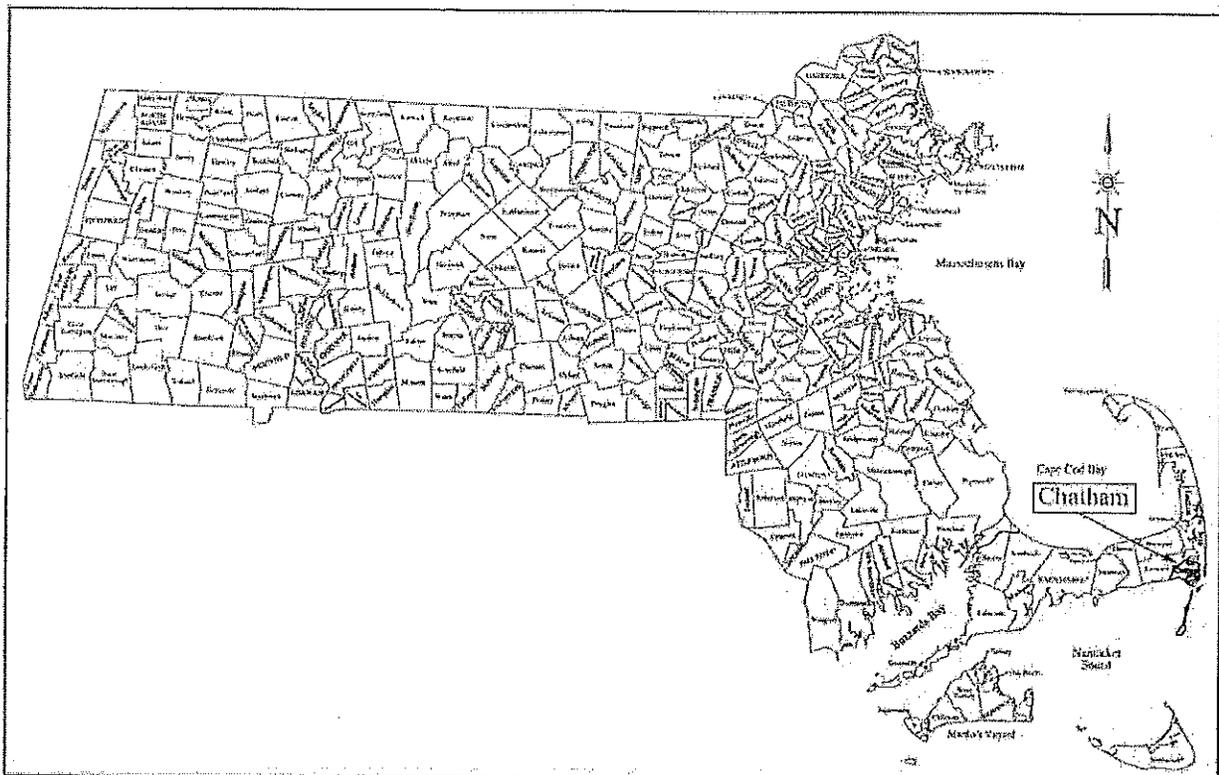


Figure 1-1. Map of Massachusetts showing the location of Chatham.

## Project Scope

The community-wide archaeological reconnaissance survey was designed to identify areas, sites, burial grounds, structures, and landscapes in Chatham that are archaeologically significant in the history and development of the community. The archaeological survey of Chatham was conducted town-wide for the purpose of determining known and probable locations of archaeological resources. The survey addressed all periods of development from the earliest known Native American settlement and the period of first colonial European presence to circa 1900. Significant themes of historical development were identified, and known and potential resources were related to these themes.

In order to meet the objectives of the project, the reconnaissance survey was divided into four separate phases, each with specific tasks and end product(s). Phases I through III of the project were completed in 2007. Phase IV will be completed following review by the town and Massachusetts Historical Commission (MHC).

### Phase I

During Phase I, PAL project personnel met with Chatham Historical Commission (CHC) to discuss the scope of work and to assess available archival materials, informants, and institutions to be consulted as part of the project. Phase I tasks included filing a technical proposal and archaeological permit application (950 CMR 70) with the MHC and state archaeologist.

Once the MHC permit was received, the PAL project staff completed a comprehensive review and evaluation of archival research sources (e.g., local historical sources, environmental studies, United States Department of Agriculture [USDA] soil maps for Barnstable County, available post-contact period maps, United States Geological Survey [USGS] maps, aerial photographs, and professional publications and cultural resources survey reports) available in state and local repositories, including the Chatham Historical Society (CHS) archives. Tasks also included collecting information from local informants and other knowledgeable persons regarding known and potential archaeological resources and archaeologically sensitive areas.

Phase I of the survey included a windshield survey with walkover surface inspection (where possible) of a sample of pre- and post-contact sites and sensitivity locations throughout the town. The fieldwork was designed to verify information about archaeological sites and sensitivity obtained during archival research and informant interviews. Fieldwork included an assessment of topography, patterns of disturbance, and areas of low sensitivity to refine the results of the information gathering described above. This data was used to construct predictive models for pre- and post-contact archaeological site locations in Chatham.

The Phase I product consisted of a management memorandum containing a written summary of the archival research and fieldwork, and a draft of the predictive site model developed for the town; an outline of management recommendations including types and procedures for local review of projects that may have an impact on archaeological resources; a list of known archaeological sites in the town; draft town-wide maps of known site locations and archaeologically sensitive areas on digitized USGS base maps showing environmental conditions.

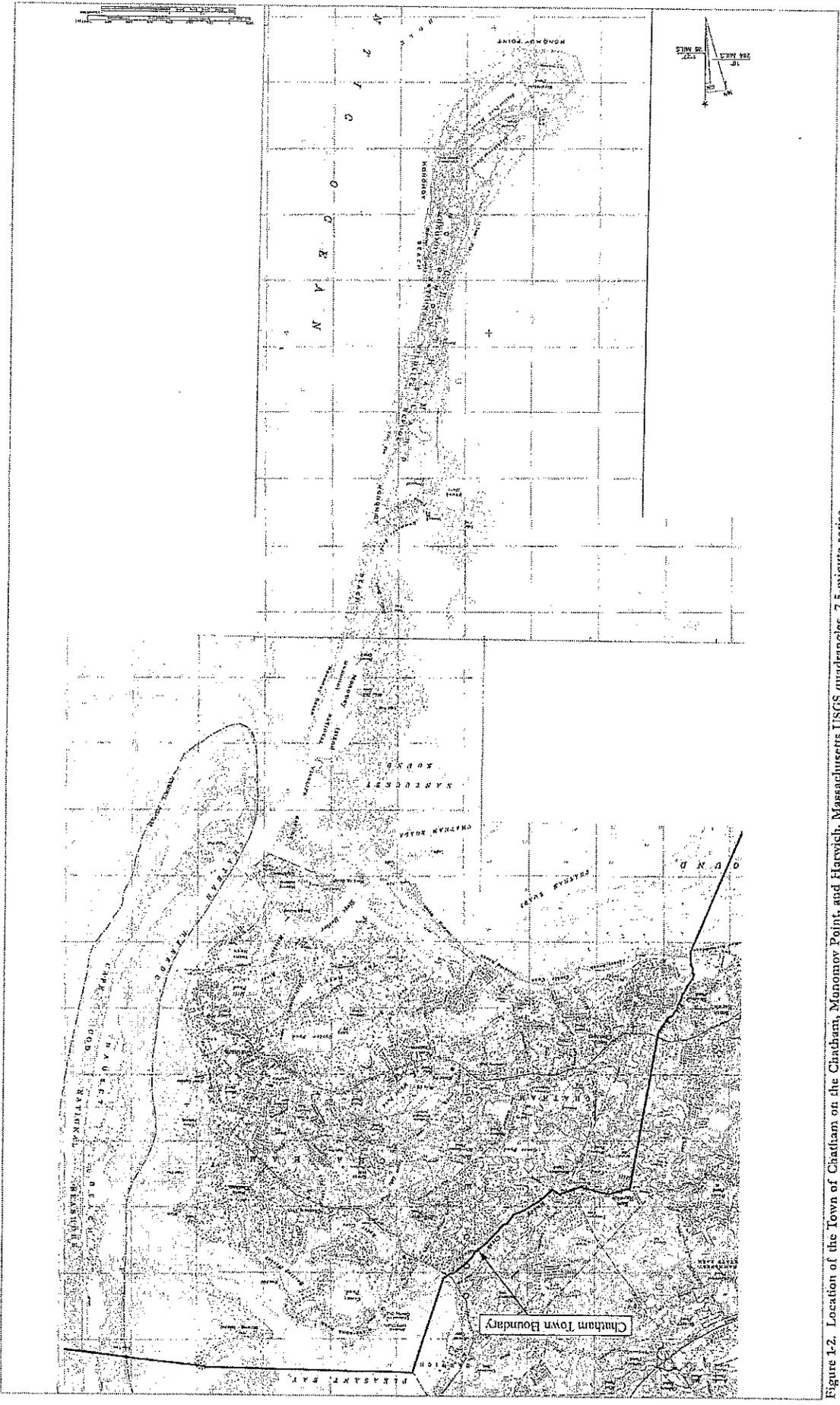


Figure 1-2. Location of the Town of Chatham, on the Chatham, Monomoy Point, and Harwich, Massachusetts USGS quadrangles, 7.5-minute series.

## Phase II

Phase II tasks included the preparation of an outline for the archaeological reconnaissance survey report using the archival research, fieldwork, and predictive model developed for the town. This outline was reviewed by the CHC.

A public lecture was presented during Phase II of the project and televised on local cable access television. This event allowed CHC and CHS members and the general public to share information about the history and archaeology of the community.

Additional information was gathered from local informants during the Phase II portion of the project.

## Phase III

During Phase III, PAL completed revisions to the archaeological sensitivity maps prepared and submitted with the Phase I memorandum, based on additional research and field checks conducted during Phase II of the project.

PAL also prepared the draft accompanying guide to understanding and using the archaeological sensitivity maps for non-professionals, as well as final management recommendations and suggested bylaws and protection measures.

Phase III included the preparation of the draft archaeological reconnaissance report based on the outline submitted during Phase II work.

## Phase IV

Phase IV represents the final documentation portion of the town-wide survey. The final reconnaissance survey report and the final archaeological sensitivity maps and accompanying user's guide are submitted following review and comments (per the scope-of-work) and constitute the final products of the survey.

## Project Authority

PAL completed the reconnaissance survey project under contract with the Town of Chatham. The archaeological reconnaissance survey fieldwork and report preparation were conducted in accordance with 950 CMR 70.14, the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716, September 28, 1983) and the Advisory Council on Historic Preservation's Handbook *Treatment of Archaeological Properties* (1980). The reconnaissance archaeological survey was conducted under permit number 2928, issued by the state archaeologist in accordance with 950 CMR 70.00.

## Project Personnel

PAL staff involved in the project include Holly Herbster (project manager and principal investigator) and Jennifer Bonner Bannister and Nichole Gillis (project archaeologists).

### Disposition of Project Materials

All project information (field recording forms, maps, photographs) is currently on file at the PAL, 210 Lonsdale Avenue, Pawtucket, Rhode Island. PAL serves as a temporary curation facility until such time as the Commonwealth of Massachusetts designates a permanent state repository.

## CHAPTER TWO

### SURVEY METHODOLOGY

The primary goal of the archaeological reconnaissance survey was to identify patterns of pre-contact and post-contact occupation and activity in Chatham, and to determine known and probable locations of archaeological resources associated with these patterns. The general approach to this large-scale survey involved methods designed to assess archaeological sensitivity and identify the full range of known and potential archaeological resources. The research framework covered all cultural/temporal associations from the PaleoIndian to the modern period and themes in both pre-contact and post-contact land use and development. This chapter discusses the methods used during the reconnaissance survey to collect and interpret various categories of data including environmental settings, known and expected pre-contact and post-contact archaeological resources, and present conditions.

#### Archaeological Significance and Historic Contexts

The different phases of archaeological investigation (in Massachusetts, designated as reconnaissance, intensive survey, site examination, and data recovery) reflect preservation planning standards for the identification, evaluation, registration, and treatment of cultural resources (National Park Service [NPS] 1983). This planning structure pivots around the eligibility of cultural resources for inclusion in the National Register of Historic Places. The National Register is the official list of properties that have been studied and found worthy of preservation. The results of an intensive (locational) survey and site examination are used to make recommendations about the significance and eligibility of an identified resource.

The standards used to determine the significance of cultural resources, a task required of federal agencies, have been the guidelines provided by the NPS (36 CFR 60): the National Register Criteria for Evaluation. Four criteria are listed by which the "quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association:

- A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. that are associated with the lives of persons significant in our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significance and distinguishable entity whose components may lack individual distinction; or
- D. that have yielded, or may be likely to yield, information important to prehistory or history." (36 CFR 60)

Archaeological properties can be determined eligible for listing in the National Register under all four criteria (Little et al. 2000; Parker and King 1998). Significance under any of these criteria is determined by the kind of data contained in the property, the relative importance of research topics that could be addressed by the data, whether these data are unique or redundant, and the current state of knowledge relating to the research topic(s). A defensible argument must establish that a property “has important legitimate associations and/or information value based upon existing knowledge and interpretations that have been made, evaluated, and accepted” (McManamon 1990:15).

The criteria are applied in relation to the historic contexts of the resources. A historic context is defined as follows:

A historic context is a body of thematically, geographically, and temporally linked information. For an archaeological property, the historic context is the analytical framework within which the property’s importance can be understood and to which an archaeological study is likely to contribute important information (Little et al. 2000).

The formulation of historic contexts is a logical first step in the design of an archaeological investigation and is crucial to the evaluation of archaeological properties in the absence of a comprehensive survey of a region (NPS 1983:9). Historic contexts provide an organizational framework that groups information about related historic properties based on a theme, geographic limits, and chronological periods. A historic context should identify gaps in data and knowledge to help determine what significant information may be obtained from the resource. Each historic context is related to the developmental history of an area, region, or theme (e.g., agriculture, transportation, waterpower), and identifies the significant patterns of which a particular resource may be an element. Only those contexts important to understanding and justifying the significance of the property must be discussed.

Historic contexts are developed by:

- identifying the concept, time period, and geographic limits for the context;
- collecting and assessing existing information within these limits;
- identifying locational patterns and current conditions of the associated property types;
- synthesizing the information in a written narrative; and
- identifying information needs.

“Property types” are groupings of individual sites or properties based on common physical and associative characteristics. They serve to link the concepts presented in the historic contexts with properties illustrating those ideas (NPS 1983, 48 FR 44719).

The following research contexts have been developed to organize the data relating to the pre-contact and post-contact archaeological resources identified within Chatham:

- Pre-contact Land Use and Settlement in Chatham, circa (ca.) 12,500 to 300 years before present (B.P.); and
- Post-contact Development of Chatham, ca. A.D. 1500 to 1950.

In addition to these broad research themes, several project-specific research contexts have been developed for the Chatham survey:

- Post-contact Native American Context;
- Agricultural Activities Context;
- Maritimes Activities Context;
- Land-based Industries/Mills Context;
- Military Activities Context;
- Resorts/Tourism Context; and
- Transportation and Communication Context.

These research themes, together with settlement and residential resource groupings, have been developed to more fully understand post-contact period development at the town-wide and regional levels. Thematic research, coupled with information about temporal periods (e.g., Contact, Colonial, Industrial, Modern) provide a comprehensive way to predict and interpret post-contact archaeological resources.

#### **Archival Research and Information Sources**

The comprehensive archival research activities completed for the project were an integral part of the reconnaissance survey. The information necessary to develop pre-contact and post-contact contexts and assess the potential for archaeological resources begins with the examination of primary and secondary documentary sources. These include written and cartographic documents relating both to past and present environmental conditions and to pre- and post-contact period resources in or close to the town. Available data about the known pre- and post-contact archaeological sites in Chatham was reviewed. Geomorphology, soils, and hydrology/drainage patterns were also studied to place the town and known sites within a larger environmental context. The collection of data assisted with the formulation of predictive models for both pre- and post-contact archaeological sites and evaluation of the archaeological sensitivity of the town. The following sources were consulted as part of the archival research for the archaeological reconnaissance survey of Chatham:

#### **Public Planning Documents and Cultural Resource Reports**

The MHC has initiated or completed several documents intended to serve as research guidelines for cultural resource management (CRM) studies. MHC publications used as general archaeological survey

guidelines include *Cultural Resources in Massachusetts: A Model for Management* (MHC 1979), *Public Planning and Environmental Review: Archaeology and Historic Preservation* (MHC 1985), and *Historic Properties Survey Manual: Guidelines for the Identification of Historic and Archaeological Resources in Massachusetts* (MHC 1992). The archaeological survey work was also undertaken in accordance with the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716, September 29, 1983) and the Advisory Council on Historic Preservation's handbook *Treatment of Archaeological Properties* (1980). This technical report follows the guidelines established by the National Park Service in the *Recovery of Scientific, Prehistoric, Historic, and Archaeological Data* (36 CFR Part 66 Appendix A) and the MHC.

A synthesis of pre- and post-contact settlement and goals for additional research in the area is provided in *Historic and Archaeological Resources of Cape Cod and the Islands* (MHC 1987) and *Historic and Archaeological Resources of Southeastern Massachusetts* (MHC 1982). The MHC reconnaissance survey report for Chatham (MHC 1984) provided general information about patterns of pre-contact period settlement and land use, a chronology of post-contact development, and the archaeological resource potential for Chatham and the vicinity. Although these sources are now somewhat dated, they contain important settlement and land use pattern frameworks upon which more recent archaeological research can be interpreted.

Other narratives on file at the MHC provided useful information about current regional archaeological studies. Sources consulted included *Historical Contexts of Lower Cape Cod* (Holmes et al. 1997), prepared for the North Atlantic Regional Office of the NPS. This comprehensive report contains detailed information about predictive models for archaeological deposits specifically associated with pre- and post-contact land use in the southeastern Massachusetts coastal area. Because of the proximity of Chatham, this study was particularly useful for identifying resource-specific predictive models.

Several recently completed town-wide archaeological reconnaissance surveys were utilized as a guide for the current project. Community-level surveys completed in Falmouth (Donta et al. 1996), Chilmark (Mulholland et al. 1998), Edgartown (Herbster and Cherau 2000a), Marion (Binzen et al. 1998), Dartmouth (Herbster and Cox 2002), and Westport (Herbster and Heitert 2004) were also consulted as part of the review of relevant local and regional cultural resource regulations.

#### State Level Cultural Resource Inventories and Artifact Collection Reports

The state site files maintained at the MHC were reviewed to obtain information about known pre-contact and post-contact sites as well as State and National Register-eligible or listed properties in Chatham and the immediate vicinity. The state site files provided information about the location, temporal affiliation and other data about known pre- and post-contact archaeological sites. The inventory forms were copied and the site locations plotted on USGS topographic quadrangle maps. PAL updated existing site forms and completed new forms (as necessary) with data collected during the survey (see Appendices D and E).

Staff of the MHC compiled computerized pre-contact profiles of towns in the Commonwealth. The Chatham site profile includes a database of recorded archaeological sites and documented avocational collections. Information is presented by site type and temporal period, artifact class, type, and material

and with locational and environmental variables. The pre-contact town profile provided important information about the existing record of pre-contact sites in Chatham, and was also helpful in the development of the predictive archaeological model.

Post-contact period development and settlement patterns are documented through a series of acetate transparencies and overlays on file at the MHC. The MHC's Chatham files also contain copies of post-contact period maps housed at the State Archives, State House Library, and other curatorial facilities. These resources were used to develop predictive statements regarding the location and survival potential of post-contact archaeological sites.

Previously collected information about historic structures in Chatham provided information about the types and locations of potential post-contact period archaeological deposits. The CHC's town-wide historic structure survey (completed over several years with input from the CHS) resulted in the documentation of several hundred buildings, districts, cemeteries and landscapes within the town. Information contained within the narrative context was reviewed for general and specific post-contact period background, and assisted with the construction of the archaeological sensitivity maps and predictive statements.

Information about pre-contact archaeological sites in Chatham was also obtained from an MHC-sponsored artifact survey project. The *Artifact Collections from Cape Cod* (Mahlstedt 1985) survey report was one of a series of reports about avocational archaeological collections completed by MHC staff in the 1980s. The inventoried collections of Eric Farham and Raymond Seamans, Jr. included materials collected from archaeological sites in Chatham, and details about both men's collecting habits in the Chatham area were reviewed.

#### Cultural Resource Management, Academic, and Avocational Studies

Articles and site reports prepared for publication in journals such as the *Bulletin of the Massachusetts Archaeological Society* (MAS) were also reviewed for information about known archaeological sites in the Chatham area. These include several articles on Native American individuals by Chatham resident and historian W. Sears Nickerson (1958, 1961), a salvage excavation report (Dunford 1986), and the results of an excavation at the contact period Mattaquason Purchase Site (Eteson et al. 1978).

Avocational archaeologists are responsible for the bulk of the information about known pre-contact sites in Chatham. Prolific collector and Provincetown artist Ross Moffett was most active during the period between 1947 and 1952 and in 1957 he published a summary of the Cape's Native American archaeological sites in the MAS *Bulletin* that highlighted finds along the Outer Cape and was used to record many of the first sites in Barnstable County (Dunford and O'Brien 1997; Moffett 1957). Other local collectors included Howard Torrey and Cleon Crowell, both of whom were active in the Pleasant Bay area and [REDACTED] (Dunford, personal communication 2008). The 1970s excavations at the Mattaquason Purchase Site (19-BN-12) [REDACTED] by members of the MAS Cape Cod Chapter were among the first controlled and carefully recorded investigations of Native sites on the Cape and provided detailed information about several thousand years of land use in Pleasant Bay (Dunford and O'Brien 1997; Eteson et al. 1978).

The MHC annually updates a comprehensive listing of all cultural resource reports conducted under its jurisdiction entitled *Bibliography of Archaeological Survey and Mitigation Reports* (MHC 2006). The survey reports are indexed by town and an abstract of each project is attached. To date, one dozen CRM archaeology projects have been completed within Chatham, the most recent of these in 2002. Previous CRM surveys in town have been focused on a specific area such as a utility corridor (Decima 1994; Decima et al. 1992; Edens 1995; Edens et al. 1995; Raber and Loparto 1988), roadway (Strauss 1994), airport (Binzen and Kelly 2002) or subdivision (Schafer and Herbster 2003; Strauss 1998; 2002). Each of these studies included some level of archaeological research and excavation, whether or not an archaeological site was identified. The 2003 PAL report (Schafer and Herbster) involved additional excavation within the previously identified Mattaquason Purchase Site.

A multi-volume study entitled *Chapters in the Archaeology of Cape Cod* published by the NPS provided comprehensive research data about archaeological resources within the Cape Cod National Seashore and surrounding area (McManamon 1984). The NPS undertook a program of archaeological survey between 1979 and 1981 that was designed to collect, compile, and interpret the cultural history and material remains of the NPS lands along the outer Cape. This comprehensive collection of research reports by multiple authors included chapters on ethnohistory, ecology and natural resources, site locational patterns, specialized artifact analyses, and predictive modeling. Subsequent volumes were added to the series and included information about post-contact period archaeological sites as well as individual site reports. The *Chapters in the Archaeology of Cape Cod* series and several other NPS research reports (Stillson 1994) also provided important contextual data about the survival rate of pre-contact archaeological sites located along the exposed eastern shoreline that were particularly useful for predicting archaeological sensitivity in the Nauset Beach and Monomoy sections of Chatham.

Two archaeological overview studies focus more specifically on the Chatham area. A 1987 project supported by the Cape Cod Natural History Museum and the Friends of Pleasant Bay resulted in an archaeological sensitivity assessment of the Pleasant Bay area (Dunford 1987). While this study included the entire bay area that extends into the Town of Harwich, the environmental and cultural contexts developed for this study provided important information that was utilized for the current study. A more recent archaeological overview of Chatham was completed by local resident Christopher Seufert (1994) as part of an anthropology graduate thesis. This study, which covered the entire town, was designed to provide town planners and the general public with information about the history and archaeology of Chatham in order to identify and protect cultural resources. This project included a video component that provided an unwritten history of Chatham told from the perspective of Native Americans and local residents. Together with Dunford's (1987) study, this thesis provided a solid research database upon which to build the current town-wide survey project.

The results of all of the cultural resource studies were used to assist in the development of updated archaeological sensitivity criteria and the predictive models for the Chatham survey. They provided information that is particularly useful for pairing environmental variables with identified cultural resources, and the CRM data complemented the information collected by avocational archaeologists who often favor specific productive locations (eroding coastlines, plowed fields) for artifact find spots.

### Environmental Studies

The bedrock, surficial geology, and geomorphology of Chatham were studied to understand depositional, erosional, and drainage patterns. Information was collected about the physical structure, geological resources, climatic changes, and hydrology of the town (Cameron and Naylor 1976; Chamberlain 1964; Fenneman 1938; Leatherman 1987; Oldale 1992). These sources were consulted to help understand the environmental settings that may have existed during the pre-contact period, and to reconstruct the natural landscape. These references also provided important information about the processes that formed Chatham's current topographic landscape, and about the evolving coastline.

The USDA Soil Conservation Service soil survey of Barnstable County (1993) supplied information about soil types and surficial deposits within the town, and the general categories of flora and fauna that these soil types support. Information about the physical characteristics of Chatham was also gathered from the Commonwealth's Geographic Information Systems (GIS) website ([www.state.ma.us/mgis/massgis.htm](http://www.state.ma.us/mgis/massgis.htm)) and from the town's own GIS files that are maintained by the Community Development Department. These digital databases include topographic information, wetlands and soils mapping and political and assessor's boundaries. A combination of MassGIS and town-supplied data files were used as the base maps upon which all PAL data layers were added.

### Town Records, Histories, and Historical Maps

Primary records, town histories, and historical maps and atlases were examined to synthesize the post-contact period development of Chatham. These sources were used to assess changes in land use, to locate documented post-contact period sites and structures, and to trace the development of transportation networks, which can be an important variable in the location of post-contact sites.

Primary sources of information about individual residents are contained within the Vital Records for Chatham and include listings of births, deaths, and marriages. Information about the development and growth of the town was collected from state and local censuses as well as annual town reports that date from the nineteenth and twentieth centuries. Repositories for these records in print form include the Massachusetts Archives, the Eldridge Public Library and the Chatham Historical Society. Subscription-based electronic databases that were consulted for these information types include the New England Historic and Genealogical Society ([www.newenglandancestors.org](http://www.newenglandancestors.org)) and [www.ancestry.com](http://www.ancestry.com).

Historical maps and atlases (Hales 1831; Howes 1795; Walker 1880; Walling 1858) were consulted to locate possible eighteenth-, nineteenth- and early-twentieth-century sites within the town, as well as to trace the development of historic neighborhoods, roads, and trails. USGS topographic maps and coastal marine charts of Chatham dating from the late nineteenth century to the present were utilized to identify post-contact and modern period land alterations as well as to locate physical resources areas (e.g., wetlands) within the town. These maps were also examined to evaluate changes in transportation systems and land alteration, and to trace modern period development.

Secondary sources also provided important information about Chatham's development. A comprehensive town history was compiled and published in three separate volumes in 1909, 1913, and 1917 by William Smith. A fourth volume was written but Smith died before publication, and was published by the

Chatham Historical Society in 1947. A revised edition of all four volumes was published by the CHS in 1992 and this edition (Smith 1992) was utilized as part of the current survey. This work contains both general information about the region and specific historical data about the Town of Chatham, including background about geography, genealogy, industry, and settlement as well as historical maps and plans. Another important local history was written by Cape Cod historian and Chatham resident W. Sears Nickerson in 1949. Privately published in 1981 (and cited in the current report as Nickerson 1981), this personal remembrance of Chatham's history and the association of the Nickerson family with the town contains a wealth of information ranging from Native American sites to life in the twentieth century.

While Smith's history of Chatham is considered the most comprehensive, a number of other historical accounts contain general and detailed information about the development of the town. These include chapters in Barnstable County histories (Deyo 1890, Freeman 1802); town histories (Baisly n.d.; Carlisle 2000; Foley 1984; Knapton 1976); and historical accounts of particular areas or neighborhoods within the town (Fernandez-Herlihy 1997; Higgins 2004; Monbleau 1995; Rogers and MacAdam 2002; Roscoe 1993). These texts, located primarily at the Eldridge Public Library and Chatham Historical Society, provide a mixture of anecdotal and historical information and often contained details about a particular place, family, event or industry that was useful in the predictive modeling for the various study zones.

### Local Historical Organizations and Libraries

Members of the CHC and CHS met with the PAL project team early in the background collection phase of the survey to discuss archival repositories and holdings as well as to provide important contact information in town. Each individual interviewed as part of the survey passed along useful information for the project.

Information available at Chatham's Eldridge Public Library was reviewed during the survey. The library holds a comprehensive section of reference materials relating to local and regional (Cape Cod) history, including family histories, specialized subjects, unpublished manuscripts, map records, and vital statistics. The library also holds a copy of the comprehensive town-wide historic buildings survey.

The Chatham Historical Society's holdings include an extensive local and regional history library as well as archived manuscripts, artifacts, newspaper articles, genealogical data, and other items relating to Chatham's Native and Euro-American history. The CHS collections have been indexed in a searchable electronic database that includes digital photographic images of many items. A significant amount of unpublished information about the history of the town and its individual locales was collected from the CHS manuscript files. Several previously unrecorded Native American archaeological sites and potential site areas were also identified through the research conducted at the CHS.

### Electronic/Internet Sources

Web-based internet sites provided additional data about Chatham that was consulted for the survey project. The CHS website ([www.chathamhistoricalsociety.org](http://www.chathamhistoricalsociety.org)) is updated on a regular basis and contains numerous links to historical information about the town. The site includes finding aids for materials housed in the archives, copies of lectures and papers delivered at CHS functions, and an online gallery of historical photographs and postcards from Chatham.

Some of the information gathered through the internet is also available in textual or cartographic forms (e.g., Deyo's *History of Barnstable County*, map references, Barnstable County census data). Other sites provided basic statistical information about the town's current physical and political setting. All specific electronic sources consulted during the survey are cited in the text and/or references section of this document.

### Collections Research and Local Informant Interviews

A main component of the survey included consultation with professional and avocational archaeologists who have conducted research in the area and provided information about artifact collecting activity and potential archaeological site locations. Interviews with collectors and longtime residents focused on obtaining information such as when and how archaeological sites were discovered (i.e., surface collecting, construction-related disturbance, informal excavation). It is important to inquire about the past and present condition of known archaeological sites and the location or ownership of artifacts or other data (photographs, documents) related to these sites. The information collected from these sources was used to complete MHC archaeological site forms that will be filed with the state archaeologist's office as part of the project.

Senior PAL staff met twice (January and April 2007) with the CHC to collect information from town officials and provide updates on the status of the survey project. In May 2007, principal investigator Holly Herbster presented a public lecture/PowerPoint slideshow at the town hall as part of Chatham's Preservation Month (see Appendix I). This event, which was recorded and rebroadcast on Chatham's local cable access channel, provided an opportunity for PAL project staff to share information about the reconnaissance survey goals and objectives and to collect additional local information regarding archaeological resources and post-contact land use. In August 2007, PAL staff also led an archaeology session as part of the summer children's program at the CHS's Atwood House Museum. During morning and afternoon sections, children learned about archaeology in the region, identified artifacts, and participated in an "excavation" of modern garbage to learn about the types of information archaeologists collect.

Fred Dunford, the resident archaeologist of the Cape Cod Museum of Natural History (CCMNH) in Brewster provided important information about the history of artifact collecting in Chatham and assisted in the identification of areas of pre-contact archaeological sensitivity. Dr. Dunford's graduate and professional work has focused on the assessment and interpretation of many of the artifact assemblages collected by the Cape's avocational archaeologists in the first half of the twentieth century. The CCMNH holds part of the Cleon Crowell artifact collection, and Dr. Dunford has researched some of the materials associated with Crowell's sites in the Pleasant Bay area, [REDACTED]

[REDACTED] Crowell, a Harwich resident, kept a detailed journal of his collection areas and finds. One focus of Dr. Dunford's research has been the area surrounding Pleasant Bay, [REDACTED]

[REDACTED] In addition to reviewing his published works (Dunford 1986, 1987, 1991, 2001; Dunford and O'Brien 1997), the survey included interviews with Dr. Dunford to collect current information about known sites and archaeological sensitivity in Chatham.

Ron Nickerson, Chatham resident, historian, and vice president of the Nickerson Family Association offered his time and expertise to take PAL staff on a tour of significant post-contact sites throughout town, including a number of sites for which little information had previously been recorded. Mr. Nickerson also offered access to the Nickerson Genealogy Research Center and provided specific information about the homestead site of Chatham's first Euro-American resident, William Nickerson.

A complete list of all persons who were interviewed and/or who provided information as part of the project is included in Appendix C of this report. Information gathered through phone conversations and/or in-person interviews is cited in the text as personal communications.

### Field Survey

The field survey comprised an important part of the project methodology and was used to visually check a sample of previously recorded archaeological sites and to refine archaeological sensitivity zones. During Phase I of the reconnaissance survey, PAL researchers conducted a windshield survey of Chatham that utilized a current town map and USGS topographic quadrangle maps showing the locations of recorded pre-contact and post-contact sites, potential sites, and environmental zones. Additional windshield survey was undertaken as part of the Phase II work to field-check the preliminary archaeological sensitivity maps and refine the location and approximate extent of zones of high, moderate, or low sensitivity.

A sample of areas expected to have high archaeological sensitivity was visually inspected during the initial windshield survey. Locales that had been subjected to extensive mechanical/modern disturbance (e.g. gravel pits, town wastewater facilities) or assigned a low sensitivity based on the archival research were also field-checked to confirm their rankings. Adjustments based on the field surveys were incorporated into the refined archaeological sensitivity maps. The field survey was augmented by the participation of members of the Chatham community, who accompanied PAL researchers on several visits. These individuals provided access to and information about known and potential archaeological sites within the town.

### Pre-contact Sites

In selecting areas to be covered by the field survey, one priority was given to locations with attributes typically associated with pre-contact sites such as sandy soils on terraces, knolls, or fields near inland and coastal wetlands and waterways. Chatham's previously recorded pre-contact sites are clustered in the coastal portions of the town, or in proximity to wetlands with coastal drainages. All are situated in proximity to a natural water resource. While wetland margins represent a favorable environmental setting, in some portions of town these areas have also been used for concentrated post-contact period settlement, sometimes over several hundred years. The windshield survey assessed the current conditions and extent of previous disturbance in these areas. Based on the amount of residential and/or commercial development in some sections of town, some areas were changed from high to moderate or low pre-contact archaeological sensitivity.

Known pre-contact site areas were also field-checked, when possible, to assess any modern/recent disturbance or development, look for visible surface finds and/or features, and check the general integrity

of the location. Several of the site areas identified by avocational archaeologists and local residents were also field-checked to collect information about the existing environment and current land use patterns.

#### Post-contact Sites

Field survey was also conducted in the vicinity of Chatham's previously recorded post-contact sites and documented standing structures. As with pre-contact site locations, some site areas are located on private property where access is limited. In general, the documented areas of post-contact period settlement were targeted as the most likely spots for underdocumented post-contact archaeological sites to be present. An effort was also made to assess the potential for post-contact period sites in outlying sections of Chatham where post-contact land use and/or settlement are less well known. Chatham's village communities were visited to collect data about present environmental and development conditions. The potential for surviving historic structures, features, and landscapes in these areas was examined in relation to patterns of modern period development and reuse. Wooded interior areas and private residential developments were examined, where possible, from public roads.

#### Predictive Models for Site Location

Observations about known and potential site locations made during the field surveys were combined with information gathered from informants and archival research. This data was used to refine the preliminary archaeological sensitivity maps and develop predictive models of pre-contact and post-contact site location. This data was also used to refine the preliminary delineation of sensitive areas and produce the final archaeological sensitivity maps.

A major goal of the reconnaissance survey was to examine the existing archaeological data about Chatham to suggest which areas of the town may have high potential for additional archaeological resources to be present. For this purpose, predictive models for pre-contact and post-contact sites in Chatham were developed. These models relied on previously established regional patterns of settlement and land use combined with project-specific data collected during the archival research and fieldwork.

Table 2-1 presents a summary of the different factors used to develop the pre-contact and post-contact archaeological sensitivity rankings that appear in the predictive model presented in Chapter 7 and are depicted on the archaeological sensitivity maps of Chatham (see Appendix A).

#### Pre-contact Resources Sensitivity - Regional Level

Archaeologists have documented 12,000 years of pre-contact Native American occupation of the region, and oral traditions of some contemporary tribes tell of a 50,000-year cultural legacy. Prior to 7,000 years ago, peoples focused primarily on inland-based resources, hunting and collecting along the Northeast's waterways. After 7,000 years ago, settlement became more concentrated within the region's major river drainages. By 3,000 years ago, concurrent with a focus on coastal and riverine settlement, large populations were living in nucleated settlements and developing complex social ties, with language, kinship, ideology, and trade linking peoples across the Northeast. During the centuries prior to European contact, these groups began to coalesce into the peoples known as Pocumtucks, Nipmucks,

Table 2-1. Archaeological Sensitivity Ranking Used for the Town of Chatham.

PRESENCE OF SITES		PROXIMITY TO FAVORABLE CULTURAL/ ENVIRONMENTAL CHARACTERISTICS			DEGREE OF DISTURBANCE			SENSITIVITY
Known	Unknown	≤ 150 m	156-500 m	≥ 500 m	None/ Minimal	Moderate	Extensive	
*		*			*			High
*		*				*		High
*		*					*	Low
*			*		*			High
*			*			*		High
*			*				*	Low
*				*	*			High
*				*		*		High
*				*			*	Low
	*	*			*			High
	*	*				*		Moderate
	*	*					*	Low
	*		*		*			Moderate
	*		*			*		Moderate
	*		*				*	Low
	*			*	*			Moderate
	*			*		*		Low
	*			*			*	Low

Massachusetts, Wampanoags, Pokanokets, Mohegans, Pequots, and Narragansetts. The chronology of the pre-contact period is presented in detail in Chapter 4. Assessing the pre-contact archaeological sensitivity of any given project area depends on a consideration of past and present geographical and ecological characteristics, known site location databases, and knowledge of distinctive temporal and cultural patterns.

The choices that pre-contact Native Americans made about where they settled, how they organized themselves, and their technologies were all results of the dynamic relationship between culture and environment. Predictive modeling for larger-scale site location in southern New England has its roots in academic research including Dincauze's (1974) study of reported sites in the Boston Basin and Mullholland's (1984) dissertation research about regional patterns of change in pre-contact southern New England. Peter Thorbahn applied ecological modeling and quantitative spatial analysis, synthesizing data from several hundred sites in southeastern New England (Thorbahn et al. 1980), demonstrating that the highest concentration of pre-contact sites occurred within 300 meters (m) of low-ranking streams and large wetlands. The distribution of sites found along a 14-mile I-495 highway corridor in the same area reinforced the strong correlations between proximity to water and site locations (Thorbahn 1982). These and other large-scale projects provided data toward developing models of Native American locational and temporal land use (MHC 1982, 1987; RIHPC 1982) that became the foundation for site predictive modeling employed during CRM surveys through the next two decades.

Today, assessment of archaeological sensitivity within a given project area, and the sampling strategy applied to it, continues to take existing physiographic conditions into consideration but at multiple scales, from bedrock geology, to river drainages, to microenvironmental characteristics. These categories of data are used to establish the diversity of possible resources through time, the land use patterns of particular cultures, and the degree to which the landscape has been altered since being occupied (Leveillee 1999). Increasingly, social and cultural perspectives, as reflected in both the archaeological and historical records (Johnson 1999), and as expressed by representatives of existing Native American communities (Kerber 2006), are being taken into consideration when assessing archaeological sensitivity. Archaeological sampling strategies have also been evaluated and refined through applications of quantitative analyses (Kintigh 1992).

Geologic data provide information about lithic resources and current and past environmental settings and climates. Bedrock geology helps to identify where pre-contact Native Americans obtained raw materials for stone tools and gives indications of how far from their origin lithic materials may have been transported or traded. The variety and amount of available natural resources are dependent on soil composition and drainage, which also play a significant role in determining wildlife habitats, and forest and plant communities.

Geomorphology assists in reconstructing the paleoenvironment of an area and is particularly useful for early Holocene (PaleoIndian and Early Archaic Period) sites in areas that are different physically from 10,000 years ago (Simon 1991). Recent landscape changes such as drainage impoundments for highways and railroads, the creation of artificial wetlands to replace wetlands affected by construction, or wetlands drained for agricultural use, can make it difficult to assess an area's original configuration and current archaeological potential (Hasenstab 1991:57).

Beyond predicting where sites are located, archaeologists attempt to associate cultural and temporal groups with changes in the environmental settings of sites. Changes in the way pre-contact Native Americans used the landscape can be investigated through formal multivariates such as site location, intensity of land use, and specificity of land use (Nicholas 1991:76). However, distinguishing the difference between repeated short-term, roughly contemporaneous occupations and long-term settlements is difficult, and can make interpreting land use patterns and their evolution problematic (Nicholas 1991:86).

#### *Pre-contact Archaeological Resources in Chatham*

In order to develop a model for predicting pre-contact site locations, all of the data collected during the survey was used. These include the Massachusetts site files, artifact collections, environmental and soil studies, academic and avocational reports, informant interviews, and CRM studies conducted in the area. Data for the archaeological sensitivity model was also drawn from Dunford's (1987) and Seufert's (1994) reconnaissance-level studies of Chatham's archaeological potential as well as Holmes et al.'s (1997) more generalized study of Cape Cod's historic contexts. The model has been further formed by theoretical expectations applied broadly to the region, which indicate the clustering of pre-contact sites in settings of high resource potential and the settlement of locations that satisfied adaptive criteria specific to different pre-contact time periods. In general, the model relies upon regional and town-specific information to predict the location of potential sites in Chatham.

To enable the predictive model, the town was divided into general environmental zones based on a combination of geographic, political and environmental attributes such as settlement area, physical location, and drainage. Specific descriptions of these zones are presented in Chapter 3 of this report, and the results of the sensitivity assessment are presented in Chapter 7.

Prior to the start of the survey, the MHC's inventory files included 61 pre-contact period sites that had been identified in Chatham (see Chapter 4). While this number of sites is relatively large compared to other towns on Cape Cod, the majority of the sites were identified by artifact collectors and are known by general location only with no information relating to size, density, recovered cultural materials, or temporal association. Avocational archaeologists usually favor exposed coastal areas, pond shores, riverbanks, plowed fields, and other areas where cultural deposits can become exposed on the ground surface. Collectors often focus on large, visible sites or sites that are well known in local historical records. These patterns are clearly seen in many of Chatham's recorded sites, almost all of which are located near the shoreline. These patterns suggested that additional artifact collections within Chatham were extant, but had not been recorded for one reason or another.

In general, Chatham contains extremely favorable environmental variables for pre-contact site location. The diversity and abundance of wetlands in every geopolitical zone combined with overall sandy, well-drained soils indicates that significant sites could be located in almost any microenvironmental setting. Recorded pre-contact sites in Chatham are tied to wetlands; coves and embayments, streams, swamps, and other wetland margins were clearly utilized throughout the pre-contact period. Expected sites could range from small, temporary campsites and resource collection areas to large, semipermanent habitation areas. Given the relatively short distance from coastal locations to the interior, Native American populations probably utilized the entire spectrum of resources and moved seasonally throughout the entire town.

The predictive model is based on a primary assumption: that pre-contact settlement patterns seen at sites in Chatham and elsewhere in coastal southeastern Massachusetts are sufficient to predict where unknown sites of similar size, form, and function are located within the town.

#### **Contact and Post-contact Resources Sensitivity - Regional Level**

The contact period in New England roughly dates from AD 1500 to 1650, and predates most of the permanent Euro-American settlements in the region. This period encompasses a time when Native and non-Native groups interacted with one another through trade, exploration of the coastal region, and sometimes conflict. While contact period sites are usually associated with Native American activity during this period, they can also include sites utilized by Native and non-Native groups such as trading posts.

Native settlement patterns during the contact period are generally thought to follow Late Woodland traditions, but with an increased tendency toward the fortification of village settlements. Larger village settlements are frequently expected along coastal and riverine settings, often at confluences. Inland villages are known to occur near swamp systems, which were exploited both as resource areas and as places of refuge in the event of attack. Such sites would likely contain material remnants reflecting the dynamics of daily life, trade, and a preparedness for defense.

The identification of contact period deposits is most frequently tied to the types of artifacts located within archaeological sites. Unfortunately, the majority of the archaeological data for this period in southern New England comes from the analysis of grave goods within identified Native American burial grounds, rather than from habitation sites and/or activity areas (Gibson 1980; Robinson et al. 1985; Simmons 1970). The available data suggest that sites dating to this period often contain traditionally pre-contact features and artifacts (e.g., storage pits, chipped-stone tools) as well as non-Native trade goods and objects (e.g., glass beads, iron kettles and hoes) (Bragdon 1996). The earliest contact period sites are often located at or near the coast and estuarine margin, since European visits to New England occurred via ship. Non-Native artifacts passed from the coastal region to the interior through trade and/or seasonal travel.

The landscape of a project area is used to predict the types of post-contact period archaeological sites likely to be present. Major locational attributes differ according to site type. Domestic and agrarian sites (houses and farms) are characteristically located near water sources, arable lands, and transportation networks. Industrial sites (e.g., mills, tanneries, forges, and blacksmith shops) established before the late nineteenth century are typically located close to waterpower sources and transportation networks. Commercial, public, and institutional sites (e.g., stores, taverns, inns, schools, and churches) are usually situated near settlement concentrations with access to local and regional road systems (Ritchie et al. 1988).

Written and cartographic documents aid in determining post-contact period archaeological sensitivity. Historical maps are particularly useful for locating sites in a given area, determining a period of occupation, establishing the names of past owners, and providing indications of past use(s) of the property. Town histories often provide information, including previous functions, ownership, local socioeconomic conditions, and political evolution, which is used in the development of a historic context and to assess the relative significance of a post-contact period site.

The written historic record, however, tends to be biased toward the representation of Euro-American cultural practices and resources, particularly those of prominent individuals and families. Archival materials generally are less sensitive to the depiction of cultural resources and activities associated with socioeconomically or politically "marginalized" communities (MacGuire and Paynter 1991; Scott 1994). These communities may include, but are not limited to, Native Americans, African-Americans, and "middling" farming or working-class Euro-Americans.

Several archaeological studies conducted throughout New England have demonstrated the methodological pitfalls of relying exclusively on documentary or cartographic materials as a means to identify potential site locations associated with these types of communities. A large-scale archaeological study by King (1988) showed that in rural areas only 63 percent of the sites discovered were identifiable through documentary research. This suggests that approximately one-third of New England's rural Euro-American archaeological sites may not appear on historical maps or in town and regional histories.

More recent archaeological and ethnohistoric studies in the region have focused on the identification of other historically "invisible" communities, notably post-contact Native American communities. Several town-wide surveys in southeastern Massachusetts have compiled archaeological and historical data about eighteenth- and nineteenth-century Native and African-American communities that are poorly represented or are altogether absent in written town histories (Herbster and Cox 2002; Herbster and

Heitert 2004). In central Massachusetts, active and influential Native Americans have been identified through archival research despite the recorded “disappearance” of this group in the early eighteenth century (Doughton 1997, 1999). The cultural continuity of groups such as the Aquinnah Wampanoag is more thoroughly documented in archival sources, but until recently archaeologists focused their attention on pre-contact archaeological deposits. Current studies include predictive models for distinctly Native American post-contact sites, as well as interpretations of eighteenth- through twentieth-century archaeological sites (Cherau 2001; Herbster and Cherau 2002).

Other archaeological investigations have focused on worker housing and landscape organization within mixed-cultural mining communities in northern New England (Cherau et al. 2003); the social and spatial organization of a mixed racial community in western Connecticut (Feder 1994); and material culture and architectural patterns among nineteenth-century mixed African-American and Native American households in central Massachusetts (Baron et al. 1996).

Information about post-contact period land use within a project area can also be collected through written and oral histories passed through family members and descendant communities. These types of information sources can often fill in gaps in the documentary record and provide details that are not available through more conventional archival sources. While informants and other oral sources are subject to contradictory interpretations just like the documentary record, this type of information can also provide important data for the identification and interpretation of archaeological sites. The sole use of and reliance on the written and oral historical records during archival research, however, can lead to an underestimation of the full range of post-contact period sites in any given region. Therefore, walkover surveys and subsurface testing, in conjunction with the critical evaluation of available documentary and cartographic resources, are required to locate and identify underdocumented post-contact sites.

An important aspect of the predictive model for post-contact archaeological resources was the survival potential for sites identified from documentary sources or historical maps. Since many potential seventeenth-, eighteenth-, and nineteenth-century archaeological sites were located in sections of Chatham that have been in continuous residential or commercial use or are located in coastal erosion zones, these estimates of survival potential were organized according to the temporal periods used by the MHC in town reconnaissance surveys (see Chapter 5).

### *Post-contact Archaeological Resources in Chatham*

The history of land use and settlement in Chatham is represented by an extremely rich and diverse documentary record. Although Native American land use patterns in the post-contact period are not as well known as those relating to Euro-American settlement, the written history of Chatham is extremely detailed, particularly with regard to the settlement areas that comprise the town. Chatham's historic standing structures are also well documented, and many buildings have been recorded within a number of local and National Register historic districts. In sharp contrast, Chatham's historic archaeological record is represented by five post-contact period sites (see Chapter 5).

While the sample size is extremely small, especially in comparison with Chatham's pre-contact archaeological database, the recorded sites indicate the breath of archaeological resource types and

periods that are likely present in town. One site is recorded as a possible Native American homestead, two sites are the locations of shipwrecks, and the remaining two sites may represent eighteenth and/or nineteenth-century Euro-American habitations. As with pre-contact sensitivity, post-contact archaeological sensitivity is closely tied to microenvironmental changes. The identification of more sites representing all periods of post-contact occupation and various thematic contexts would add greatly to the town's historic and archaeological heritage.

### Archaeological Sensitivity Maps and User's Guide

The combined results of historic and archival research, informant interviews, fieldwork, and predictive modeling were used to prepare the archaeological sensitivity maps (see Appendix A). The first step in creating these maps was to synthesize information collected during the archival research. This included environmental attributes such as soil type/surficial deposit, slope, and drainage. This information was combined with the results of fieldwork, including the inspection of known and expected archaeological site locations and disturbance assessment, and with information collected from local sources and informants.

All of this information was used to delineate zones of high, moderate, and low pre-contact and post-contact archaeological sensitivity in Chatham (see Table 2-1 for ranking criteria). Zones of high sensitivity include known and/or documented archaeological sites and intact areas with attributes similar to those sites. Moderate sensitivity zones include areas with minimal to moderate levels of disturbance, no known sites, but some of the environmental attributes similar to sites identified in the general area. Zones of low sensitivity include areas known or likely to have been extensively disturbed by residential and/or commercial development or other types of modern land use. Most poorly drained areas such as wetlands are also ranked as having low sensitivity, exceptions being known and documented locations of post-contact industrial sites on streams and ponds, and maritime sites in coastal areas. Zones of preliminary archaeological sensitivity determined through archival research and fieldwork were first drawn on USGS topographic maps (completed during Phase I). This information was digitized and transferred to large-scale topographic maps of each designated geographic zone as part of the revised sensitivity assessment.

The locations of known prehistoric and historic archaeological sites are not shown on the sensitivity maps. They have been excluded to maintain the confidentiality of site locations and protect these vulnerable cultural resources. Archaeological sites' location data are kept in the inventory of cultural resources maintained by the MHC and state archaeologist. This information is protected under several state statutes such as MGL c. 9, ss. 26A and 27C (950 CMR 70) and MGL c. 40, ss. 8D.

The guide to understanding and using the archaeological sensitivity maps has been written in a non-technical style (see Appendix B). The primary goal in producing the user's guide was to translate categories of information collected during the reconnaissance survey into text that could be easily understood by members of local and regional boards and commissions, the public, and others who are not extremely familiar with archaeology or CRM. The text of the user's guide also describes the intent or purpose of the sensitivity maps as a planning tool to assist in implementing archaeological resource protection. The importance of protecting the confidentiality of information about known archaeological sites is also stressed in this document.

## Chapter Two

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Another section of the guide contains a brief description of how the sensitivity maps were developed and the basis for delineating archaeologically sensitive zones. Other components of the user's guide are a general description of symbols and conventions, zone boundaries, and known and expected types of archaeological sites. The guide also contains a glossary of common archaeological terms and descriptions.

## CHAPTER THREE

### ENVIRONMENTAL CONTEXT

Environmental settings, conditions, and natural resources are important factors to consider when assessing the potential for the presence of Native American and Euro-American sites. The varied topography, water resources, and floral and faunal species within Chatham contribute to the wide range of ecozones present in the study area.

Prior archaeological research on Cape Cod and elsewhere in southern New England has determined that land use patterns are closely tied to the proximity and availability of certain environmental resources. For example, the selection of activity, habitation, and ceremonial sites by Native Americans in the pre-contact period is often influenced by soil conditions, slope of land, and proximity to fresh water. Euro-American settlement and land use is often linked to transportation corridors, available raw materials, and proximity to water resources. The presence or absence of certain combinations of these and other environmental elements can be used to predict a wide variety of archaeological sites, from short-term resource collection areas to long-term settlement areas.

#### Physiography

The Town of Chatham is located in Barnstable County at the southeastern edge or "elbow" of Cape Cod. The town is bounded on the west by Harwich, on the north by Orleans and Pleasant Bay, on the east by the Atlantic Ocean, and on the south by Nantucket Sound. The town encompasses a total area of 24.33 square miles and a land area of 16.43 square miles.

Chatham is located within the Coastal Plain physiographic zone (Figure 3-1). This zone encompasses all of Cape Cod and the majority of the southern New England coastline. It is characterized by bedrock sources deeply buried under glacial outwash deposits and ice-contact features. The landscape of Chatham is characterized by level or gently rolling terrain known as "knob and kettle" topography and many ponds, swamps, small rivers, and wetlands. Elevations within the town range from 0 to 120 feet above sea level with the highest point being Great Hill near the center of Chatham.

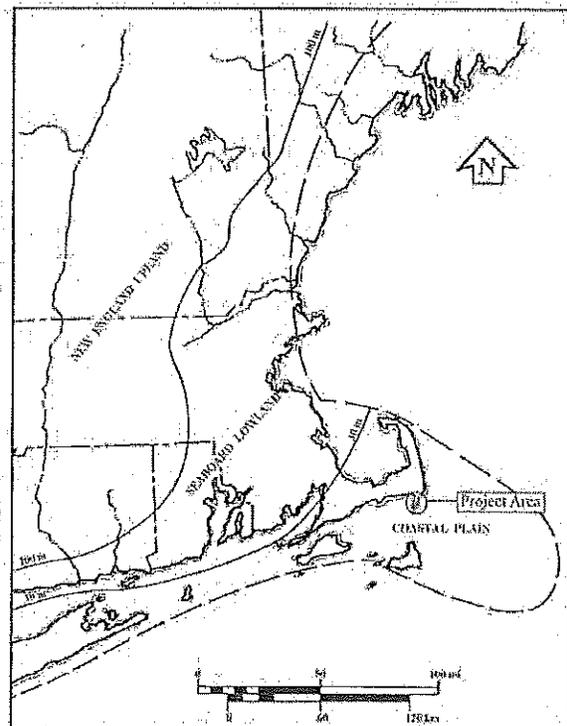


Figure 3-1. Physiographic zones of New England showing Chatham, MA (source: Penneman 1938).

## Geology and Geomorphology

The topography of the Chatham area was formed by glacial activity. The final recession of the glaciers approximately 14,000 years ago resulted in the deposition of massive amounts of materials on the land surface. The flow of outwash from the edge of the glacier once located in Cape Cod Bay created the current landscape; as the ice melted, river valleys were created and soils, rocks, and other particles were released and deposited as hills and valleys. The outwash plains that extend south from High Head are predominately sand with some gravel, cobbles, and boulders intermixed. Lenses of glacial lake deposit clayey silt are scattered throughout the outwash.

The surface of the glacial outwash deposits throughout Barnstable County are interrupted by kettle holes. Originally these were the locations of ice blocks buried by glacial deposits. Those that are deep enough to encounter the water table contain ponds (USDA 1993). Examples of these "kettle hole" ponds are found throughout Chatham's interior; some of the larger include Goose, Schoolhouse, Emery, and White ponds and Lovers Lake (Figure 3-2). Sea level is largely responsible for the height of water levels in the freshwater ponds, wetlands, and streams (Leatherman 1987). Both the glacial drift and the aeolian (windblown) and marine deposits are generally very permeable so that precipitation percolates through the soil to the water table located just above sea level.

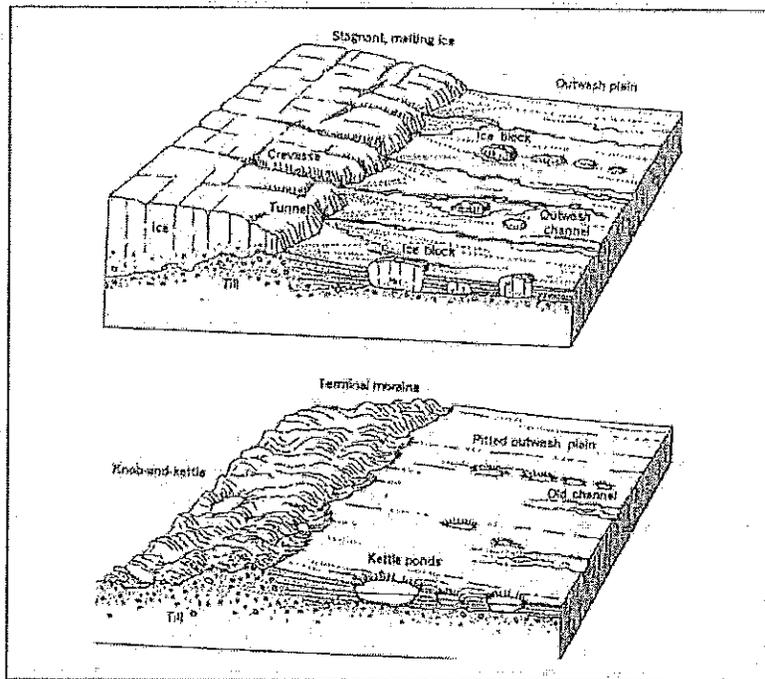


Figure 3-2. Diagram depicting the formation of "knob and kettle" topography and kettle hole ponds (source: Strahler 1966).

One of the most important differences between the ancient and modern environment is that the shoreline of 12,000 B.P. was located as much as 50 miles farther south and east than the current location. Nantucket Sound, Chatham Harbor, and Pleasant Bay did not exist in their present form until approximately 3,000 B.P. (Chamberlain 1964; Oldale 1992). Approximately 10,000 B.P., the area that now contains Pleasant Bay was likely a shallow freshwater wetland filled with glacial meltwater. By approximately 6500 B.P., rapidly rising sea levels had moved the shoreline closer, only about 1–2 miles east of its present-day location. The current Cape Cod shoreline was established by about 3500 B.P. and as sea levels became consistent Pleasant Bay began to develop into an estuarine ecosystem (Dunford 1987).

### Coastal Erosion and Shoreline Movement

The relatively recent break in Chatham's North Beach highlights the dynamic nature of shoreline topography and affects the predictive model for known and expected archaeological resources near the coast. Chatham's shifting shoreline has been well-documented for almost 400 years, with at least four separate breaches depicted on historical maps or in town records (Figure 3-3; see Chapter 5). The general pattern involves a break in the Nauset barrier and then the movement of the inlet to the south. The change in tidal flow caused by the initial breach leads to sand deposition and the creation of new land at the southern end of the barrier and erosion at the northern end of the barrier. Once the reformed barrier reaches a certain point, the process begins again (Howes et al. 2003; Oldale 1999).

The initial formation of the barrier beach is also relevant in the context of the archaeological predictive model. The creation of the Nauset Barrier Spit is closely tied to the stabilization of sea levels along Cape Cod's shoreline. According to archaeologist Fred Dunford (1987), the development of the Nauset barrier likely began after 6000 B.P. Prior to this time, Chatham's eastern shoreline would have been exposed to the ocean. As sediments were deposited along the spit, the Pleasant Bay estuary developed and erosion patterns along the formerly exposed shoreline changed.

The ongoing natural process of coastal erosion and deposition was a significant factor in the assessment of archaeological potential for some areas of Chatham. Portions of Monomoy Island and especially

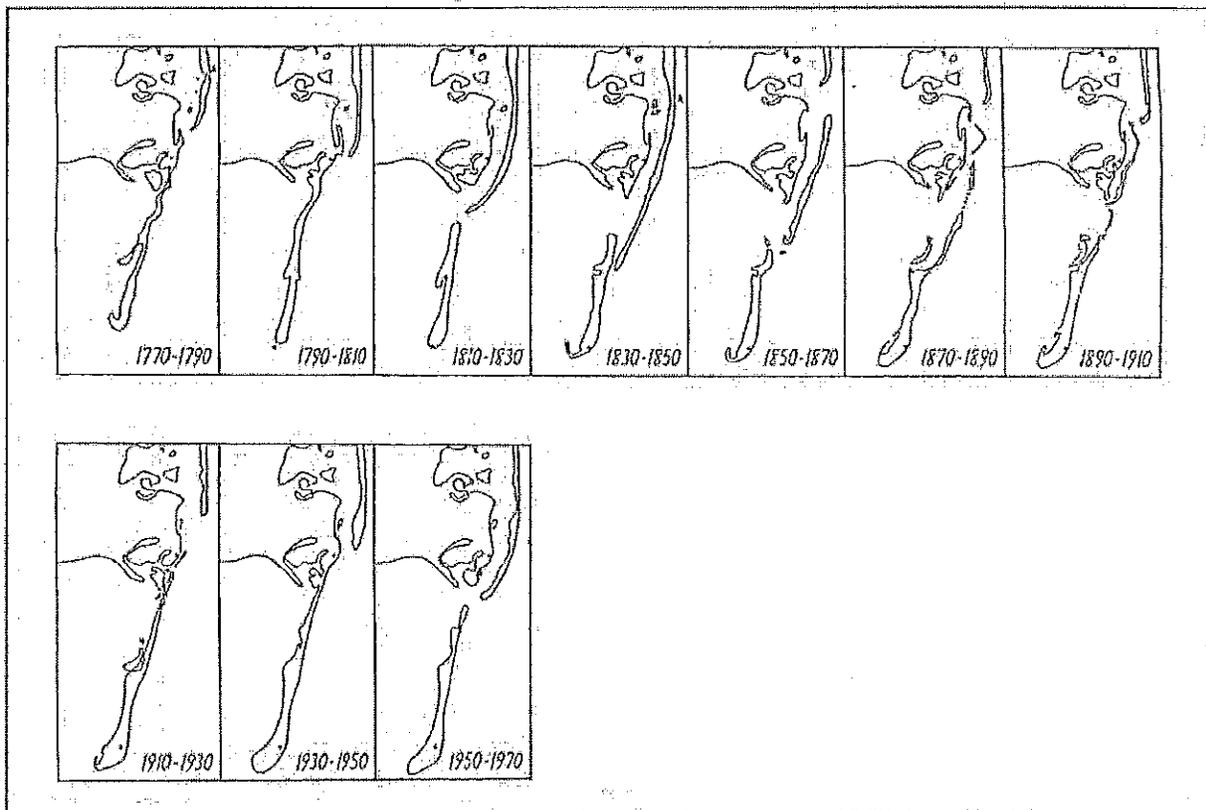


Figure 3-3. Historic changes in the Nauset Beach and Monomoy land forms (sources: Geise 1988 in Howes et al. 2003).

Nauset Beach are comprised of shifting land areas that have formed in the more recent past. The likelihood that pre-contact period deposits (both natural and cultural) could be present in these areas is extremely low, and therefore affected the sensitivity assessment. Coastal erosion on Chatham's mainland is also a factor that influenced the archaeological sensitivity assessment. Storm surges, combined with the effects of the breaches along Nauset Beach, have caused significant loss of land along Chatham's eastern shore from Allen Point to the Chatham Lighthouse. This erosion has led to the loss of some historic homes along the waterfront as well as the relocation farther inland of numerous other structures.

### Water Resources and Drainage

As a coastal community, Chatham contains both saltwater and freshwater resources. Chatham's wetland ecosystems, however, are especially rich and exhibit a greater range of diversity than many other locations in southeastern Massachusetts. Pleasant Bay represents one of Chatham's ecosystems and forms the northeastern boundary of the town. Pleasant Bay, which is shared by the towns of Chatham, Orleans, and Harwich, includes the smaller embayments of Bassing Harbor, Crows Pond, Ryder Cove, and Muddy Creek. A second estuarine ecosystem is located at the southern end of town and is comprised of Stage Harbor, Mill and Oyster ponds, and the Mitchell and Oyster Pond rivers (see Figure 1-2). The two areas are linked by Chatham Harbor, which extends between the eastern shoreline and Nauset Beach from the northern to southern tip of town. These wetland systems provide habitat for an extremely diverse range of plant, shellfish, marine mammal, fish, and bird species that have attracted humans over many thousands of years. They also provide access around the "elbow" of the Cape and, through wetlands including Muddy and Frost Fish creek, link interior resource areas to the coast. Wetland margins were also utilized during the post-contact period for salt production and as hay meadows.

Freshwater resource types in Chatham are more limited than saltwater resources and consist almost exclusively of glacial ponds (Figure 3-4; see discussion above). Kettle hole ponds are located throughout the central portion of Chatham and are contained primarily within the western town boundary with Harwich and the area

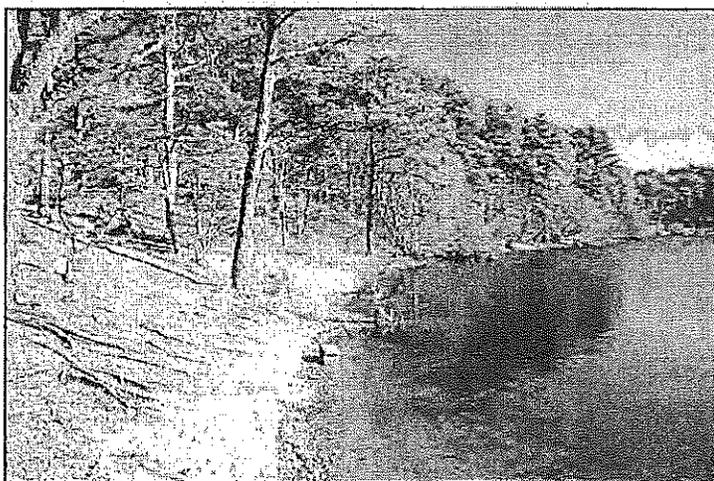


Figure 3-4. Photograph of Pickerel Pond, a typical "kettle pond" in Chatham, MA.

located within the Route 28 corridor (see Figure 1-2). Several small rivers and creeks connect coastal resources with interior location, but in general these types of wetlands are absent in Chatham. Kettle ponds, which would have existed throughout the pre-contact period, provide important habitat for terrestrial plants and animals and are often associated with short and long-term Native American land use and habitation. While these features on the Cape tend to be somewhat acidic because they sit above the saltwater groundwater table, they would have certainly been utilized by humans. These wetland resources also attracted post-contact period residents who could have modified pond margins through

damming in order to regulate water flow for milling and other industrial purposes. Mill Pond, located along Chatham's western boundary, is one example of post-contact period modification and use. Cranberry bogs, though not as common in Chatham as in other Cape towns, were also created around freshwater wetlands during the post-contact and modern periods.

### Soils

Soils within the Town of Chatham are comprised of three main types. The western two-thirds of Chatham and most of the Pleasant Bay shore area classified as Carver soils; nearly level to steep, very deep, excessively drained sandy soils. These soils are formed in glacial outwash and occur on outwash plains and glacial kames. The eastern third of Chatham's mainland that stretches from North Chatham to Quitneset contains Carver-Hinesburg-Nantucket soils. These soils are similar to Carver soils but include sandy and loamy soils formed in glacial outwash, glacial lake sediments and glacial till. Nauset and Monomoy Island and Harding Beach are comprised of Hooksan-Beaches-Dune soils. These soils are located on beaches and dune land and are described as nearly level to steep sandy soils formed in windblown deposits along coastal shorelines (USDA 1993).

More specific information about soils is included in the descriptions of the study units, below:

### Existing Conditions and Descriptions of Geographic Study Units

To enable the development of specific predictive models, Chatham was divided into four geopolitical/ecological zones. These divisions provided manageable areas for purposes of archaeological sensitivity, and corresponded to patterns in land use that could be tied both the pre-contact and post-contact cultural contexts.

The delineated zones for the Chatham survey consist of:

- 1) Pleasant Bay/Chathamport/North Chatham;
- 2) Central Chatham;
- 3) Chatham Harbor/Stage Harbor/South Chatham;
- 4) Monomoy and Nauset.

These four zones primarily delineate ecological areas within the town, but they also provide geographically and/or politically distinct research areas. With the exception of the Central Chatham Zone, each of these areas contains coastal resources and/or saltwater wetlands, so many of the environmental variables (and occasionally cultural resources) overlap from one zone to the next. Their approximate locations and geographic extent are shown in Figure 3-5. Physical descriptions of each zone, including existing conditions information, are presented below.

The *Pleasant Bay/Chathamport/North Chatham Zone* encompasses the northeastern section of Chatham located north of Route 28 (Orleans Road). This coastal zone is defined primarily by its location within the Pleasant Bay drainage and extends south the approximate location of Watch Hill, where the Chatham Harbor Zone begins. This zone includes Strong and Tern islands, Nickerson Neck, and the villages of Chathamport and North Chatham.

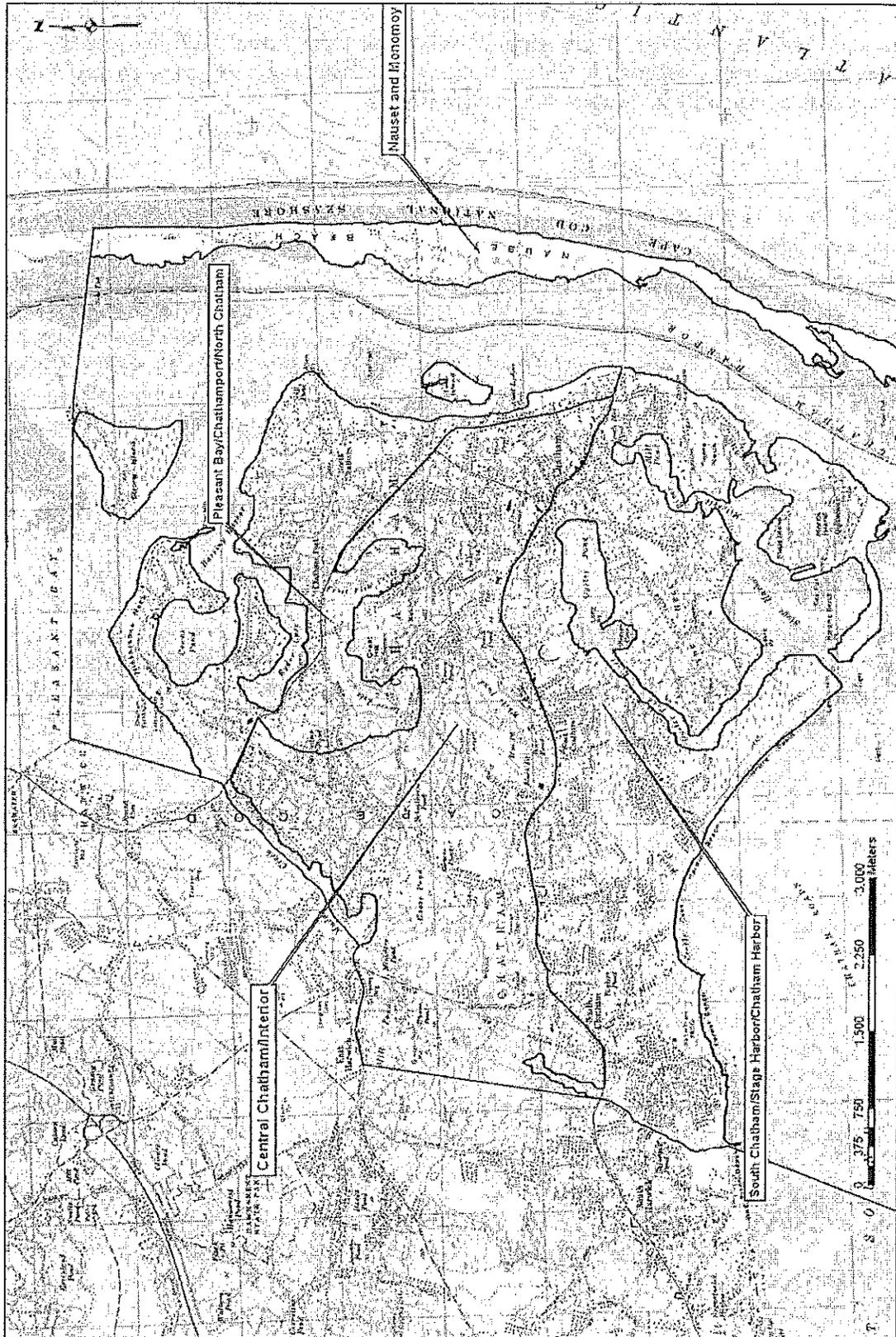


Figure 3-5. Topographic map of Chatham showing designated geographic zones, Chatham Archaeological Reconnaissance Survey.

Wetland resources within this zone include Bassing Harbor, Crow's Pond, Ryders Cove, and Frost Fish Creek as well as two small salt ponds and one unnamed pond in the North Chatham area. Soils in this zone are almost exclusively associated with the Carver course sand unit, deep and excessively drained soils formed in areas of ice-contact deposits and on glacial outwash plains. Small areas of Nantucket sandy loam are allocated near the shoreline and in proximity to low, poorly drained areas of muck.

Nearly half (25 of 61) of Chatham's previously identified pre-contact archaeological sites are located within the Pleasant Bay Zone. Prior to the reconnaissance survey, no post-contact period archaeological sites had been recorded in this zone.

The *Central Chatham Zone* includes the northwestern and north central sections of Chatham and is the only area that does not contain coastal or saltwater wetlands. This area is roughly bounded by Route 28 on the north and south, Shore Road on the east, and the town boundary with Harwich on the west. The tidal wetlands associated with Frost Fish Creek, Lovers Lake and Muddy Creek on the northern shore and the Red River on the southern shore are excluded from this zone. The Central Zone includes a portion of the main village area, the high school and middle school, and the Chatham Municipal Airport as well as several modern period residential subdivisions.

Freshwater wetlands within the Central Zone are numerous and comprised mainly of kettle ponds created when blocks of glacial ice melted in deep ground depressions. Examples of these types of ponds include Emery, Black, White, Schoolhouse and Goose Pond. Mill Pond, located along the Chatham/Harwich town boundary, may have been formed as a kettle hole pond but appears to have been altered to provide energy for a post-contact period industry. Soils in the Central Zone are dominated by Carver course sand, with areas of Eastchop loamy fine sand and Merrimac sandy loam located in the eastern and southern portions of the zone.

Prior to the survey, eight pre-contact and two post-contact sites had been identified in the Central Zone.

The *South Chatham/Stage Harbor/Chatham Harbor Zone* includes the southern and southeastern portions of Chatham's land mass and like the Pleasant Bay Zone includes numerous coastal ponds, salt marshes, and tidal wetlands. This area is bounded on the north by Route 28 (Main Street), on the east at Watch Hill by Chatham Harbor, on the south by Stage Harbor and Nantucket Sound, and on the west by the Red River and the Harwich town boundary. This zone includes the villages of South Chatham, West Chatham, a portion of the main village area, and Quinneset, comprised of Morris and Stage Islands.

The wetland network in this zone extends well into the interior and includes the deep reaches of the Mitchell River and Mill Pond, Oyster Pond, Sulphur Springs, and the Mill Creek and Taylor's Pond. Like the Pleasant Bay Zone, the majority of the South Chatham Zone's soils are comprised of Carver course sand.

Like the Pleasant Bay Zone, nearly half (28 of 61) of the previously recorded pre-contact sites and one post-contact period site are located in the South Chatham Zone.

The *Nauset and Monomoy Zone* consists of the disconnected section of Nauset Beach located within the town boundaries and the entirety of Monomoy Island, located south of Morris Island. These two landforms are currently under federal jurisdiction; Nauset Beach is part of the NPS's Cape Cod National Seashore and Monomoy Island is a National Wildlife Refuge controlled by the U.S. Fish and Wildlife Service (USFWS). Both segments are classified as barrier beaches and are directly exposed to the Atlantic Ocean. Unlike much of Chatham's protected coastline, Nauset and Monomoy are subject to constant changes in land shape and size. As an example, Monomoy has been attached to the mainland as a peninsula and detached as an island several times in the last century, most recently in November 2006, when shifting sand deposits at the northern end of the island reconnected with South Beach.

Soils on both Nauset and Monomoy are comprised primarily of Hooksan sand, a beach deposit located primarily on vegetated sand dunes. Areas of developed top and subsoils are constantly exposed and covered by windblown dunes and wave erosion, making this zone extremely dynamic in its resource support network and archaeological potential.

Prior to the reconnaissance survey, no pre-contact period sites have been identified in the Nauset and Monomoy Zone. One post-contact period site, a shipwreck, has been identified in the waters of Chatham Harbor just west of Nauset Beach's shoreline.

## CHAPTER FOUR

### PRE-CONTACT PERIOD RESEARCH CONTEXT

The Native American presence in southeastern Massachusetts has been well documented in general, but the locations and numbers of sites vary greatly from one location to the next. Much of the information about previously identified archaeological sites in Chatham is limited to very general locational and temporal data. By utilizing information about the known pre-contact period (10,000-450 B.P.) sites in Chatham and the body of data about sites in nearby coastal and interior areas with similar environmental attributes, it is possible to construct a chronology of Native American settlement and land use for the current survey.

#### Archaeological Studies on Cape Cod

The existing database of pre-contact period Native American settlement and land use patterns on Cape Cod has been compiled by avocational and professional archaeologists over most of the twentieth century and is informed by ethnohistoric sources and oral histories. Some of the earliest academic studies conducted on the Cape were directed by prominent archaeologists Douglas Byers, Frederick Johnson, and Ripley Bullen who were affiliated with the R.S. Peabody Museum in Andover, Massachusetts. Their work focused on excavating large, complex midden sites and often burials on Martha's Vineyard (Byers and Johnson 1940), the Hemingway Site in Eastham (Johnson 1942), and the Taylor Hill and Seth's Swamp sites in Wellfleet (Torrey 1946). While the investigation of human burials for academic research is not practiced today, these early excavations formed the building blocks of Cape Cod archaeology and led to interpretations of pre-contact period Native Americans coastal land use.

During the 1940s, 1950s, and 1960s the majority of the excavation on the Cape was conducted by members of the Cape Cod Chapter of the Massachusetts Archaeological Society (MAS). Active collectors at the time included Ross Moffett, who investigated a number of sites in Truro and Wellfleet, and Howard Torrey, who conducted excavations in Eastham and Truro. Both of these men amassed very large artifact collections ranging from 6,000 to 95,000 items (MHC 1987; Moffett 1957). These collections along with excavation notes and maps significantly increased the archaeological database for the region and contributed to the understanding of Native American settlement systems throughout southeastern Massachusetts. The pre-contact history of the Cape was better understood following William Ritchie's work on Martha's Vineyard in the 1960s. His studies resulted in the publication of a new cultural sequence for southeastern New England and a proposed model for human adaptation to maritime resources (Ritchie 1969).

Archaeological investigations on Cape Cod during the 1970s were primarily conducted by members of the MAS. These excavations focused on sites in West Yarmouth and the Mattaquason Purchase Site in

Chatham (Eteson et al. 1978). Systematic surveys conducted by professional archaeologists have only taken place on the Cape in the past 15 years. There has been a concerted effort by professional groups to initiate new studies as well as to reassess previous excavations and analyses. The area of the outer Cape, in particular, has become one of the most extensively studied and best-dated regions in the state. This research was led by a comprehensive survey of the Cape Cod National Seashore (CACO) undertaken by the NPS between 1979 and 1981 (McManamon 1984). Since CACO stretches along the entire eastern shoreline, research was collected within the towns of Provincetown, Truro, Wellfleet, Eastham, Orleans, and Chatham. Most recently, the Cape Cod Museum of Natural History in Brewster has promoted the storage and curation of artifacts, and has taken an active role in informing the general public about Native American and historic cultural resources in the region and the needs to salvage sites from destruction (Dunford 1986).

The archaeological database of the Cape has also been increased through numerous CRM surveys as well as collections analyses and excavations sponsored by professional groups from the Nantucket Historical Association, the University of Massachusetts at Boston and Amherst, and the MHC (MHC 1987). One such analysis of private artifact collections was conducted by MHC archaeologists in the summer and fall of 1984. This survey concentrated on collections from the mid- and inner-Cape region because of the paucity of information about these areas. Seven private collections along with several collections stored at the Cape Cod Museum of Natural History were included in the survey (Mahlstedt 1985).

The information gathered from the collections study, from region-specific surveys (Dunford 1987 and Seufert 1994), and numerous CRM surveys has resulted in the formulation of tentative patterns concerning the location and nature of Native American sites in the greater Chatham vicinity. Sites generally tend to be located on relatively flat, elevated areas, usually at least 10 feet above sea level. Sites are often protected on the north and east from predominant winds. The heads of salt ponds and slightly elevated terraces overlooking open areas of saltwater or freshwater also appear to have been favored by Native American groups occupying the southeast sections of the Cape. For the majority of known sites, freshwater sources are located in close proximity. These observed locational patterns are preliminary in nature, since a limited number of subsurface testing projects have actually been conducted either along the coast or at inland locations in Chatham. They generally follow the established Native American cultural chronology for Cape Cod presented below.

#### **Pre-contact Cultural Chronology for Chatham**

The body of data generated from the combined efforts of avocational and professional archaeologists has resulted in the compilation of a regional Native American cultural chronology within which known and potential sites can be studied. Table 4-1 presents a general outline of pre-contact cultural periods in southern New England that serves as a framework for interpretations of identified archaeological resources.

##### **PaleoIndian Period (12,500–10,000 B.P.)**

The earliest known Native American sites in New England date to the PaleoIndian Period. Few PaleoIndian sites or artifacts have been identified on the Cape Cod peninsula, and to date none have

Table 4-1. Pre-Contact Native American Cultural Chronology for Southern New England.

PERIOD	YEARS	IDENTIFIED TEMPORAL SUBDIVISIONS	CULTURAL ASPECTS
Paleoindian	12,500-10,000 B.P. (10,500-8000 B.C.)	<ul style="list-style-type: none"> <li>• Eastern Clovis</li> <li>• Plano</li> </ul>	Exploitation of migratory game animals by highly mobile bands of hunter-gatherers with a specialized lithic technology.
Early Archaic	10,000-7500 B.P. (8000-5500 B.C.)	<ul style="list-style-type: none"> <li>• Bifurcate-Base Point Assemblages</li> </ul>	Few sites are known, possibly because of problems with archaeological recognition. This period represents a transition from specialized hunting strategies to the beginnings of more generalized and adaptable hunting and gathering, due in part to changing environmental circumstances.
Middle Archaic	7500-5000 B.P. (5500-3000 B.C.)	<ul style="list-style-type: none"> <li>• Neville</li> <li>• Stark</li> <li>• Merrimack</li> <li>• Otter Creek</li> <li>• Vrsburg</li> </ul>	Regular harvesting of anadromous fish and various plant resources is combined with generalized hunting. Major sites are located at falls and rapids along river drainages. Ground-stone technology first utilized. There is a reliance on local lithic materials for a variety of bifacial and unifacial tools.
Late Archaic	5000-3000 B.P. (3000-1000 B.C.)	<ul style="list-style-type: none"> <li>• Brewerton</li> <li>• Squibnocket</li> <li>• Small Stemmed Point Assemblage</li> </ul>	Intensive hunting and gathering were the rule in diverse environments. Evidence for regularized shellfish exploitation is first seen during this period. Abundant sites suggest increasing populations, with specialized adaptations to particular resource zones. Notable differences between coastal and interior assemblages are seen.
Transitional	3000-2500 B.P. (1600-500 B.C.)	<ul style="list-style-type: none"> <li>• Atlantic</li> <li>• Wauketown</li> <li>• Orient</li> <li>• Coburn</li> </ul>	Same economy as the earlier periods, but there may have been groups migrating into New England, or local groups developing technologies strikingly different from those previously used. Trade in soapstone became important. Evidence for complex mortuary rituals is frequently encountered.
Early Woodland	3000-1600 B.P. (1000 B.C.-A.D. 300)	<ul style="list-style-type: none"> <li>• Meadowood</li> <li>• Lagoon</li> </ul>	A scarcity of sites suggests population decline. Pottery was first made. Little is known of social organization or economy, although evidence for complex mortuary rituals is present. Influences from the midwestern Adena culture are seen in some areas.
Middle Woodland	1650-1000 B.P. (A.D. 300-950)	<ul style="list-style-type: none"> <li>• Fox Creek</li> <li>• Jack's Reef</li> </ul>	Economy focused on coastal resources. Horticulture may have appeared late in the period. Hunting and gathering were still important. Population may have increased from the previous low in the Early Woodland. Extensive interaction between groups throughout the Northeast is seen in the widespread distribution of exotic lithics and other materials.
Late Woodland	1000-450 B.P. (A.D. 950-1500)	<ul style="list-style-type: none"> <li>• Levanna</li> </ul>	Horticulture was established in some areas. Coastal areas seem to be preferred. Large groups sometimes lived in fortified villages, and may have been organized in complicated political alliances. Some groups may still have relied solely on hunting and gathering.
Protohistoric and Contact	450-300 B.P. (A.D. 1500-1650)	<ul style="list-style-type: none"> <li>• Algonquian</li> </ul>	Groups such as the Wampanoag, Narragansett, and Nipmuck were settled in the area. Political, social, and economic organizations were relatively complex, and underwent rapid change during European colonization.

<sup>1</sup>Termed Phases or Complexes  
<sup>2</sup> Before Present

been recorded in the greater Chatham vicinity. Many researchers have theorized that early sites may have been located in areas that were inundated by the postglacial sea level rise and, in places like Chatham, coastal erosion (see Chapter 3).

The use of local lithic types to manufacture stone tools suggests that an initial definition of territories may have occurred. One of the largest PaleoIndian sites in New England, the Bull Brook Site in Ipswich, Massachusetts, contained such a diverse artifact assemblage that it appears that a wide range of available floral and faunal resources were exploited during this period (Grimes et al. 1984). A mammoth tooth recovered by a fishing vessel off the coast of New Bedford suggests that megafauna were present in the Dartmouth area (Glennon 2001). If available, animal resources such as these would likely have been utilized by PaleoIndian inhabitants.

Until recently, evidence of PaleoIndian occupation on Cape Cod had been limited to surface finds from interior riverine locations in the mid-Cape region (MHC 1987). A professional archaeological survey in Barnstable identified one of the first in situ PaleoIndian finds for Cape Cod. The Hathaway Pond I Site, located adjacent to an interior kettle hole, yielded a probable Eden projectile point and associated chipping debris (Davin and Gallagher 1989). A cache of Eden-like points was also discovered in Barnstable underneath an uprooted tree (Dunford, personal communication in Davin and Gallagher 1989).

#### Early Archaic Period (10,000–7500 B.P.)

The Early Archaic Period was also characterized by changing environmental landscapes as sea levels rose and inundated coastal plain areas that may once have been occupied. The climate was becoming warmer and drier and was dominated by a mixed pine-hardwood forest. Like PaleoIndian depositions, sites dating to the Early Archaic Period are also very rare, and the social and technological adaptations devised by the indigenous populations of New England at the time are not well understood. Research indicates that Early Archaic social groups moved within established territories, practicing an increasingly generalized subsistence strategy based on river and lake systems and other physiographic zones (Nicholas 1987; Tuck 1974).

The lithic technology of the Early Archaic Period reflects a more diversified subsistence strategy, including unifacial edge tools, cores, flakes, hammerstones, milling slabs, and notched pebble sinkers, indicating an increased utilization of plant and fish resources (Robinson 1992). Corner-notched, stemmed, and bifurcate-based points serve as the diagnostic artifact class for the period. Characteristic of both assemblage types is the predominance of expedient tools made from local lithic sources.

Information about Early Archaic occupation on the Cape is also lacking.

The infrequent recovery of diagnostic artifacts dating to this time period and the lack of in situ finds may be the result of several factors. It is possible that the portions of Cape Cod originally part of the Continental Shelf were not frequently utilized by

Native American groups between 10,000 and 7,500 years ago. However, it seems more likely that the Cape and its natural resources were available to and exploited by Native American groups, but early site locations that would have been adjacent to the coastline are now submerged as a result of rising sea levels and eroding sea shores.

#### Middle Archaic Period (7500-5000 B.P.)

The distribution and somewhat higher density of Middle Archaic sites in southeastern New England (compared with sites dating to earlier periods) indicates that a multi-seasonal settlement system was established by this time. A general warming trend, reflected by an increased diversification in ecosystems, characterizes this period. This period is characterized by Neville and Stark projectile point types. A preference for locally available lithic raw materials for a variety of bifacial and unifacial stone tools is also evident at many sites. Ground-stone technology introduced a variety of tool types into the lithic assemblage including net sinkers, plummetts, grooved adzes, axes, gouges, whetstones, and atlatl weights (Carlson 1964; Dincauze 1976; Fowler 1950). The presence of adzes, gouges, and axes suggests heavy woodworking and possibly the appearance of dugout canoes.

Archaeological data indicate a Middle Archaic settlement system of planned seasonal movement, oriented around major rivers and streams. Subsistence was based upon the harvesting of anadromous fish, plant gathering, and hunting. Sites have been located in diverse environmental settings, including upland, coastal, and riverine environments. The Bass and Herring rivers in the mid-Cape region appear to have been important focal points of Middle Archaic subsistence strategies. The Farnham artifact collection contains 56 Middle Archaic projectile points, [REDACTED]

[REDACTED] A concentration of Middle Archaic deposits has been identified in Dennis along the Bass River, including multicomponent sites [REDACTED]

[REDACTED] is thought to be associated with the harvesting of anadromous fish (Dunford 1991).

On the outer Cape, there are only a few scattered indications of Middle Archaic utilization and these are primarily located around kettle hole ponds. [REDACTED]

[REDACTED] Thirteen Stark projectile points, a Kirk Stemmed projectile point, and the base of a Neville projectile point were recovered from this site. The emphasis in this assemblage on Stark projectile point types is suggestive of some specialized functional association. [REDACTED]

[REDACTED]

In Chatham, one Middle Archaic projectile is recorded in a collection [REDACTED]

[REDACTED] Although not identified at the time of excavation, the Mattaquason Purchase Site (19-BN-12) in Chatham contained a diagnostic Stark-like point, suggesting that the wetland resources associated with [REDACTED] may have been productive during the Middle Archaic Period (Eteson et al. 1978).

### Late Archaic Period (5000–3000 B.P.)

Late Archaic Period sites in southeastern Massachusetts are much more numerous than those dating to earlier periods based on inventoried artifact collections and professionally excavated sites. Land use patterns during this period appear to reflect population increases and environmental changes, and sites have been located in almost every type of ecological niche. In the region, Late Archaic sites have been found adjacent to swamps, marshes, tidal flats, brooks and streams, and major rivers in both coastal and upland areas. Small, special-purpose sites found along the edges of streams, bogs, and kettle hole swamps suggest the utilization of a wide variety of plant and animal resources.

The Late Archaic Period is grouped into three cultural traditions: the Laurentian, Susquehanna, and Small Stemmed, all of which are represented in area sites. The Small Stemmed tradition appears to be particularly focused in the Narragansett Basin, and nearly every recorded site contains components of this tradition. Quartz is also frequently associated with the Small Stemmed tradition, especially in southeastern Massachusetts and on Cape Cod. Regional studies have hypothesized that environmental niches were limited during the Late Archaic and that groups were forced to use more marginal locations, such as marsh and wetland peripheries (MHC 1982). Based on these studies, many of the smaller sites in the area that consist of quartz chipping debris and biface fragments, but no diagnostic tool types, are considered to date to the Late Archaic Period.

A single Otter Creek style (Laurentian) projectile point was recovered during the CACO archaeological survey at Site 19-BN-274 (Borstel 1984). Twenty of the sites identified during the CACO survey contained Small Stemmed components. These are located in a variety of environmental settings, such as areas adjacent to bays, inlets, and freshwater marshes as well as in isolated upland settings.

Two sites (19-BN-723 and -733) identified in South Chatham during a CRM survey also contained probable Late Archaic materials (Decima 1994). The Mattaquason Purchase Site also contained a Small Stemmed quartz biface that may be evidence of Late Archaic occupation (Eteson et al. 1978).

### Transitional Archaic Period (3600–2500 B.P.)

The Transitional Archaic Period characterizes the shift from the Archaic to Woodland periods. Susquehanna projectile points became prevalent along with the continuing Small Stemmed styles. Site types often consist of special purpose, ritual activity areas and complex burials. New technologies and patterns of site utilization may have been developed by local populations or introduced by groups migrating into New England from distant areas. One new technological development during this period was the use of steatite, a soft, easily carved soapstone. Steatite was extracted from lithic beds located across southern New England and was often transported over long distances. This material was manufactured into vessels such as bowls and platters and into utilitarian and ceremonial smoking pipes. Artifacts considered to be diagnostic of this time period include Genesee, Normanskill, Wayland Notched, and Orient Fishtail projectile points.

The Coburn Phase of the Susquehanna tradition has a relatively strong presence on the outer Cape, and this cultural tradition was first identified through avocational excavations [REDACTED]. Transitional Archaic sites from the mid- and outer-Cape regions document the utilization of a wide variety of interior pond and riverine as well as coastal habitats. [REDACTED]

[REDACTED] One possible Atlantic projectile point was recovered during the CACO survey, from site 19-BN-417. Seven Susquehanna Broad/Wayland Notched projectile points and two broad spear-like bifaces were recovered during the CACO survey. Orient style projectile points were also recovered from sites 19-BN-308 and 19-BN-390 during the survey. It is likely that the Mattaquason Purchase Site in Chatham may have been intensively utilized during the Transitional Archaic Period based on the recovery of diagnostic deposits (Schafer and Herbster 2003).

### Early Woodland Period (3000–1600 B.P.)

The presence of shell midden deposits is considered a characteristic of Woodland Period sites. Many of the sites identified along the coastline in the Cape and Islands region were initially identified by shell middens, which are often highly visible along exposed sandy cliffs and on the exposed ground surface. Without associated tools, it is difficult to place shell midden sites into a specific Woodland period. [REDACTED] and [REDACTED] have been identified in some cases as shell-lined pits located near the shoreline.

A number of the previously recorded sites in Chatham are identified on the basis of shell midden deposits, and can generally be classified as dating to the Woodland Period. Eleven pre-contact sites identified by avocational collectors are listed as “shell midden” sites. [REDACTED] The Mattaquason Purchase Site, which was excavated by avocational and professional archaeologists, is also an example of a shell midden site near the Chatham coast.

The Early Woodland Period in southern New England is generally underrepresented in terms of site frequency. While this has been attributed to a decline in population, it is more likely evidence of difficulty in identification (see above). The manufacture and use of Small Stemmed quartz projectile points continued into the Woodland Period, raising the possibility of confusion between Late Archaic and Early Woodland archaeological components.

Increasingly, Small Stemmed materials have been recovered within dated Woodland Period archaeological deposits, especially in coastal sections of southern New England. Collections analysis and recent excavations on Martha’s Vineyard have noted that Late Archaic-styled points (especially Small Stemmed points) fashioned of quartz are often the most common projectile recovered from sites that also contain Woodland Period deposits such as ceramics, and have been identified in features radiocarbon dated to later periods (Halligan 2000; Herbster and Cherau 1999, 2001).

Technological innovations of the Early Woodland Period included the manufacture of ceramic vessels, horticulture, and the emergence of the Meadowood and Rossville projectile point types. Coastal resources became increasingly significant in the subsistence regime of indigenous populations, a pattern reflected in the settlement systems recognized during the Early Woodland Period.

While definite Early Woodland Period sites are infrequent, archaeological deposits dating to this period have been located in all sections of the Cape. At least seven Early Woodland sites have been identified in the town of Harwich. Early Woodland components have been identified at several of the multicomponent Bass River sites [REDACTED]. Few Early Woodland components have been located on the outer Cape (McManamon 1984).

The presence of an Early Woodland component at the Carns Site is indicated by a reported radiocarbon date of  $2000 \pm 80$  B.P. (Beta 48238) (Stillson 1994) and the possible presence of Rossville projectile point types (Johnson 1997:138, 140). Seven sites identified during the CACO survey contain evidence of Early Woodland Period components in the form of diagnostic ceramic or projectile point types. In Chatham, [REDACTED]

[REDACTED] contain definite Early Woodland components. The Mattaquason Purchase Site, which was excavated by avocational and professional archaeologists, is also an example of a shell midden site containing an Early Woodland component near the Chatham coast.

#### Middle Woodland Period (1600–1000 B.P.)

In southern New England, archaeological evidence for Middle Woodland occupations is more common than that for the preceding period. A higher level of sedentism in settlement patterns is indicated, in addition to population increase, greater social complexity, and evidence for regional trade. Technological diversification expanded, marked by a proliferation of ceramic styles and the emergence of several types of projectile points. People of the Middle Woodland Period in southern New England obtained exotic lithic materials, including Pennsylvania jasper and New York State cherts.

Middle Woodland occupation is indicated by the presence of diagnostic Jack's Reef Corner-Notched and Pentagonal, Fox Creek, and Greene projectile point types as well as by increased variation in ceramic vessels and fishing tools. Recovered materials and feature information indicate that hunting, fishing, and collecting activities continued to dominate the subsistence strategy, but an increased emphasis on shellfish harvesting is reflected in the numerous shell midden sites. Since Ritchie's excavations, many additional sites have been identified and recorded as containing Middle Woodland Period artifact assemblages (MHC 1987:35).

A number of Middle Woodland components were identified during the archaeological investigations within CACO. Site 19-BN-336 yielded a Fox Creek projectile point and one site [REDACTED] contained eight Jack's Reef points, as well as evidence of winter exploitation of shellfish (Borstel 1984:244). Middle Woodland ceramic types were recovered from four sites identified during the survey. A significant Middle Woodland component was identified [REDACTED] in Eastham, which yielded an assemblage of 21 lanceolate projectile point forms (Fox Creek, Greene), as well as sherds of cord-wrapped, stick-impressed and linear dentate-stamped pottery (Bradley 2005; Stillson 1994). The Mattaquason Purchase and PSS-11-2-2 sites in Chatham also contained evidence of Middle Woodland Period occupation.

### Late Woodland Period (1000–450 B.P.)

The Late Woodland Period in much of the Northeast region saw the aggregation of indigenous populations into large, complex villages. In New England, evidence suggests that settlements were on a more modest scale. Composed of extended family groups, communities may have moved seasonally from inland bases to coastal sites to exploit seasonally abundant resources. By alternating between procurement areas, the environment was able to support a greater number of people for a longer period of time before being exhausted. Ethnohistoric accounts and archaeological evidence appear to support this interpretation of a smaller-scale settlement pattern for this period.

The Late Woodland Period on Cape Cod is best represented by shell middens, although as noted above these deposits span the entire Woodland Period. While artifacts diagnostic of the period (including Levanna projectile points and decorated pottery) are numerous in collections and from excavated sites, the locations of identified Late Woodland occupations do not appear to be as varied as those associated with earlier periods. The majority of these site locations occur along the coast, suggesting that shellfish exploitation constituted a very important part of the subsistence strategy at this time. The diversity and density of materials found within the middens indicate the presence of sedentary, relatively long-term occupations (McManamon 1984). Horticulture was also introduced into local subsistence systems during this period, and may have influenced the locational settlement patterns.

Identified Late Woodland sites in Chatham vary considerably in size and composition. Site 19-BN-622 is represented by a small shell midden eroding out of a road cut, while [REDACTED]

[REDACTED] The Mattaquason Purchase and Malluzzo (19-BN-489) sites both contained intact archaeological features, expansive shell middens, and covered several acres in size. [REDACTED]

[REDACTED] was identified during construction and documented by the MHC in 1982. Bulldozers revealed shell pit features that contained bones from deer, fox, and fish, as well as lithic tools, grit-tempered ceramics, and charcoal.

### Expected Pre-contact Period Resources within Chatham

Prior to the reconnaissance survey, 61 Native American sites were documented in Chatham. The presence of these sites, along with numerous other sites in the region, indicates that the environmental variables in this area, such as proximity to fresh water and the associated resources were extremely favorable for pre-contact period Native American habitation. The majority of the known sites are located adjacent to streams, freshwater ponds, or the coast. Based on the distribution of sites, level, well-drained land overlooking these water sources was also preferred.

The known sites in Chatham vary in size from small, isolated lithic scatters, to multi-feature shell middens comprising several acres. A wide variety of artifacts has been recorded, indicating that these sites had multiple uses. Several of the identified sites also contain human burials. The dates of Native American occupation range from the Middle Archaic to the Late Woodland and into the post-contact period (see Chapter 5; Appendix F).

The existing site database and the assessment of environmental variables were expected to supply the means to make predictive statements regarding additional site types and locations and to develop pre-contact research themes. A major focus of the reconnaissance survey project was the collection of information from avocational archaeologists and local research sources that could provide information about undocumented and/or underdocumented pre-contact site areas within the town.

## CHAPTER FIVE

### CONTACT AND POST-CONTACT PERIOD RESEARCH CONTEXT

The post-contact period in Chatham begins at the time of the first European arrivals to the region and relates to both Native American and Euro-American occupation. The following context addresses Chatham's development from the contact period through the Modern Period (ca. A.D. 1500–1950). This chapter presents an overview of the general history of the town gathered from written accounts and local information sources. More specific historical information about Chatham's individual locales is presented in Chapter 7 with the predictive model for post-contact archaeological sites.

#### Contact Period Development (A.D. 1500–1620)

The lifeways of Chatham's Native American inhabitants during this period are believed to have been similar to those of the Late Woodland Period. Seventeenth-century narratives and modern ethnohistorical sources attest to the extensive trade network in place during this period (Bragdon 1999; Brassler 1978; Snow 1980; Winthrop 1996). Interaction between Native people and Europeans in the Chatham area was recorded by several early explorers and settlers including John Winthrop, William Bradford, Thomas Morton, Samuel Champlain, and Samuel and John Smith.

Native American groups living in the Chatham area likely had sporadic interaction with Europeans in the late sixteenth and early seventeenth century. Prior to the first European settlement of the area, the outer Cape was inhabited by Native American groups known by the general name of Nauset. There are several different spellings in the historical literature for the Algonquin name of the territory in the southeast portion of the Cape Cod peninsula, but it is most often referred to as Monomoyick or Monomoit (Smith 1992). One or more kin-based groups known as the Monomoyick or Potonumecot may have included the Chatham area within their homelands. Figure 5-1 shows a nineteenth-century reconstruction of Native American territorial divisions recorded by Europeans during the contact period.

The first documented contact between Europeans and Native people in the Chatham area occurred around 1602 when Bartholomew Gosnold, while returning from a fishing expedition near the area of Provincetown, anchored for several days off the Chatham shoreline (Smith 1992). According to recorded accounts, several Native Americans approached the side of his ship by canoe. These men brought with them items to trade, including tobacco, copper pipes, and skins, suggesting that they had previous contact with Euro-Americans. Gosnold soon left the area and attempted to start a settlement on Cuttyhunk Island.

In 1606, the Chatham area was again visited by European sailors when Samuel de Champlain anchored in Stage Harbor for two weeks in order to repair a broken rudder. Champlain described Chatham as an area where "there is much cleared land and many little hills, whereon the Indians cultivate corn and

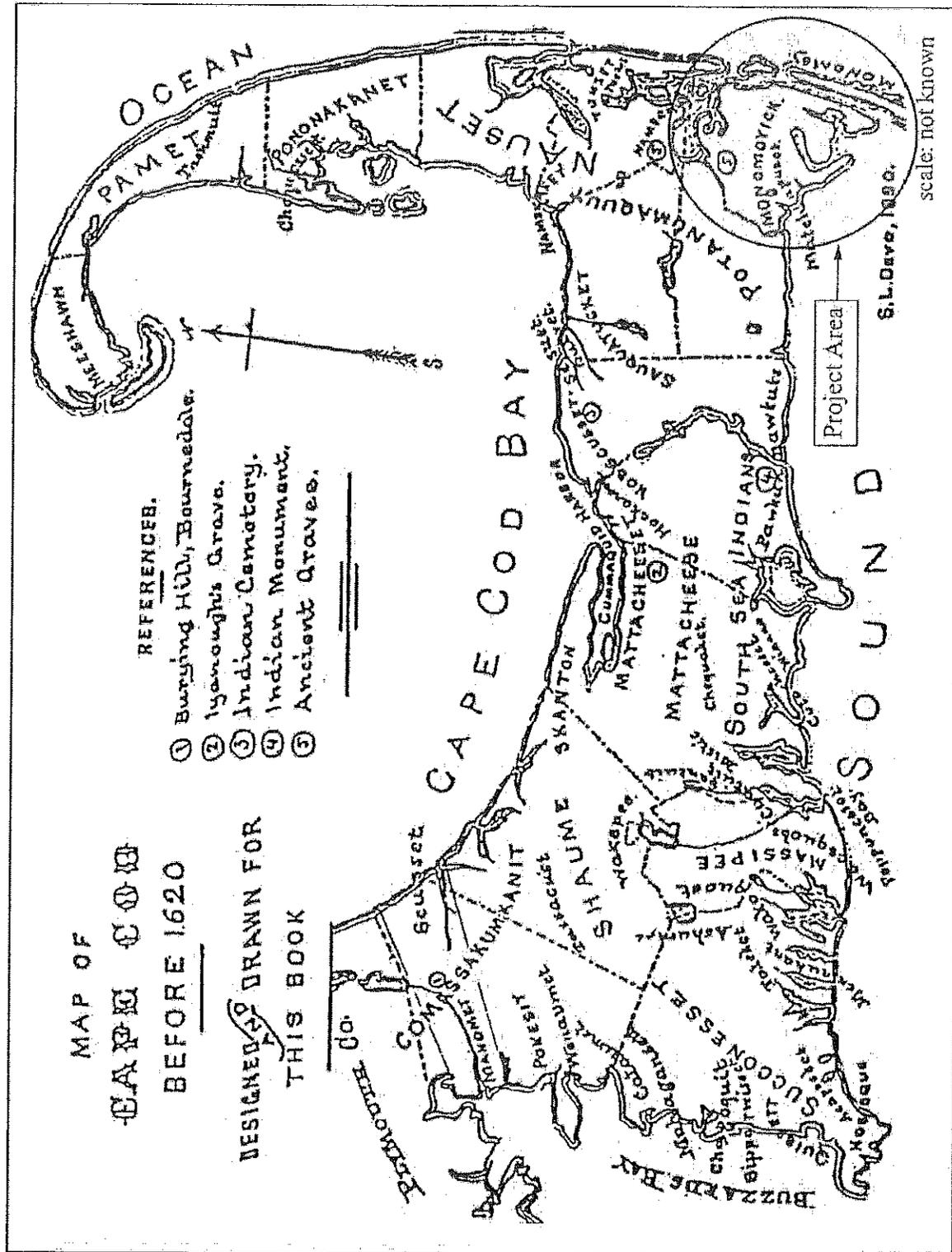


Figure 5-1. Cape Cod before 1620, showing the location of Native American territorial divisions and Chatham (source: Deyo 1890).

other grains. . . . In the sand on . . . the hills they dig holes some five to six feet deep more or less, and place their corn and other grains in large grass sacks, which they throw into the said holes, and cover them with sand to a depth of three or four feet above the ground . . . in this way it is preserved as well as it would be possible to do in our granaries” (Champlain 1922:410-411). Champlain also stated that the residents of Chatham were “not so much great hunters as fishermen and tillers of the land” (Champlain 1922:412). They raised corn and beans together, and also raised squash and pumpkins, and cultivated tobacco (Smith 1992). Champlain also reported an abundance of wild grape vines, walnut trees, and plum brushes in the area.

Champlain estimated that 500 to 600 people inhabited the area, although this number may be inaccurate. He described the native dwellings as “separate from each other, according to the land which each one occupies . . . large, of a circular shape, and covered with thatch” (Champlain, in Smith 1992:13). Figure 5-2 shows Champlain’s map of the area in 1606. The map clearly depicts the general location of native dwellings and paths in the area he called “Port Fortune,” as well as numerous topographic features including Mill and Oyster ponds, Great Hill, and numerous rivers, marshes, and beaches. Nine of the recorded pre-contact archaeological sites in Chatham (19-BN-261 through -269) were identified on the basis of information contained in Champlain’s account of his visit.

Ethnohistoric accounts document a well-established Native trail system that existed across the Cape. Main routes included an east-west trail running along the Cape Cod Bay shoreline (in the approximate area of the current Route 6A) that may have extended from Provincetown all the way to Plymouth (MHC 1987). Secondary trails in the Dennis area may have provided north/south access between Cape Cod and Buzzards bays.

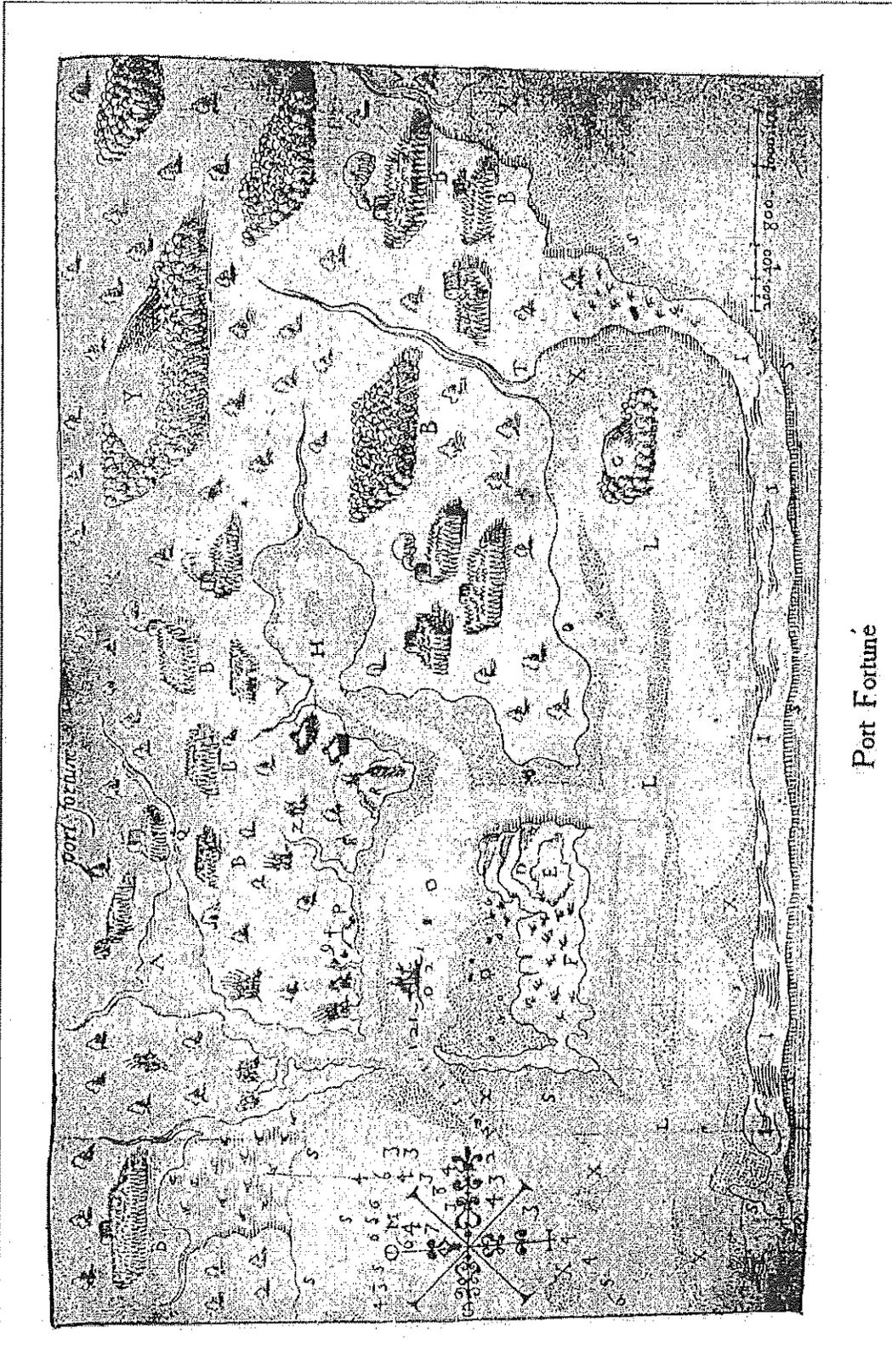
Few contact period archaeological sites have been professionally documented on Cape Cod. [REDACTED] was identified during a CRM survey and excavated as part of a University of Massachusetts Boston field school. The extensive testing and analyses conducted at this site provided detailed information about the occupation of the area in the Late Woodland and contact periods. In addition to cultural material, excavations [REDACTED] revealed stratified shell deposits, evidence of structures (post molds), intact living surfaces, textiles, European artifacts (beads, iron, clay pipe fragments), and more than 42 intact corn hills in a well-preserved landscape context (Mrozowski 1994).

In Chatham, excavations at the Mattaquason Purchase Site also revealed evidence of Late Woodland and contact period site use, although the majority of the identified deposits appeared to date to the Late Woodland Period. The recovery of charred maize kernels, extensive shell midden deposits, and high densities of animal and fish bones indicated that Native people were extensively utilizing the full range of resources available [REDACTED] (Peterson et al. 1978, Schafer and Herbster 2003).

## Post-contact Period Development

### First Settlement/Plantation Period (1620–1675)

With the exception of a few fisherman, traders, and adventurers, Cape Cod was controlled exclusively by Native Americans until sometime after 1630, when the Cape was designated as part of Plymouth



Port Fortune

Figure 5-2. Champlain's map of the Chatham area in 1606 (source: Smith 1992).

Colony and Euro-American land grants began to be made. The Chatham area continued to be occupied solely by Native people throughout most of the Plantation Period, as permanent colonial settlement does not appear to have occurred on the outer Cape until later in the century.

The earliest non-Native settlement on the Cape began in 1637 in the present town of Sandwich and spread eastward into Barnstable and Yarmouth. The frequency of Euro-American visits to the Chatham vicinity increased with the establishment of a settlement at Yarmouth. Additional settlement to the east was temporarily halted when Plymouth Colony officials reserved the land between Yarmouth and Eastham for the plantations of “purchasers” or “old comers” the name given to the colony’s first settlers and those few families who had permanently joined the colony during its first seven years. The land encompassing all of present-day Chatham was part of these reserved lands. The majority of the “old comers” had already established homes at Plymouth or in adjacent areas, and while they reserved their rights to the plantation lands, they did not show any interest in settling them. In fact, the first movement to utilize the reserved land did not occur until 1652, more than 10 years after land rights had been acquired (Smith 1992).

William Nickerson made the first land purchase in the Chatham area in 1656 through an agreement with the sachem Mattaquason. Nickerson was a weaver who had immigrated first to Boston from Norwich, England with his wife, Anne, and four children in 1637 (Derick 1998). Nickerson likely resided in Watertown for a short period, but Court records indicate that he and his family were settled in Yarmouth by 1640.

Nickerson was not one of the “old comers” and his land purchase from Mattaquason was negotiated without the consent of the colonial authorities. As a result, his land rights were contested by Plymouth Colony. Nickerson settled in Chathamport, on the west side of Ryders Cove, in 1664. A 1665 Court order conferred only 100 acres to Nickerson. The rights to purchase the additional lands claimed by Nickerson were distributed to various others including Thomas Hinckley, then a sitting assistant of the Court and later Governor of the Colony. In 1672, Nickerson was finally able to secure deeds for the original land negotiated with Mattaquason, shown on Figure 5-3 as “Nickerson’s First Purchase” and “Nickerson’s Second Purchase” (Smith 1992). To the east of the “first purchase” were lands retained by the sachems, though Nickerson was granted rights to pasture cattle. In 1679, Nickerson obtained a deed for lands adjoining his original purchase to the west, shown on Figure 5-3 as “Nickerson’s Third Purchase.” The deed for Nickerson’s final purchase is dated 1682, for the meadow at Pamuet and the meadow east and west of Tom’s Neck. Eventually owning approximately 4,000 acres, Nickerson’s purchased lands comprised all of present-day Chatham except for lands he had deeded to his sons and daughters (Derick 1998).

By 1674 other colonists began to settle the area, although their numbers were few, and habitation was dispersed throughout the Chathamport and North Chatham areas (MHC 1984; Smith 1992). Lots were laid out for the Nickerson family in the Muddy Cove, on the north side of Oyster Pond and south of Oyster Pond on Great Neck (Smith 1992) (Figure 5-4). Considerable tracts were sold to John Downing and Teague Jones at West Chatham, and to Thomas Crow in the vicinity of Cackle Cove. Farming land on the south shore was granted to other purchasers who agreed to settle in Chatham. Several of the new settlers were former neighbors of Nickerson from Yarmouth (Derick 1998). The first families included

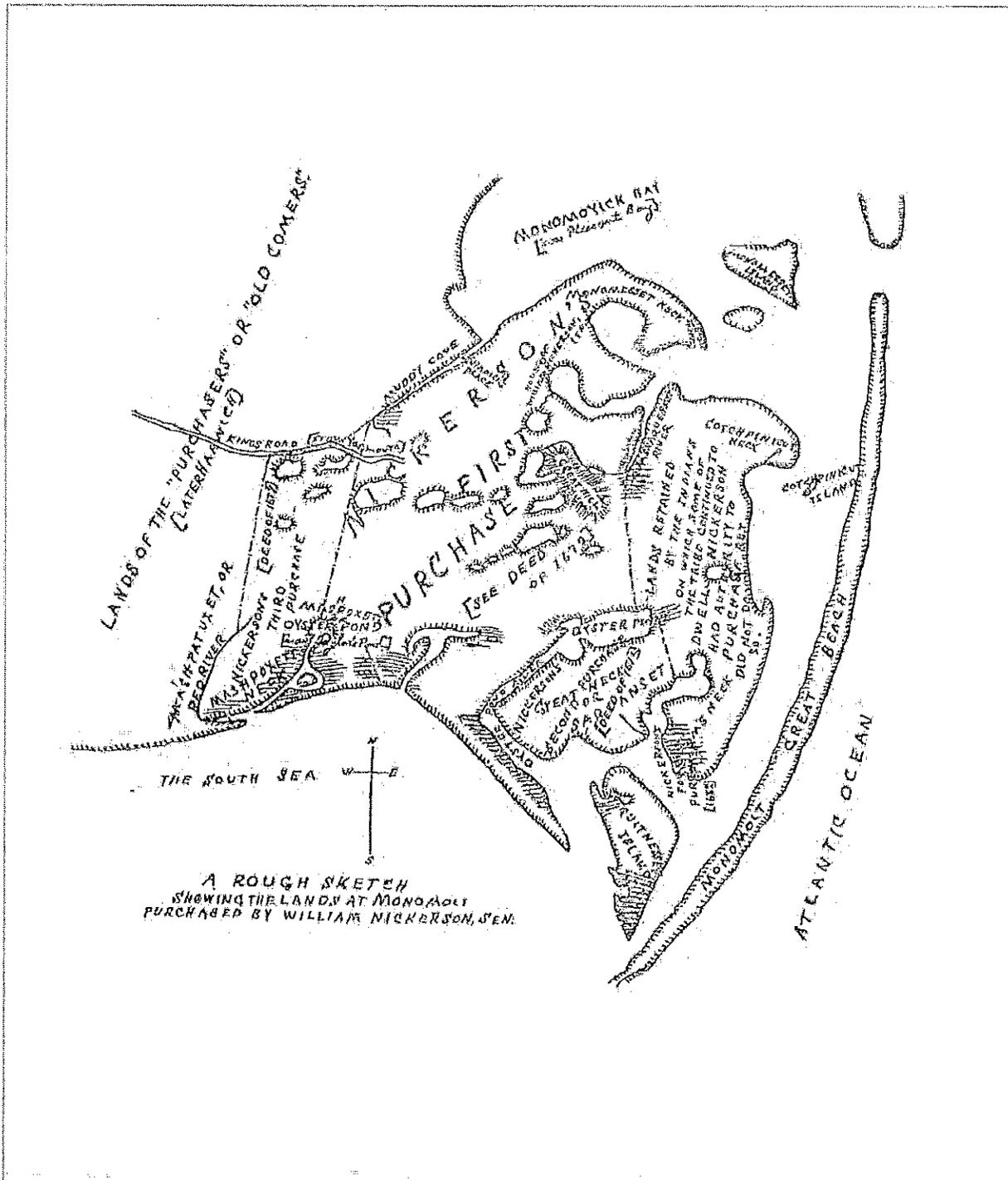


Figure 5-3. Sketch of lands purchased by William Nickerson (source: Smith 1992).

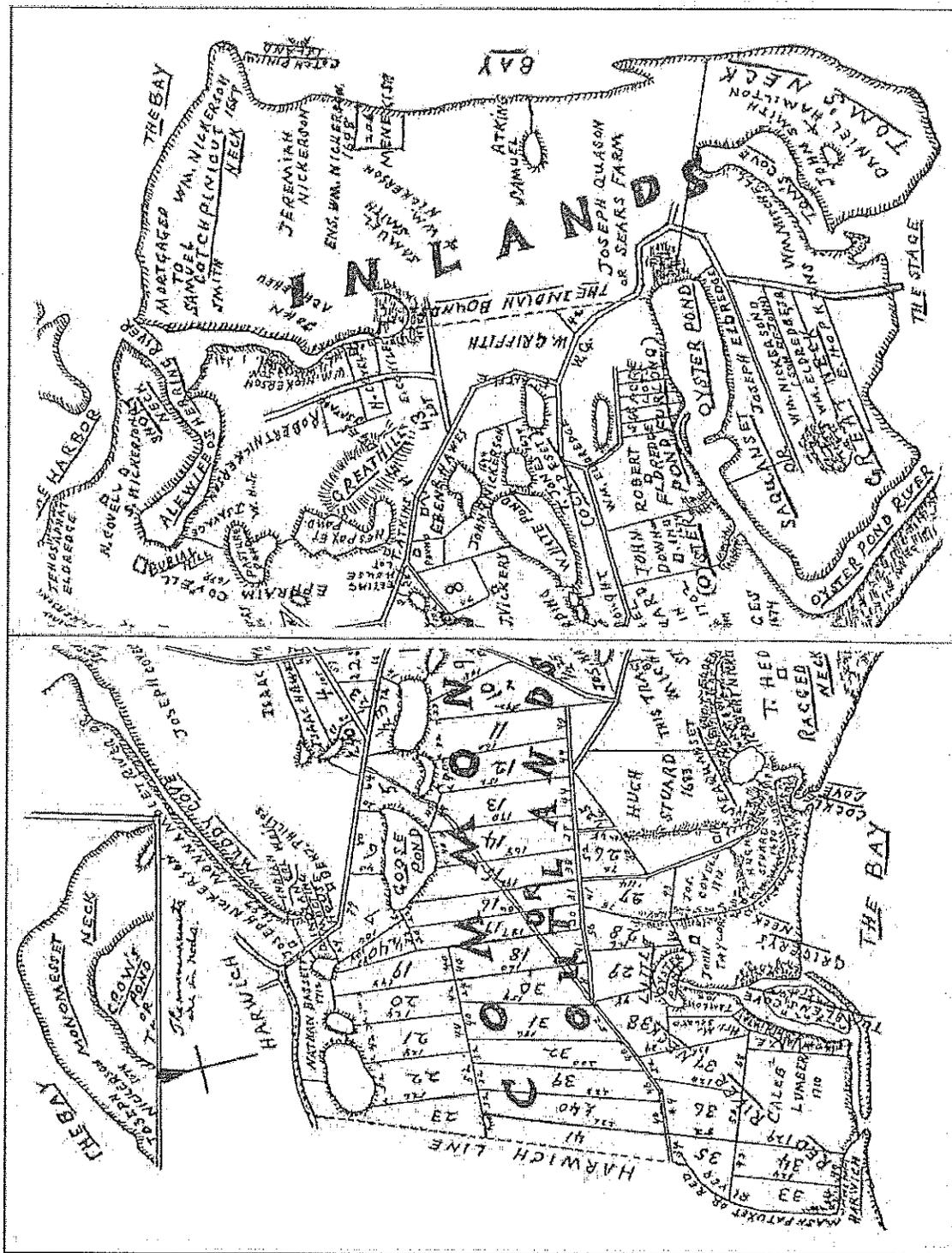
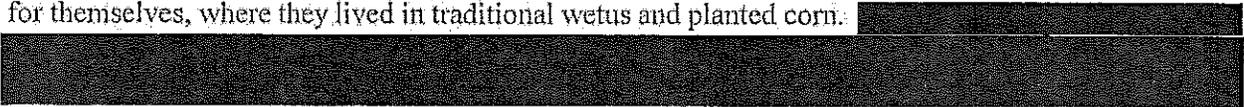


Figure 5-4. Sketch plan showing lot divisions and lands of early Chatham settlers (source: Smith 1992).

those of Hugh Stewart, Samuel Smith, William Cahoon, William Gross, George Godfrey, Edward Small, Joseph Harding, Benjamin Phillips, William Eldred, Lieutenant Nicholas Eldred, Joseph Eldred, Moses Godfrey, Nathaniel Tomlon, William Stewart, William Covell, and John Ellis (Deyo 1890).

The early homesteads were established along the few existing overland roads in town, all of which were located along Native trail routes. The main pathway during this period was the Old Queen Anne Road (also known as the Old Monomoy Road) which extended from Yarmouth and Harwich (MHC 1984).

After the initial wave of colonial settlement, Native Americans in the area reserved small tracts of lands for themselves, where they lived in traditional wigwags and planted corn.



The first Euro-American settlers, like the Native Americans, combined agriculture with fishing, gathering, and hunting. Corn, rye and wheat were the main agricultural products, while the nearby marshes produced salt hay for animal fodder. Shellfish, marine mammals and a variety of fishes (including cod, mackerel and striped bass) were also exploited. Beached whales were an excellent source of blubber, oil, bone, and teeth, and alongshore whaling was likely practiced by the town's residents (Holmes et al. 1997; Smith 1992).

#### Colonial Period (1675–1775)

Chatham's recorded Native American population continued to decline during the Colonial Period. A 1685 report indicated that there were 115 "praying Indians" in Chatham while the 1765 Provincial Census lists only four Native people residing in Eastham and none in Chatham (MHC 1984). The tract of approximately 800 acres east of Nickerson's purchased land was called the "unpurchased" or "Indian" land (see Figure 5-3) and, except for tracts that were sold to settlers around 1690, these lands remained in the possession of the Native Americans who likely remained in the area (Smith 1992:138).

According to local historical sources, Mattaquason parceled out these lands to members of his family and tribe, following the English custom. By 1711, however, Mattaquason's son deeded nearly all of the remaining Native lands in the area to colonists. These deeded lands were known as the "Quason Purchase" or the "Sixteen Share Property Deed" (Holmes et al. 1997). Two tracts of land were reserved by Mattaquason's descendants, both located near the Chatham-Harwich town border in the vicinity of Round Cove and Muddy Creek.

The Euro-American population rose slowly and steadily throughout this period, from 150 inhabitants in 1694 to 929 persons listed in the 1776 census (MHC 1984). This rise came despite a smallpox outbreak in 1766 and the departure of several original families (Deyo 1890). Members of the Nickerson family continued to purchase land in Chatham, later selling off parcels to other settlers who often moved to the area from more crowded sections of Cape Cod. Much of Chatham's undeveloped lands were acquired and redistributed in this manner. After 1700, new settlers to the area included Roland Paddock, Robert Nickerson, Caleb Lombard, and Richard and Daniel Sears (Deyo 1890).

Small concentrated settlements were dispersed throughout this period and did not follow the characteristic New England village pattern. [REDACTED]

[REDACTED] the center of town developed to the southeast near Oyster Pond (MHC 1984). Chatham was incorporated as a town in 1712. By this time a meetinghouse had already been established to serve the growing population (Deyo 1890). The main road network expanded to include present-day Main Street (Route 28) while smaller roads and trails extended to the settlement areas around Nickerson Neck, Oyster Pond and the Old Harbor area (MHC 1984).

By 1700, seafaring, fishing and other maritime-related trades were the chief industry of Chatham, the main fishing port in the Lower Cape. These industries included mackerel and cod fishing, shellfish (especially clam) harvesting, and even a small amount of shipbuilding. Small fishing and transporting vessels were built on many of the Cape's coastal waterways, and the protected harbors along Chatham's south shore provided appropriate building facilities. Shipping fluctuated greatly with the local needs of fishermen and freighters. The first fishing station was established by Daniel Greenleaf, who came from Yarmouth in 1731 (Deyo 1890). Smith (1992:162) reported that the fishery was probably a whale fishery. Whaling was generally a collective community venture, in which nearly all the young men were occupied, and whale lookouts were maintained for many years along the shore bluffs. By 1740, however, shore-whaling was replaced by deep-sea whaling as blackfish and right whale pods disappeared from the Cape (Holmes et al. 1997).

Although agriculture continued to be practiced, deforestation, the sandy nature of the soil, erosion, and possible over-farming led to soil depletion and a decline in the importance of agriculture, especially in the southern portion of town. As early as 1700, sheep husbandry commenced and various laws were passed by the town to advance and systemize the industry (Deyo 1890).

#### Federal Period (1775–1830)

Chatham was the second-fastest growing town on the Cape during the Federal Period, although settlement remained fairly dispersed throughout the town. By 1790, the population had reached 1,140, and by 1830 the population had reached 2,130 (Deyo 1890). A 1795 map of Chatham depicts many of the town's geographic features, including almost all of the coves and inlets along the northern and southern shores, Nauset and Monomoy, interior ponds, and several of the islands located in Pleasant Bay (Figure 5-5).

The greatest development during this period occurred around the growing town center, located between Mill and Oyster ponds (MHC 1984; Smith 1922). Native American populations on the Cape, however, declined further during the Federal Period (Holmes et al. 1997). Their land holdings declined as well, with privately owned parcels generally limited to a few acres. The great-grandson of Mattaquason lived in Harwich until about 1789, and his cousin, Hosey Ralph, lived at the Harwich-Chatham line until 1800.

The expanding community became more focused on the fishing industry in the Federal Period. In 1802, twenty-five schooners employed more than 200 men and boys, many of whom were town residents (Freeman 1802). Prior to the War of 1812, Chatham was the Cape's leading cod fishing town. Even after the war, cod fishing was the central industry of the town, and many ancillary industries were



created to support the fishermen. Clams were used as bait, and laws were soon passed that regulated shellfishing to town residents only (MHC 1984). Wharves and other coastal facilities were expanded to accommodate maritime industries.

The outer Chatham shoreline presented tremendous hazards to seafaring vessels because of dangerous currents and shifting shoals. Some of the earliest lifesaving aids on the Cape, including lighthouses and lifesaving stations, were established along Chatham's eastern shorelines during the Federal Period. Lifesaving was first organized by the Boston-based Humane Society of Massachusetts in 1786. The society was later absorbed into the federally governed United States Life Saving Service (USLSS), eventually coming under the direction of the United States Coast Guard (USCG) in 1915. Beginning in 1787, the Humane Society of Massachusetts constructed shelter huts for shipwrecked sailors in Boston Harbor and on the desolate beaches of the Lower Cape (Holmes et al. 1997). Each hut was equipped with a fireplace and a flagpole, and supplied with firewood and straw. Local individuals were appointed to secure and stock the huts, but most were not well maintained and fell to decay. The Humane Society of Massachusetts began purchasing lifesaving boats by 1810, and the lifesaving boat stations became the main focus of the Society's lifesaving efforts.

Lighthouses were also constructed to facilitate the increased use of the many harbors in town. The first lighthouse at Chatham was erected in 1808 (Deyo 1890; Holmes et al. 1997). The original lighthouse was constructed of wood, which washed away, and was replaced by a brick lighthouse in 1841. A second lighthouse was constructed at Monomoy Point in Chatham in 1823 (Holmes et al. 1997). Both lighthouses were constructed with a keeper's residence that housed one man during the summer and eight during the winter (Deyo 1890).

Beginning shortly after 1800, salt manufacturing works were constructed along the entire Chatham shoreline, from Pleasant Bay to the Red River at Harwich (Deyo 1890). The height of the salt manufacturing industry was in 1830, at which time there were 1,457,690 superficial feet of saltworks in Chatham (Quinn 1993:155). The importance of this industry in Chatham is evident from an 1830 map that shows extensive works on Oyster Pond, Mill Pond, Ryders River, Crowe's Pond, and along Chatham Harbor (Figure 5-6). The complex of drying vats associated with the various works are depicted as hatched squares on this plan. Deyo (1890) reported that the coves and bays of Chathamport afforded the best facilities for salt manufacturing.

Other industries that were established or improved during this period included a tannery at Old Harbor and a rope walk built by Cobb Nickerson near his homestead (Deyo 1890). Due to limited waterpower, windmills were constructed to power mills for processing grains, fiber, and lumber. In 1797 the first windmill in Chatham was constructed to power the Godfrey Mill and by 1800 there were seven windmills in town (Deyo 1890; Holmes et al. 1997).

Agriculture intensified during this period, taxing the already depleted soils (Holmes et al. 1997). Less productive agricultural land was used for sheep pasture, which further intensified soil erosion. Sheep raising became more intensive after legislation in 1816 helped spur the domestic textile industry.

### Industrial Period (1830–1915)

Settlement outside of the town center continued to be dispersed throughout the Early Industrial Period (1830 to 1870) (Figure 5-7). The needs of a growing population led to an increase in the number of churches, schools and other civic buildings built in the town center during this period. Chatham's population continued to expand until 1860, when it reached a peak of 2,710 individuals (MHC 1984:13; Smith 1922). Though it is likely that some Native Americans continued to live in Chatham and other areas on the Lower Cape during this period, there is very little discussion of these populations in the literature (Holmes et al. 1997).

The cod and mackerel fishing industry, which continued to be the mainstay of Chatham's economy in the early to mid-nineteenth century, rose and fell because of the shifting position of Nauset Beach. In the 1830s, Chatham had 22 fisheries vessels (Deyo 1890). In 1832, the Town Treasury reported that all businesses in Chatham were declining because the entrance to the harbor became obstructed by sand bars (MHC 1984:14). Fishing stations were built on Monomoy Point and other outlying islands, reflecting the need for new sites with unrestricted access to the ocean. In the 1850s, Nauset Beach was reopened, allowing Old Harbor to once again be utilized as a fishing port. Fish weirs were constructed in Chatham, beginning in the mid-nineteenth century and used extensively after 1872 (Holmes et al. 1997). Weir fishing also focused on cod and mackerel, in addition to herring, whiting, squid, and flounder. Oysters were also a major seafood product during this period.

The infrastructure for seafaring industries expanded during the early Industrial Period, mainly through the construction of wharves in many sections of town (Holmes et al. 1997). Additionally, a rescue boat and boathouse were established at Chatham by 1841 and manned by a 10-member volunteer crew. In 1872, the US Lifesaving Service built nine new lifesaving stations on the Cape and began to offer full-time employment for keepers and surfmen. A depression during the late nineteenth century resulted in a decline in the fishing fleets of many towns, as well as a decline in the number of wharves constructed.

In the latter part of the nineteenth century, cranberry production began to fill the void of the declining fisheries (Deyo 1890). Several advancements in the cranberry production industry were made throughout the early nineteenth century, and by the middle of the nineteenth century, cranberries were seen as a potentially important crop for the Cape (Holmes et al. 1997). By the Late Industrial Period, many farmers on the Cape had turned to producing other specialty crops as well, including strawberries, asparagus, and turnips. These specialty crops grew well on the Cape, required less arable land, commanded high market values, and could be brought to market in Boston quickly using water routes (Holmes et al. 1997). By the end of the Industrial Period fruits and berries (including specialized crops and cranberries) were the most profitable of the various agricultural pursuits in Chatham, followed closely by dairy products, poultry products, and hay, straw, and fodder.

The saltmaking industry and the number of mills in town decreased during this period. There were several factors contributed to the fall of the salt manufacturing industry on Cape Cod, beginning in the 1840s and continuing until the 1880s (Quinn 1993). Probably the most important factor in the decline of the industry was increased competition from salt springs in New York, Virginia, and Kentucky (Quinn 1993:185–186). Another factor was the cost of soft pine from Maine, used almost exclusively in the construction of the salt vats, dramatically increased in value. Many of the unprotected vats on Cape

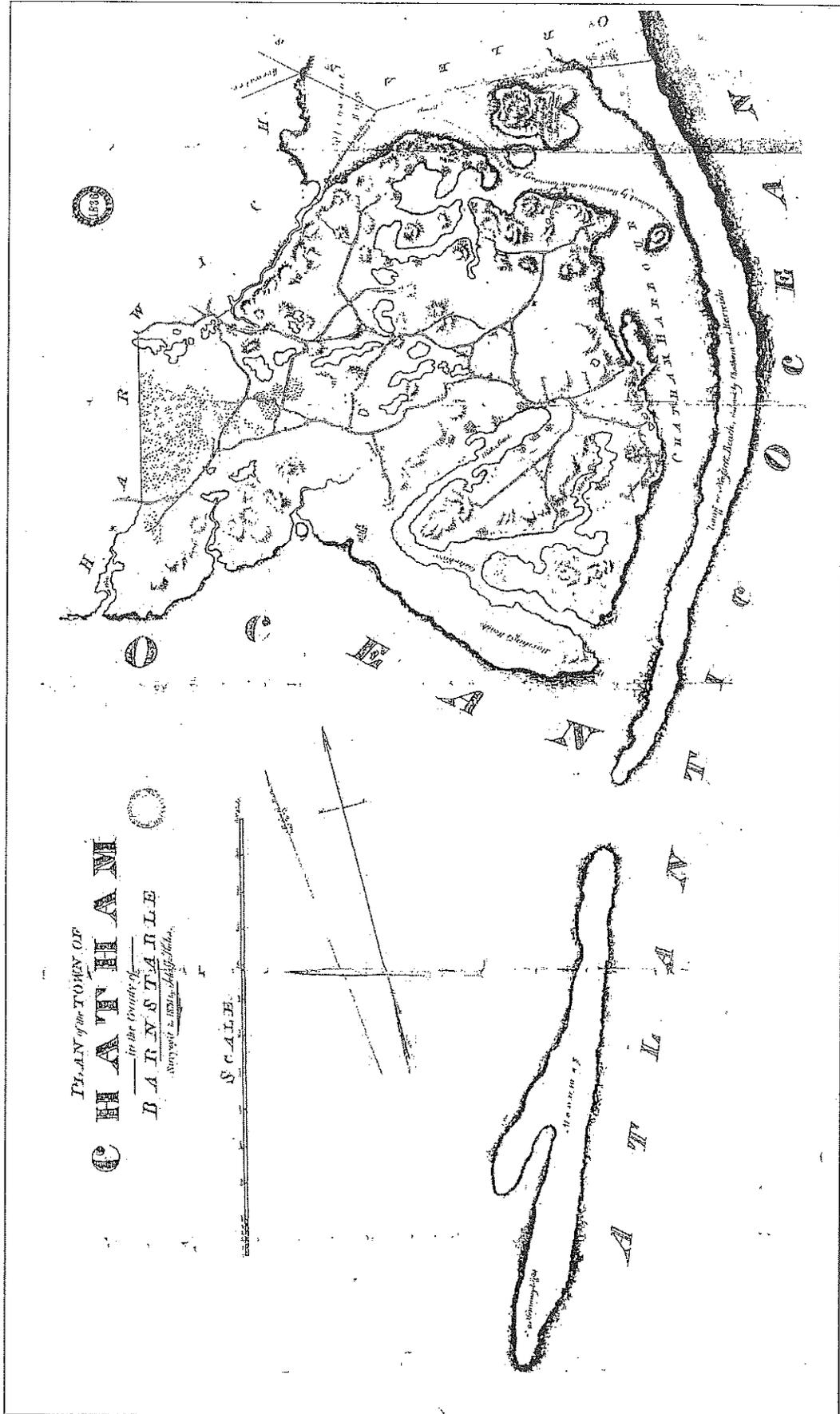


Figure 5-6 Map of the town of Chatham in 1831 (source: Hates 1831).



Figure 5-7. Map of the town of Chatham in 1858 (source: Walling 1858).

Cod were also destroyed in storms. By 1850, the number of superficial feet of saltworks in Chatham was down to 71,550 (Quinn 1993:155). Eventually, the return dropped below the cost of production, and the saltworks on Cape Cod were torn down. Lumber from the vats was recycled and used in construction of houses, barns, and outbuildings. The population of Chatham decreased during the Late Industrial Period, related to the decline of the salt and fishing industry (Deyo 1890). Settlement continued to be concentrated in the town center until the turn of the twentieth century (Figure 5-8).

The shipbuilding industry was scattered between the saltworks; several schooners were constructed in Chatham between 1828 and 1860 (Deyo 1890). Other industry in Chatham during this period included some minor textile manufacturing enterprises, specifically the Chatham and Harwich Manufacturing Company; minor employment in the boot and shoe industry; cod liver, menhaden, and whale oil production; and sail making (Holmes et al. 1997).

The Chatham Branch Railroad, a branch of the Cape Cod Division of the Old Colony Railroad, opened in 1887 (Figure 5-9). This new transportation network opened Chatham to the rest of the Cape and linked it with Boston, resulting in an increase in commercial buildings in the center of town. The railroad also marked the beginning of the tourist industry on the Cape, and several railroad-based tourist houses and hotels were opened (Holmes et al. 1997).

In 1914, construction began on the Marconi Wireless Radio Station. This complex sent some of the earliest transatlantic radio messages and played an important role in communications during both World Wars and in documenting other historic events (Adams and Jenkins 1993; MHC 1984).

#### **Early Modern Period (1915–1950)**

The Early Modern Period was a time of economic stability and steady population growth for the Town of Chatham. Fishing has remained an important industry in Chatham, and this focus on marine resources helped to preserve the intact conditions of the lands around the freshwater ponds. Whaling disappeared, with the last voyages being conducted on the Cape in the early 1920s (Holmes et al. 1997). Agriculture declined considerably during the Modern Period. The cranberry industry on the Cape deteriorated after prices fell after WWI and continued to dwindle after WWII. Of the Cape towns, however, Chatham held the most land in cranberries in the 1930s.

Prior to the turn of the twentieth century, Chatham began to attract short-term vacationers and summer residents. The construction and expansion of railroad networks in the nineteenth century and the mass production of automobiles and the improvements to local roads provided access to coastal areas that had previously been difficult to reach. By 1925, nearly one-third of all buildings in Chatham were owned by non-residents, and summer residents paid 42 percent of the town tax (MHC 1984). The number of hotels and related services, such as golf courses and tennis clubs, also increased during this period. Residential development began to expand across the former farmlands outside of the town center, although large parcels of woodland remained throughout the area.

### Historic Research Contexts

The sensitivity assessment for post-contact period archaeological sites in Chatham relies primarily on documentary and cartographic materials, with a secondary emphasis on environmental attributes and/or features. Local historical references, historical maps, informant interviews, and current town street maps were the most useful tools for guiding the field survey and generating statements about the location and types of post-contact period sites within various sections of Chatham. Predictive criteria developed in regional reconnaissance surveys, especially those on Cape Cod (Holmes et al. 1997), were also used to suggest likely locations for underdocumented post-contact period archaeological resources in town, meaning those not specifically identified in historical texts or on available post-contact period maps. The research contexts developed for Chatham were also designed to tie different sections of the town together by common themes, and to link the current study to surveys in surrounding areas (e.g. Pleasant Bay). This general predictive scheme assures that some environmental attributes and aspects of the cultural landscape can be used to locate functional categories of sites, including those relating to:

- Post-contact Native Americans;
- Agricultural Activities;
- Maritime Facilities and Activities;
- Land-based Industries;
- Religious/Civic Organizations;
- Military Activities;
- Resort/Tourism; and
- Transportation and Communication

These research themes, together with settlement and resource groupings, have been developed to more fully understand post-contact period development at the town-wide and regional levels. Thematic research, coupled with information about temporal periods (e.g., Contact, Colonial, Industrial, Modern) provides a comprehensive way to predict and interpret post-contact archaeological resources. Rather than provide an exhaustive listing of all of the resources associated with each of the above contexts, the following section is designed to present a town-wide perspective on each topic, indicate likely archaeological resources associated with each, and suggest areas of future research and documentation.

#### Post-Contact Period Native American Context

Chatham's recorded histories contain numerous references to Native American settlement and activity areas even though the existing archaeological database provides little corresponding documentation. Native people who utilized Chatham's abundant natural resources during the Late Woodland Period clearly remained in the area well into the eighteenth century, especially given the slow and highly dispersed colonial settlement within the present-day town.

The colonial history of Chatham begins with several well-known encounters between European visitors and Native American residents, including Bartholomew Gosnold and Samuel de Champlain. Many local historical sources also suggest that the Wampanoag man known as "Squanto" who figures prominently in the history of the Plymouth colony, died on board ship in Pleasant Bay and was buried near the Muddy River in Chatham (Knapton 1979). After the contact period, the Native American

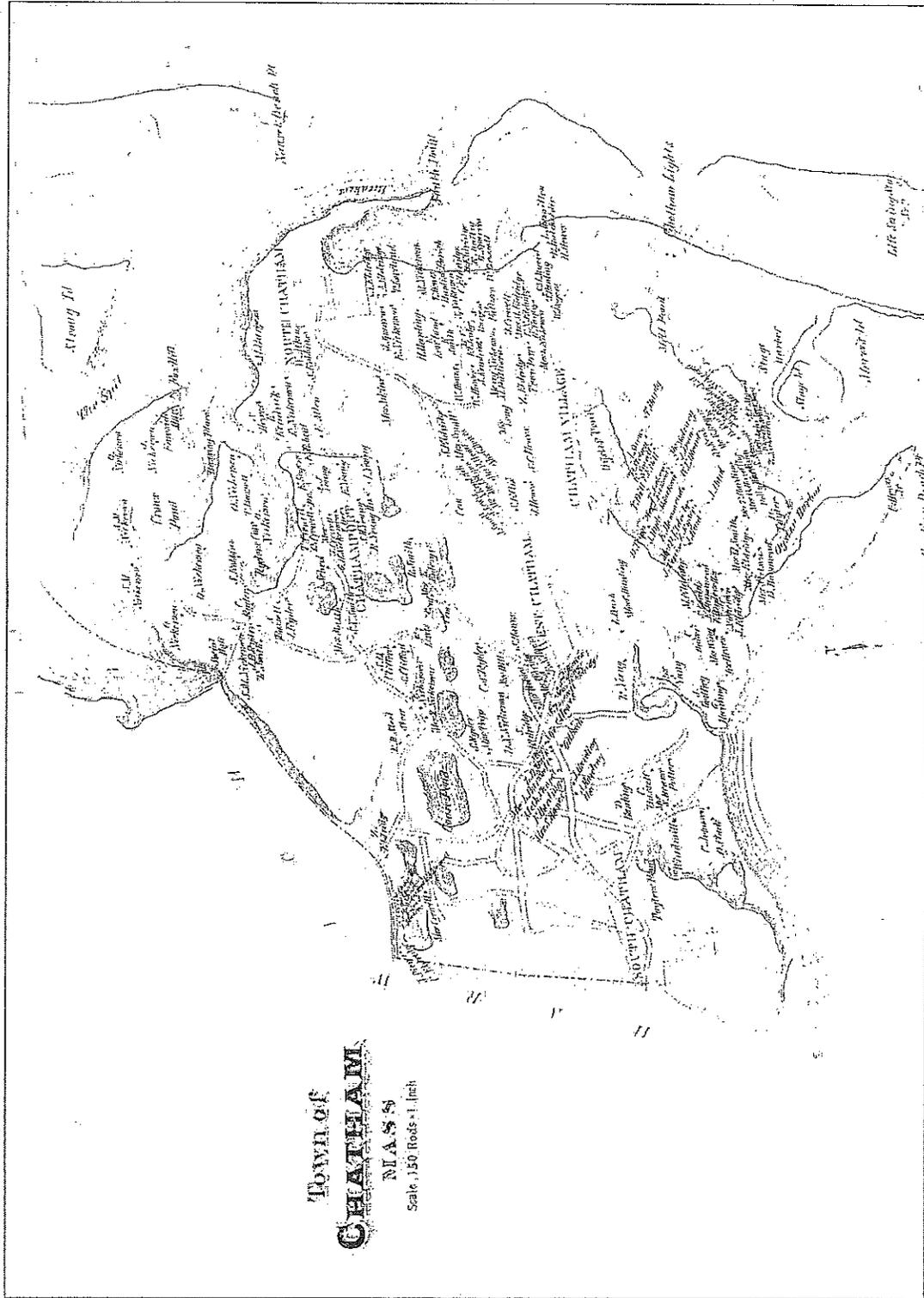


Figure 5-8. Map of the town of Chatham in 1880 (source: Walker 1880).

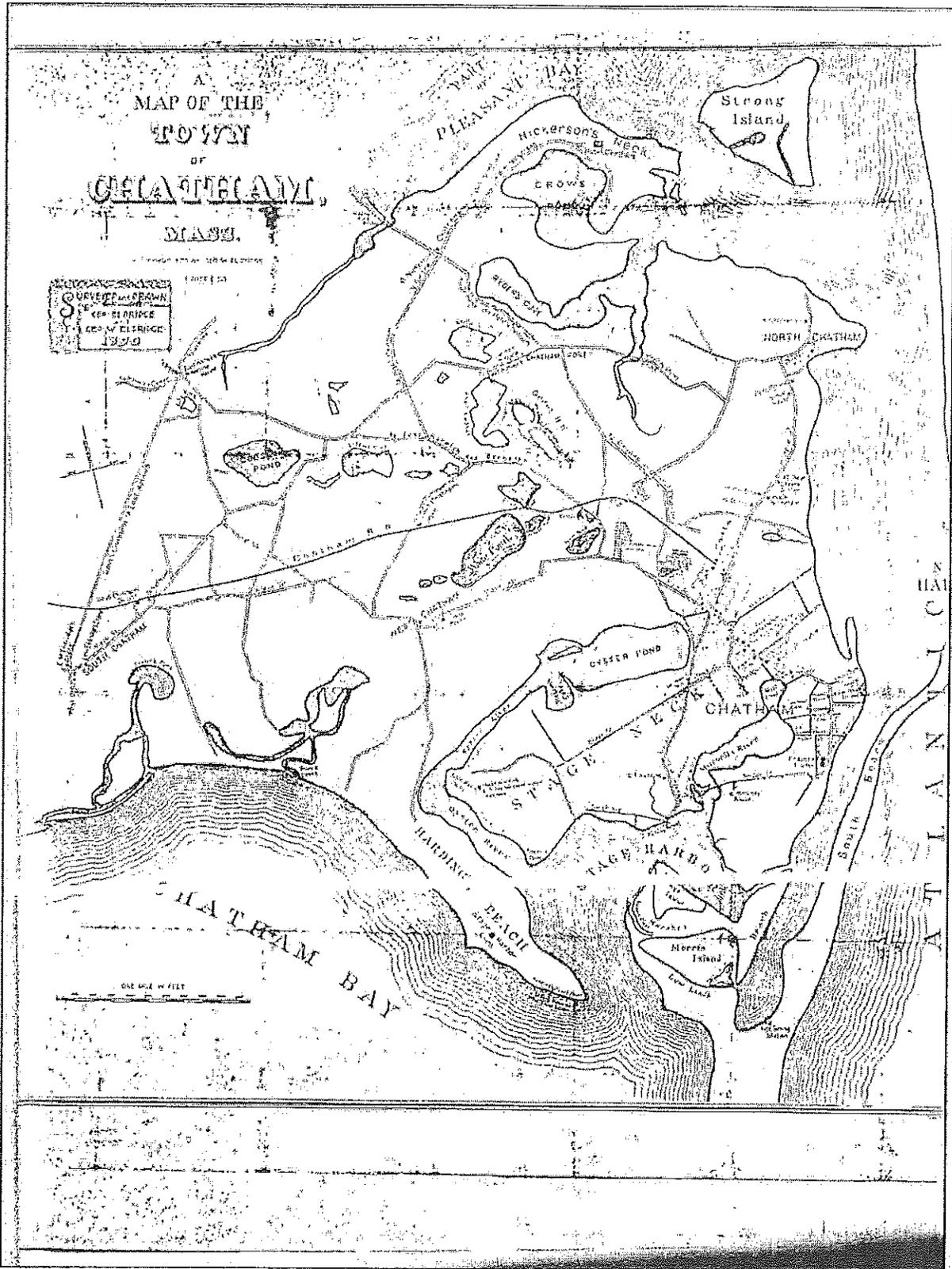


Figure 5-9. A Map of the Town of Chatham, Massachusetts (source Eldridge and Eldridge 1890).

history of Chatham centers on the arrival of William Nickerson as the first permanent colonial settler. Accounts of Nickerson's dealings with the sachem Mattaquason are varied but all indicate that the former Yarmouth settler had numerous direct interactions with the Native leader, and that later colonial arrivals also bargained with Native residents for access to the lands around Pleasant Bay.

[REDACTED] were also likely occupied by Native people after the first colonial settlers arrived. Sites types from the early post-contact period (primarily the seventeenth century) would likely be similar to those expected in the Woodland Period, and may be difficult to differentiate without clear temporal indicators. Sites could include large, semipermanent habitation areas represented by features including traditional structural remains (wetus/wigwams), shell midden deposits, chipped-stone and/or metal tools, and planting fields.

[REDACTED] which was located just over the town line in Chatham (MHC 1984, Rich 1979). [REDACTED] and noted that Rev. Samuel Treat was paid by the Society for the Propagation of the Gospel to oversee the education of Chatham's Native American residents as well as several Native teachers (1992:105).

Like most towns in southern New England, at some point Native Americans "disappear" from local histories. Often one Native person is referred to as the last "full-blooded Indian" or groups are described as having "died out." By way of example, a Native American population numbering more than 50 individuals was recorded in neighboring Yarmouth in 1861 (Earle 1861). In fact, Native people continued to live throughout the region, to maintain their distinct cultural and social communities, and to remain active in local affairs. This cultural continuity is evident in the present-day Native American residents of Cape Cod and the islands. While Native people may not have been recognized as such by Chatham's nineteenth- and early-twentieth-century historians, they almost certainly continued to live among other Euro-American and immigrant residents and to contribute to the development of the town.

Eighteenth- and nineteenth-century Native American settlement and land use patterns in Chatham are not well known, but it is likely that homesteads were established in outlying sections of town that were not immediately claimed by white settlers. Smith's narrative history of Chatham is full of references to Native Americans who appeared in colonial documents and court records throughout the second half of the seventeenth century and into the eighteenth century. Smith (1992:265) noted that in 1720 "... Indian families were living in Chatham ... [REDACTED]

[REDACTED] and in several other unidentified places within town. These were not individuals but rather families, living together as distinct Native American groups among the town's colonial population. Eighteenth-century Native American archaeological sites in the areas described above or elsewhere in Chatham could be expected to include some of the components listed above, with an increased likelihood of Euro-American objects and structural remains (e.g., fieldstone foundations and/or cellar holes).

Reflecting a pattern seen elsewhere in coastal Massachusetts, it is likely that many Native American men became involved in the maritime industries (including commercial fishery) in Chatham during the late eighteenth through mid-nineteenth centuries. Ships' logs, fishing fleet histories, and other records may contain additional data about Native residents who followed this trade.

### **Agricultural Activities Context**

The historic development of Chatham's economy included the creation of farms on large tracts of fertile land, especially in the southern section of town. Following a pattern seen in other coastal New England towns, settlers likely chose lands that had been cleared and cultivated by Native Americans during the Woodland and contact periods. The reports of Native villages and/or large habitation areas along the southern coastline and especially around Stage Harbor suggest that these areas would have been desirable to colonial residents who were eager to establish homes and farmsteads with access to markets and other resources.

Early Euro-American settlers also took advantage of the many tidal islands located in Pleasant Bay, off the eastern mainland, and to the south as pasture for cows, sheep and other livestock. Smith (1992), Nickerson (1981) and other historians document these activities on Strong, Tern, Stage and Morris islands in Chatham. Animals were herded out to the islands at low tide and were safely contained as the water rose. These islands and the tidal inlets located on the mainland would also have provided marsh grasses that were harvested and dried as salt marsh hay.

While the town's villages developed commercial, industrial, and civic institutions, residential patterns tended to fill in along the existing roadways that linked one area to another. Farmsteads were developed on land holdings along these corridors, with a homestead often built near the roadside. While early statistics are unavailable, it is clear that the majority of the town's food and raw materials were produced on family farms during the eighteenth century.

Archaeological research about historical farmsteads on Cape Cod is lacking primarily because so few large farmsteads remain. Chatham follows a pattern seen elsewhere in New England where landholdings have been subdivided and often parceled into modern residential subdivisions in the twentieth century, the dearth of unaltered farmland in the present day. This is especially true in Chatham where the proximity to the shoreline has led to the construction first of seasonal cottages and later larger vacation homes. If present, original elements of eighteenth- and nineteenth- century farmsteads would be expected along the corridors of historical roadways, such as Orleans and Old Corners roads in the northern portion of town and Main Street in the southern section of town. Surviving elements could include homes, barns, wells, privies, pens, smoke and milk houses, and shops that were sited close to the roadways and have been reutilized or left intact in the modern period. These features could survive as either standing structures or belowground features within parcels that have been maintained throughout the years.

Chatham's extremely sandy soils were taxed by traditional crop farming as early as the eighteenth century and exposure to the elements meant that large-scale farming, especially in the southwestern portion of town, was not widespread. Farmlands in this section of town were instead utilized as pasture, especially for sheep raising. By the nineteenth century Chatham residents imported the majority of

their agricultural products. In 1865, only 11 farms were reported in the entire town of Chatham. Based on this documented pattern, it is unlikely that complex farmsteads would comprise a major archaeological context for Chatham. Unlike communities where farm complexes remained relatively intact into the modern period, Chatham's farms were likely broken up and lands sold off during the nineteenth century. As a result, it is unlikely that historic farmsteads would comprise a significant archaeological context in Chatham. The few documented farms that did remain in existence would be considered valuable resources for documenting agricultural activities through any surviving structural remains, field divisions, and other deposits.

### Maritime Activities Context

Maritime activities in Chatham were necessarily centered on the coastal region, including the tidal rivers and ponds that extend into the interior from Pleasant Bay in the northern and Stage Harbor in the southern portion of town. This research category includes shipbuilding as well as on and offshore activities such as whaling, fishing, and coastal trade that relied on Chatham residents for labor, operated out of town ports, or both. Maritime facilities and coastal modifications such as lifesaving stations, lighthouses, jetties and wharves, and bridges are also included in this research category. Many of these resources are related to other maritime activities, or to residential and/or commercial development along the coast. Other improvements such as seawalls, public and private beaches, and recreational facilities may also be included within this category. For Chatham, maritime activities in all of the forms listed above comprise a major historic research context.

Chatham's reliance on shellfish as both a source of food for its residents and an export industry dates back to the earliest settlement period, when people selected habitation sites located near tidal inlets and marshlands. The importance of marine resources expanded early in the town's history, and by 1700 fishing and whaling had been added to the local economy. Although the exact location is unknown, a whaling station likely comprised of a coastal lookout tower was reported established at Stage Harbor by 1700 (MHC 1984).

As the eighteenth century progressed, Chatham's maritime industries became more diversified and the town's economy began to turn from failing agricultural pursuits to the fisheries. The first fishing station was operated by Daniel Greenleaf by 1711, and the industry quickly expanded. Water travel had been important since the town's early days as an efficient means of travel to Plymouth and Boston, so wharves and landings, small shipyards, and other facilities had likely been established at all of the major settlement areas prior to the start of commercial fishing. These may have included facilities at Nickerson's Neck, Harbor Cove, Eldridge Neck, Ragged Neck, and Harding Neck. Structural evidence of some of these landings may still be visible, especially in protected areas not subject to erosion or dune development. Other town landing sites may not be as well known or documented, and may contain archaeological deposits including the remains of wooden piers or posts and/or small building foundations.

The existence of this infrastructure supported the blossoming of Chatham's commercial fishing industry in the late eighteenth century. By 1774, Chatham supported 27 vessels engaged in the offshore cod fishery on the Grand Banks and at least 240 men were employed in the industry (MHC 1984). Coasting was also important in town, with commercial service transporting goods to and from markets to the

north and south. During this period, the Old Harbor section of Chatham served as the primary center of the maritime industry with a secondary focus at Stage Harbor to the south. Both areas offered protected waters that were not subject to the extremes of waves and wind along the outer shoreline.

Cod fishing remained the primary maritime industry in Chatham in the early nineteenth century and continued to employ the majority of the male residents in town. With the advent of large-scale salt-making in town by 1800, the ability to dry and store fish near Chatham's shoreline increased dramatically.

Chatham's coastline was well equipped to establish saltworks, and by 1831 operations were documented in virtually every coastal section of Chatham. The earliest operation has been attributed to Rueben Ryder, who by 1809 was producing 16 percent of the town's salt supply (MHC 1984). The 1831 (Hales) map of Chatham depicts drying vats all around the shores of Pleasant Bay, along the length of the eastern shoreline, around Mill and Oyster ponds and at Harding Beach (see Figure 5-6). In 1802 six saltworks were listed in town; by 1837 there were 80 reported operations producing approximately 27,400 bushels of salt (Town of Chatham 1921:54).

Evaporative salt making used large, roofed vats to separate out impurities from seawater, which was pumped in through wooden pipes powered by windmills and then drawn off into various "rooms." A roof made of canvas or wood was often placed on wooden rollers to be opened and closed to protect the drying salt from rainwater. Salt houses were built nearby to store the crystals as they finished drying (Glennon 2001; Holmes et al, 1997). Archaeological deposits associated with saltworks could include features such as foundations, footings, or builder's trenches from structures used in the production process, such as storage and drying vats, and wooden or metal water pipes.

Shipyards were established in Chatham during the early nineteenth century. One of these was located at a yard located just to the north of the twin lights at Chatham Village, and another yard was established in 1804 by Lombard Nickerson near the Eastward Ho Golf Course (Town of Knapton 1976:15). These yards were often situated close to ropewalks and sail lofts that contributed materials to the trade. In 1845, six vessels were built in Chatham shipyards and in 1855 this number increased to 15 (Town of Chatham 1921:54). A marine railway was established at Stage Harbor in 1878, and in 1881 a short-lived steamship company operated out of this location (Knapton 1976:15).

The development of Chatham Village as a major hub of the maritime industries was partially responsible for the construction of the lighthouses there. The 1831 (Hales) map of Chatham shows this developing community as the most densely populated section of town and depicts at least one wharf extending to the shoreline (see Figure 5-6). By 1858 the village had been extended to include additional streets and the light houses were depicted on atlas maps (see Figure 5-7).

The breaching of Nauset Beach had a direct effect on the maritime industries at Old Harbor and Chatham Village. The businesses operating out of Old Harbor declined after 1832 when the development of sand bars at the former Nauset opening made it difficult for ships to enter or leave the port. Fishing interests improved in the 1850s when the port was again accessible through a deeper channel. Perhaps due in part to the lack of permanent access along the eastern shoreline, the first fishing station was opened at Monomoy Point in 1847.

The mackerel industry began to decline after 1880 and by 1887 had collapsed. Commercial shellfishing and lobstering continued to be strong supporters of the economy and kept the shoreline industries busy, but after about 1860 maritime industries did not dominate the local economy. Summer tourism, combined with the arrival of rail service, created alternative occupations for many residents. Despite the decline, fishing has remained vital to Chatham's year-round residents and contributes to both the historic and modern character of the town.

The development of Chatham Village as a major fishing port and salt production area led to the erection of Chatham's first lighthouses at James Head in 1808. Erected as a pair of wooden structures, these lighthouses provided safe passage for the town's fleet as well as the packet ships moving from one section of town to the next and up and down the New England coast. These lighthouses were lost to coastal erosion in 1840 and were replaced by two brick lighthouses that were sited 400 feet farther back from the shoreline (see Figure 5-7). One of these brick towers was lost to erosion in 1877 and both structures were again replaced by cast-iron lights. One of these iron lights was moved to Nauset Beach in 1923. Lighthouses were also erected on Monomoy Point in 1823 and at Harding Beach in 1880 (CHC 1999; Knapton 1976).

Lifesaving stations were established along Chatham's shorelines at a relatively early date, due in large part to the heavy water traffic into and out of the town as well as the tricky currents and dangerous shoals found at the elbow of the Cape. Prior to the official establishment of the Massachusetts Humane Society, Chatham residents routinely attempted to rescue sailors and cargo lost off the coastline, often resulting in the deaths of the rescuers themselves (Knapton 1976).

The earliest reported Humane Society hut was situated "half way between Nauset and Chatham harbors" in 1802 (Town of Chatham 1921:60). Huts were also reportedly set up 1 mile north of the mouth of Chatham Harbor and on Monomoy beach during this period. Lifesaving stations were established by the U.S. Cutter Revenue Service at Morris and Monomoy islands between 1872 and 1874 and at Old Harbor in 1898 (MHC 1984). No doubt due to shifting terrain and powerful storms, the Monomoy station was rebuilt in 1905 and the Monomoy Point station in 1900 (Town of Chatham 1921:61).

Archaeological deposits relating to this research context could include the remains of buildings, foundations, and work areas along the waterfront where shipyards, sail lofts and other industries are documented in the cartographic record. Remnants of wooden pilings and stone features may survive along the protected shoreline in these areas, as well as under the current waterline.

Many of the potential archaeological deposits associated with post-contact period coastal modifications may no longer be present along the eastern shoreline between Old Harbor and Chatham Village and on Nauset and Monomoy islands. Significant erosion has occurred in these areas, and continues to occur today, during periods when the inner shoreline is exposed to storm swells and hurricanes.

Two of Chatham's recorded post-contact period archaeological sites are shipwrecks located off the eastern shore. It is likely that additional shipwreck sites or grounding areas are also present in the waters surrounding Chatham both inside and outside Nauset Beach and off Monomoy Island. Archaeological deposits could include not only structural materials but also lost cargo and ballast.

### Land-Based Industries Context

Land-based industries include those activities associated with extractive technology (e.g. turpentine production, salt making), processing (e.g. most mill activities), and manufacturing. While salt making is considered to be an extractive industry, it is grouped with the maritime research context above based on its close association in Chatham with fisheries.

The earliest mill sites in Chatham were likely located in close proximity to the first Euro-American settlement areas and expanded as the population grew. Access to waterpower in the form of fast-flowing streams and rivers was limited in Chatham, so many of the early mills in town likely operated on wind power. These mills served primary needs such as grinding grain and cutting timber for housing. The first documented mill in Chatham was built around 1720 [REDACTED] in the vicinity of the town's meetinghouse. Given its location, this mill was almost certainly powered by wind rather than water. The growing population led to the establishment of additional mill sites Stage Neck, Toms Neck, Old Harbor, Mill Hill, Chathamport, South Chatham, and Oyster Pond (CHC 1991). Those mills located close to a source of waterpower may have utilized it, while inland mills likely operated as windmills. The 1831 (Hales) map depicts at least four mills- all drawn as windmills although it is uncertain they were actually operating as such (see Figure 5-6).

Windmills were reported to be the primary means of gristmill power in Chatham. Between 1850 and 1860 there were nine reported windmills in Chatham at a time when mechanized water mills were driving the local economy in many other communities. Two of these were located in South Chatham, and one mill each was located near Oyster Pond, Stage Harbor, the Chatham Village lighthouses, Old Harbor, and Chathamport (Town of Chatham 1921:54-55).

Historian Joseph Paine (1937) noted the creation of a cotton factory on the Chatham side of the Red River in 1824, which lasted less than one year before the failure of the water source caused the owner to move the operation to the Herring River in Harwich. Another water-powered mill operation was centered near the Harwich line north of the Red River and Duane Pond. Known today as "Mill Pond", the changing depiction of water bodies in this area suggests the modification of natural ponds for use in some type of milling operation. A small village community developed around this area after 1830, suggesting that a mill operation was in place by that time (MHC 1984).

Many of the early mill sites were likely improved and/or rebuilt over the course of the nineteenth century, as construction techniques improved and mill types diversified to include fulling, carding, cotton, shingle, cider, iron, salt, and oil mills. Mill structures also became more complex as technological advances were developed.

As the twentieth century approached, the reliance on water or wind power began to diminish. Most processing and manufacturing could be completed more efficiently using steam, gasoline, and later electrical power, and goods were easily imported from other areas via overland and coastal routes. As mills ceased operation, salvageable materials were likely reused elsewhere but structural remains and features such as pits, head and tailraces, windmill bases, and millponds were left in place. Machinery and parts (stone, metal, wood) used in various types of mill operations could also be expected as scattered refuse in areas where mills were known to have existed.

To date, no archaeological evidence of Chatham's mills has been documented. Investigations of extant post-contact mill sites should include thorough background and archaeological research prior to any reconstruction and/or repair efforts to document these important historic resources.

Other land-based industries developed near the village centers and often were concentrated in areas where other businesses operated. For example, the fishing industry gave rise to the establishment of coopers for barrel-making and provisioners who could supply workers and travelers on the packet services. One town historian noted that "general manufacturing was never carried on here to any extent (Town of Chatham 1921:54).

The specific locations of eighteenth century land-based industries in Chatham are poorly documented, but included at least two blacksmiths, several carpenters and coopers, a shoemaker and a ropewalk (CHC 1991). In the early nineteenth century, most business centered on the Old Harbor area which was described as the area where the "principal business of the town is done" (Freeman 1802, in CHC 1991). The first recorded general store was opened by Elisha Hopkins in 1735 near Stage Harbor (Smith 1992).

Following the Revolutionary War, Chatham's geographic villages began to coalesce and commercial and industrial interests multiplied greatly. The business center of town began to shift to the Chatham Village area where the new lighthouses, expanding wharf complexes and civic structures were being established. By 1856, this area included a sail loft, a mill, and at least five stores (CHC 1991).

In general, the examples above provide an indication of the types of resources that could be expected for various occupations. Shops were often located near the tradesman's home, sometimes housed in outbuildings on a farmstead. Within the village centers, independent shops would more likely be located along main crossroads and near shops, public houses, and other gathering spots. The determination of patterns in industrial and commercial activity as well as the specific locations of various types of businesses could be determined through map research, assessors and property records, oral and written histories and business directories (for the later post-contact periods). Archaeological deposits could help to identify underdocumented industries as well. For example, if large amounts of charcoal and wood ash are located along with iron debris and other discarded materials near a historic structure, it may be possible to connect a blacksmith operation with a historic period landowner.

#### Religious/Civic Organizations Context

Chatham's earliest community structures served the dual function of religious and civic center. Prior to 1700, Chatham apparently did not have enough residents to warrant its own minister. The first location for these facilities was near the geographic center of town at the intersection of Old Queen Anne and George Ryder roads, where the first and second meetinghouses were erected in 1700 and 1730, respectively. Each structure was located adjacent to a common burying ground, although some early residents were buried in family plots on individual home and farmsteads.

In 1720, Chatham was officially established as a separate congregation headed by Rev. Joseph Lord and the town's residents decided to establish a parsonage near the original meetinghouse and burial ground. Between 1728 and 1730, the town's original, unfinished meetinghouse was deemed too small.

and plans were enacted to build a new structure. The new building was sited on the north side of Old Queen Road and was included galleries on three sides. Updates and improvements were completed in 1739 and 1773 (Smith 1992).

In the nineteenth century the diversity of Chatham's growing population led to the creation of various denominational churches. The second meetinghouse on Old Queen Anne Road was dismantled in 1830 and a new Congregational church was built on Main Street at the Union Cemetery on the Harwich border. The building was moved to 650 Main Street in Chatham in 1866 (Knapton 1976).

A Methodist Chapel was built in the Old Village section of town in 1808, and a larger structure was built in 1820 at the Seaside Cemetery on Depot Street (CHC 1991). The Methodist Church at Main and Cross streets was built between 1849 and 1851.

A Baptist congregation was formed during this period and in 1827 erected a church at a circa 1766 Baptist cemetery on Old Queen Anne Road. The building was moved to Old Harbor Road in 1873 and presently serves as a Masonic lodge (CHC 1991; Knapton 1976). A Universalist parsonage was built at the intersection of Stony Hill and Crowell roads in 1824 and a church was built on Old Queen Anne Road in 1850. This structure burned down in 1878. A new building was erected on Main Street in 1880 and later became an Episcopal church (CHC 1991).

Chatham's first civic town hall was established in 1851 when the abandoned Methodist Church at the intersection of Old Harbor and Depot roads was dedicated for this purpose. The building remained in use until 1878 when its function was shifted to a town-operated Alms House. The structure later served as a rooming house and was demolished in the 1970s (CHC 1991; Knapton 1976). After 1878, a new town hall was built at the western end of Chatham Village. This building also served as the town jail in 1895.

The earliest effort to establish schools in Chatham occurred in 1720, when Samuel Stewart was hired as schoolmaster. At that time, colonial regulations required communities of more than 50 families to employ a teacher, although classes met in individual homes rather than in a dedicated schoolhouse. In 1764, Chatham was reprimanded for not having a grammar school, which was required for communities with more than 100 families (Baisly n.d., in CHC 1991). The first schoolhouse does not appear to have been built until 1790 at the corner of Barcliff and Old Harbor roads.

By 1802 the town had responded to the call and five schools were in place within Chatham. By 1840 thirteen schools were in operation with a budget of just more than \$1,000 dedicated to education. The declining population reduced this number to 12 in 1848. The first private school, the Granville Academy, was built in 1842 on Old Harbor Road. The first dedicated grammar school was established in 1858 in the Chatham Village area (CHC 1991).

Chatham operated a "town farm" in the nineteenth century for the support of some indigent and/or disabled residents. Town Officer's Reports from the period between 1884 and 1893 indicate that during this period at least 10 people lived on the "Old Town Farm" while another 18 were supported by the town but lived elsewhere (reports on file, Chatham Historical Society Library).

Archaeological deposits associated with public structures and meeting places would be somewhat different from those associated with habitation sites. Documentary, deed, and map research would be the most useful way to identify the specific locations of structures that are no longer standing or to document the relocation of a building or reuse of a particular site. Foundation remains and materials associated with construction could help to pinpoint the period of use for any domestic refuse found in association with public buildings. Expected artifact classes could include smoking pipes, coins and lost personal items, food and beverage discards, and site-specific materials such as graphite pencils around school buildings.

### **Military Context**

The earliest references to military conflicts occurs during King Philip's War (1675-1676), when several Chatham residents including William Nickerson, Jr. were reportedly called away to help the fighting elsewhere. Town records from the period between 1690 and 1763 indicate concern that Chatham's location left it vulnerable to attacks by French privateers and other pirates, and as a result several orders were passed that the town's male residents not be called away to military service elsewhere (Town of Chatham 1912).

As early as 1681, the town was required to drill a militia on a regular basis. All adult male residents were required to participate in drill exercises, which reportedly occurred each year until 1830. The location of the drill field was west and slightly north of the meetinghouse, within the triangular area presently bounded by Old Comers, Old Queen Anne, and Training field roads (Rich 1979; Town of Chatham 1912).

Chatham organized a military company in 1775 and appointed Benjamin Godfrey as captain. Men were dispatched to Rhode Island, Bunker Hill, and Plymouth during the conflict and town records indicate payment in taxes to support the Continental Army as well as the families of Chatham men who served during the Revolutionary War. Several men were engaged with the Coast Guard and fought battles in Boston as well as New York. The only reported incident to affect Chatham directly was a raid in 1782 by a British privateer that attempted to capture one of the brigantines anchored in the Old Harbor. A company of Chatham men fired shots from the beach and reclaimed their ship (Town of Chatham 1912).

The embargos enacted during the War of 1812 had a tremendous effect on Chatham's emerging maritime industry. Rather than participate directly, the blockade forced many Chatham men to seek temporary employment elsewhere, including work on farms in neighboring Rhode Island (Town of Chatham 1912).

During World War I a Naval Air Station was established at Eastward Point on Nickerson Neck. Built between 1918 and 1919, the facility included a large dirigible hangar, several smaller hangars for seaplanes, and a series of support buildings. After the war, the station was closed and after 1921 the lands upon which it has been located, known at the time as "Concrete Point," were developed into a residential subdivision called Eastward Point (Knapton 1976:19).

Archaeological deposits associated with military sites could date from the seventeenth century through the World War II era. Military site types could include ammunition and/or equipment storage structures,

muster fields, and temporary barracks. Soldiers' and sailors' gravesites and burial grounds have been identified and recorded within town and could be present as well, either as marked or unmarked areas. Cultural deposits including military buttons, insignia, hardware, and ammunition could also help to identify military sites.

### Resort/Tourism Context

This research category encompasses a variety of resource types including taverns and guesthouses, recreational facilities, and summer home communities. Broadly defined, these categories are tied together by their function within the community as places where people traveled to and from, either for short periods of time, as would be the case with taverns and recreational facilities, or for longer periods as with summer home communities and estates.

The earliest taverns in Chatham provided entertainment for area residents as well lodging for visitors passing through or for residents traveling from outlying sections of the town. These facilities functioned in a similar manner to the general store of later periods. These structures were almost exclusively located on major roadways, often at intersections or midway points between distant locations. They were also often opened in residential homes, with some rooms converted for public use and bedroom areas reserved for lodgers.

Ebenezer Hawes operated a tavern on Old Queen Anne Road near the meetinghouse location as early as 1706 (Smith 1992:182). This structure served as a convenient meeting place for town residents in what was at the time the town center. According to Smith, Hawes' tavern was located so close to the parsonage that the Rev. Adams complained about the activities that occurred there, and the rancor between the two men escalated into slander lawsuits that were heard in Barnstable and Boston. In the end, Rev. Adams appears to have lost his post and moved with his family to Maine around 1718 (Smith 1992:185-187).

Taverns were opened in other sections of Chatham as the population grew and industries began to spread in developing villages. The Red Tavern (CHA.344) was built around 1780 on Old Wharf Road in the Old Harbor section of town and the Squire Crowes Tavern (CHA.296) was established around 1810 on Seaview Street in Chatham Village (CHC 1991). One of the town's earliest taverns operated at Wreck Cove on Monomoy (Smith 1992:209).

Chatham's development as a major tourism destination began as early as 1860 when the Ocean House opened on Main Street as the first summer hotel. The industry did not become firmly established, however, until the arrival of the railroad in 1887. The earliest of Chatham's summer resorts was the Hotel Chatham located on the southern end of Eastward Point (Nickerson Neck). Opened in 1890 by Marcellus Eldredge, his brother H. Fisher Eldredge, and Jordan Marsh department store founder Eben Jordan of Boston, the three-story hotel included more than 70 guest rooms, a dining room, and billiards. The operation lasted only five years, after which point the owners declared bankruptcy. The closure of the hotel was blamed in large part on the inability of guests to reach this section of town via rail. The buildings were demolished sometime after 1907 (Knapton 1976:22-23).

After the railroad was completed in 1887, hotels sprang up throughout town. Around 1890, the Surfside Inn and Hotel Mattaquason opened in Chatham Village. After 1900, the hotel industry expanded greatly,

led by the construction in 1914 of the Chatham Bars Inn on Shore Road. The inn complex included landscaped grounds, multiple buildings, and a nine-hole golf course. The 162-room hotel was identified as the most expensive on Cape Cod during this period (CHC 1991). Ancillary facilities were established to accommodate the visitors, including a bathing wharf at the upper end Little Mill Pond in 1920, and the private Chatham Beach and Tennis Club at the southern end of Main Street in Chatham Village in 1925.

The Eastward Ho Golf Course was developed on the site of the Hotel Chatham in the 1920s. Construction of the course, operated by the Chatham Country Club, began in 1920 and the links opened in 1922. The club's central building is the ca. 1805 Ensign Nickerson House that was built nearby and moved to the golf club site. The eastern end of the club consists of an eighteenth-century building brought from Acushnet and the western portion, including a fireplace, is from a house built in Walpole (Knapton 1976:25-26).

Many of Chatham's summer visitors decided to purchase property rather than stay in a hotel. In 1925, slightly more than half of the taxed dwellings in town were owned by non-residents who paid 42 percent of the annual town tax (MHC 1984). The southern portion of Chatham was the most popular place for these summer homes, which were built within small subdivisions south of Main Street and extending down to the shoreline.

Hunters and birders began to visit Monomoy Island and North Beach in the mid-nineteenth century, attracted by the large number of shore birds that gathered there. By 1862, the Bryant Club had been established on Monomoy and small cabins and camps were erected along North Beach during this period (CHC 1991). Historian John Knapton indicated that a hotel was located on Monomoy Point in the nineteenth century, but did not provide any additional information about this facility (1976:22). It is possible that the "hotel" was some sort of overnight accommodation to service the birders who began to venture to the point during this period.

These types of structures were present in each of Chatham's historic villages, and are best documented through historic records and oral histories associated with older homes used for these purposes. Archaeological deposits may also help to identify private homes used as taverns. Trash middens including caches of liquor bottles have been identified at colonial-era tavern sites, along with domestic features such as privies, wells, storage sheds and outbuildings, and food refuse pits. Some of these features could also be expected in the vicinity of nineteenth-century hotels and boardinghouses.

### Transportation and Communication Context

While the coastal shoreline provided access around Chatham's northern, eastern, and southern sections, the earliest roadways served as the primary transportation and communication corridors between the town's settlement centers and other sections of Cape Cod. The first colonial settlers utilized existing Native trails to reach their homes and farmsteads, which were established along these pre-existing corridors to allow access to other settlement areas. Among the early overland routes in Chatham, Old Queen Anne Road (also known as Monomoy or Barnstable Road) was possibly the first, followed by the Harwich Road (later known as Main Street and then Route 28).

In addition to supporting colonial residential development, busy main thoroughfares also attracted travel support industries such as inns and taverns, stables and smiths, and merchants. Stage lines were established along the main roadways to move mail, people, and goods from one village to another as well as in and out of town. Chatham's first stage line was established in 1814 and was the only direct link between the town and Boston prior to the arrival of the railroad (Henderson 1989). The stage stopped at Training Field Road and completed its Chatham route at the store and post office of Joshua Nickerson in North Chatham (CHC 1991). Many of Chatham's industries were located near strategic intersections of overland roads and waterways in order to easily import supplies and send products to market.

Chatham residents began debating the best location for the expanding Cape Cod Central Railroad as early as 1863, but it would take more than two decades for the service to arrive. Throughout the 1870s and 1880s, town meetings were dominated by discussions over where to site the tracks and establish a Chatham depot. After rail service was completed in Provincetown and Truro in 1873, Chatham and Mashpee remained the only Cape towns that did not have rail lines (MHC 1987). In 1887, the Chatham Railroad Company was established to oversee direct service through town. Tracks were built parallel to Main Street in the southern portion of the town and connected to Harwich. A depot was built west of the town center and dedicated in November 1887. Depots were also built at South Chatham and a stop was established in West Chatham to service the new Hotel Chatham (CHC 1991). The rail line operated until 1930 after which auto travel replaced this mode of transportation. The tracks were removed sometime later and the Chatham Village depot was turned into a museum (Knapton 1976:16)

The Marconi Wireless Company established a radio-telegraph station at Ryders Cove in 1914. This station was the second established on the Cape; the first station to send a trans-Atlantic message was erected by Guglielmo Marconi in Wellfleet in 1901. Although numerous wireless stations were built during this period, the facility in Chatham is the only one to retain its integrity and the majority of its buildings, and the complex was placed on the National Register in 1994 (Adams and Jenkins 1993). The National Register nomination notes that significant archaeological deposits associated with the construction and use of the facility could be present.

Archaeological resources associated with early roadways are unlikely to have survived several hundred years of use and improvement. The most probable resources would be located within corridors alongside the actual roadbeds and could include private homes and public buildings used for stage stops, post offices, and other functions related to transportation and communication.

### **Expected Post-Contact Period Resources Within Chatham**

Prior to the reconnaissance survey, Chatham's post-contact period archaeological database was limited to five sites, two of which are offshore shipwrecks. Chatham was clearly occupied at the time of the earliest Euro-American settlement and almost all of the historical sources reviewed as part of the survey indicate that Native people remained settled within their long-utilized homelands throughout the eighteenth and well into the nineteenth centuries. Virtually any section of town could be expected to contain Native American domestic sites and burial plots.

Euro-American archaeological deposits in Chatham have not been documented, despite the recordation of more than 1,000 standing historic structures. This is due in part to the renovation and reuse of historic homes and properties. Research themes for post-contact period resources should be aimed at developing a comprehensive archaeological model for sites that focuses on variations within the town's numerous village communities, as well as on different site uses (e.g., residential, agricultural, commercial/industrial, maritime). Based on the rich and varied historic character of Chatham, expected archaeological sites in the town will span the entire post-contact period and all of the research contexts discussed above. Information about post-contact archaeological sites collected during the survey represents a starting point for documenting the town's cultural resources.

The town contains a broad spectrum of post-contact period resources spanning more than 400 years of Native and Euro-American settlement. Although the history of Chatham is well studied and understood, the addition of archaeological data would provide an added (and extremely important) layer of interpretation to various research-specific contexts, and would allow the town to be tied into larger regional models of archaeological site occurrence and survival.

As with pre-contact sensitivity, post-contact archaeological sensitivity is closely tied to microenvironmental changes. The identification of more sites representing all periods of occupation and various thematic contexts would add greatly to the town's historic and archaeological heritage, and would complement the great volume of written and oral history that Chatham's citizens maintain.

## CHAPTER SIX

### RESULTS OF THE RECONNAISSANCE SURVEY

This chapter presents the results of the archaeological reconnaissance survey conducted within the Town of Chatham. The survey was comprised of three major research components; the collection of historic and archival information, informant and local resident interviews, and the completion of field survey work. The data resulting from these tasks, presented below, were used to refine the preliminary archaeological predictive models (presented in Chapter 7) and sensitivity maps (presented in Appendix A).

Prior to the town-wide archaeological survey, there were 61 recorded pre-contact and 5 recorded post-contact period archaeological sites within the MHC site files for Chatham. The survey resulted in the identification and/or additional documentation of four pre-contact sites and eight post-contact sites. These sites were identified through archival research, informant interviews, and field survey, and represent a wide range of resources within Chatham. The locations of all previously known and newly identified archaeological sites in Chatham are presented in Appendix F of this report.

Major benefits of the reconnaissance survey included the documentation of several archaeological sites in areas of Chatham where none had previously been identified, the addition of several post-contact period archaeological sites to the town's database, and the production of archaeological sensitivity maps that reflect the types and locations of predicted archaeological resources within Chatham. While pre-contact and post-contact period resources are still underdocumented, especially with regard to the numerous pre-contact sites identified by collectors, the reconnaissance survey has collected information about human activity in Chatham along a continuum of nearly ten thousand years. The archaeological record becomes more complete with each site addition.

#### Summary of Additional Research Sources

The collection of historic and archival research was one of the important components of the survey and a significant amount of time was devoted to the various activities described in detail below. During the initial phases of the survey, efforts were focused on gathering generalized background materials about Chatham, including environmental data, archaeological site and survey forms, historic building data, and town histories. This information was used to develop the basic environmental and cultural frameworks included in preceding chapters of this report, as well as to tailor the preliminary archaeological sensitivity assessments to fit local and regional models. Research was conducted at the MHC, Massachusetts State Archives, Chatham Historical Society Archives, and Chatham's Eldredge Library. Historical maps, town vital statistics and census data, historical photographs, and other background information were collected from internet sites, including the CHS website, academic links, the Library of Congress, and subscription based internet databases such as Ancestry.com and NewEnglandAncestors.org. A complete list of the general background information sources is presented in Chapter 2 as well as in the references cited section of this report.

As the survey progressed, the historic and archival research efforts became more topical and/or geographically specific and were tied closely to the ongoing field survey and informant interviews. In some cases, state repositories and cultural resource reports were revisited, but for the most part the research utilized local sources of information. For example, information gathered from local informant interviews and town historians was supported by research on file at the MHC and contained in local histories. Additional background information was also collected from local residents and historians for sites and structures identified during the field survey.

Recorded data about Native American artifact collections and site areas in Chatham was collected primarily from the MHC and from written archaeological reports. The archaeological site files for Chatham were examined as part of the reconnaissance survey, as were the MHC's collector/landowner codes for site areas and/or artifacts found in Chatham that were not associated with a specific geographic site area. The site files were reviewed several times during the project to insure that updated information was collected.

Fred Dunford, the long-time staff archaeologist of the Cape Cod Museum of Natural History provided additional information about the collecting habits and artifact assemblages of avocational archaeologists who frequented Chatham. In particular, Dr. Dunford's knowledge of the Cleon Crowell collections from the Muddy Creek area provided new data that was used to update the recorded site information for this locale. Dr. Dunford also shared his knowledge of pre-contact settlement and land use patterns in other sections of Pleasant Bay that was extrapolated for the Chatham project and in particular for the predictive model and sensitivity assessment for the Pleasant Bay Zone.

Archival and informant information was used in many cases to refine the archaeological sensitivity of a particular area. This was especially true for post-contact period resources that appear in the documentary record but for which there is no specific locational and/or archaeological data. Some of the places, events, and structures that are associated with Chatham's early history are difficult to associate with a specific present-day location, given the generalities of early maps and eyewitness accounts. In many cases, local historical sources were used to pinpoint places and events within the current town boundaries. Wherever possible, the combination of archival research, local informants, and field checking was used to try to identify and sensitize areas that may contain archaeological deposits associated with these documented resources.

MHC inventory forms and National Register files for Chatham were also consulted for information about potential historic period archaeological resources. Chatham follows a pattern seen in many other southeastern Massachusetts towns, where the documentation of standing structures far surpasses that of post-contact period archaeological deposits. The MHC files for Chatham include more than 1,000 historic buildings, areas, burial grounds, structures, and objects. Some of these recorded historic resources are grouped into local and National Register historic districts while others are listed individually. Unlike recorded archaeological sites, inventoried standing structures are located in all sections of town. Completed Area Forms document the historic neighborhoods of:

- Chathamport,
- North Chatham,
- Old Chatham Village,

- South Chatham, and
- West Chatham;

the corridors surrounding:

- Bridge Street,
- Cedar Street,
- Champlain Road,
- Crowell Road,
- Old Harbor Road,
- Old Queen Anne Road,
- Seaview Street,
- Shore Road,
- Stage Harbor Road, and
- West Main Street;

and the areas around:

- Chatham Light Station,
- Marconi-RCA Wireless Receiving Station,
- Monomoy Point Lighthouse,
- North Beach, and
- Oyster Pond.

Five individual properties are listed in the MHC's MACRIS database as having either pre-or post-contact period archaeological significance, although only one corresponding archaeological site form had been previously recorded. The inventory and area forms provided geographically specific post-contact information and were also used to help construct the predictive model for historic period archaeological sites. As a group, they represent a tremendous amount of effort focused on preserving aboveground cultural resources in Chatham and illustrate the potential for Chatham to contain a wide variety of archaeological resources.

Historic maps were also used to provide details about the past configuration of Chatham, and to help assess the relative age of undocumented historic period structures and landscapes. Chatham is somewhat unique among the Cape's towns in that one of the earliest European visitors produced a figure showing the locations of Native habitation sites. Samuel Champlain's 1606 drawing of Port Fortune, identified as the Stage Harbor area of Chatham, has been used by historians to help document European contact with Native Americans in the seventeenth century. In Chatham, the map and account of Champlain's visit has been used to identify the potential locations of nine archaeological sites (19-BN 261-269).

Maps and atlases produced from land surveys in the eighteenth and nineteenth centuries were used to help reconstruct the historic development of the town and identify possible post-contact archaeological sites and sensitive areas. The Barnstable County atlas maps were particularly useful for identifying roads, structures, and industries in the nineteenth century. For example, the 1831 (Hales) map depicts the locations of salt works and schools in Chatham, while late nineteenth century atlases (e.g. Walker

1880) identify landowner names and depict individual buildings in Chatham's neighborhoods. These detailed maps allowed the PAL researchers to compare the present-day landscape of the town with that of the past, and to locate areas that have been affected by modern period activity.

The Public Information Day in May 2007 provided members of the community with an opportunity to learn about the reconnaissance survey, and allowed the PAL project team to gather information about potential archaeological resources in town. This event, combined with a summer children's education program at the CHS's Atwood House Museum, offered opportunities to meet local residents who shared information about the areas around their own individual neighborhoods.

PAL staff also met with Julia Purdy, an architectural historian who was completing a local survey project for standing structures in Chatham. Ms. Purdy shared information about documentary, oral, and cartographic research sources and identified several potential post-contact period archaeological resources.

#### **Summary of Reconnaissance Fieldwork**

The field survey was completed in several stages, beginning with a preliminary drive over of the entire town during the Phase I portion of the project. One goal of this activity was to examine the range of existing conditions within each of the geographic sensitivity zones, and to become familiar with the various locales within Chatham. The initial field survey was also designed to check on the condition of a sample of the previously identified archaeological sites. Unfortunately, many of the known site areas are located on private property, are not defined by a specific geographic location, or can only be accessed through private property. This is particularly true for sites located around Pleasant Bay and Stage Harbor that are accessible only from private roadways located a distance from the shore. The survey accomplished both goals, however, by sampling accessible areas within each of the geographic zones.

The field survey was used to help determine the condition of a number of previously identified archaeological sites, as well as to check on sites that were suspected to have been destroyed and/or impacted by later development, erosion, or other processes. The survey included a visit to the Mattaquason Purchase Site to check on the current condition of the general area. Since PAL staff conducted archaeological investigations at this site in the 1990s, the locations of specific excavation areas and features was known. The general site area is well known to local residents, some of whom were involved in the 1970s MAS excavations, the site is relatively easy to access. The site visit indicated that there has been little or no disturbance around the site boundaries and little change to the residential neighborhood surrounding the site.

As the project continued, additional field survey was used to check on existing conditions at known and potential sites that had been identified through archival research, verify the preliminary archaeological sensitivity assessment, and revisit areas that had been targeted as high sensitivity during the survey. Generalized information collected from town histories and local residents who were unsure of the exact locations of potential resources were also checked, where possible, to determine if there were any surficial indicators of archaeological deposits.

This portion of the survey included a driving/walking tour with Ron Nickerson, who provided on-site identification of many known and potential archaeological sites within all sections of town. This activity was extremely useful for the survey. Mr. Nickerson also allowed access to the William Nickerson Homestead Site and provided detailed information about the history of the Nickerson family in town.

### Identified/Documented Archaeological Resources

The following section describes archaeological site areas and/or deposits that were identified during the course of the field survey, that were documented through archival research and/or informant interviews, or that were updated with new or additional information. Chapter 7 includes a discussion of newly identified/documentated sites by zone together with the predictive model for archaeological resources in that zone. Appendix F includes lists and maps of all pre- and post-contact sites documented or updated by PAL during the survey.

Many potential archaeological sites dating to the pre- and post-contact periods were suggested by written local history sources and/or historical maps and atlases. In many cases, informant interviews or field survey provided additional locational data for sites that had been difficult to locate through documentary sources alone. New post-contact period sites were more frequently identified through background research, especially given the number of identified historic structures in town and the availability of numerous written historical texts.

#### Pre-Contact Sites

One of the goals of the reconnaissance survey was to try to collect more specific data on some of the relative to pre-contact archaeological sites identified by collectors. As discussed elsewhere, the majority of Chatham's recorded pre-contact sites are listed with no specific locational data and no record of the types of artifact that were associated with these sites.

Fred Dunford provided some additional data about Chatham sites based on his familiarity with some of the region's collectors, in particular with Harwich resident Cleon Crowell. While Dr. Dunford did not know Mr. Crowell while he was alive, he has analyzed portions of the Crowell collection archived at the CCMNH and reviewed a copy of Crowell's collection notebook, also archived at the Museum

[REDACTED]

also notes that Crowell believed that the Muddy Creek was the core area for the sachemship of the Monomoyick Tribe [REDACTED] (Dunford and O'Brien 1997:11). Numerous town histories also [REDACTED] (Nickerson 1981; Smith 1992).

The current MHC site files [REDACTED]

[REDACTED] This site (19-BN-55) was recorded from old MAS files and is described [REDACTED]

[REDACTED] No additional information was recorded with the site form except for an association with collector Frank Kreimp. Based on the information provided by Dr. Dunford, a new site designated as [REDACTED]

the **Muddy Creek/Monomoyck River Site** was recorded as part of the reconnaissance survey. While

A review of Eric Johnson's (1985) survey report on Cape Cod artifact collections provided some additional data on previously recorded avocational sites in Chatham.

Collectors Ross Moffett and Frank Kremp were listed as the recorders. Mahlstedt inventoried materials from this site that were part of the Eric Farham collection, including a Neville Variant point, a ground stone adze, and a pendant. While the exact provenience of these materials is unknown, taken together they suggest that the site area was utilized during the Middle Archaic Period (7500-5000 B.P.).

The **Morris Island Shell Heap Site (19-BN-3)** was also recorded through a review of MAS site forms based on materials excavated in the 1940s and 1950s by Howard Torrey and Ross Moffett.

The presence of this material, which would have been collected from a non-local source, suggests that Morris Island may have been utilized in the Transitional Archaic Period (3600-2500 B.P.) as well as in the Woodland Period.

Another potential pre-contact period archaeological site identified in this zone may be associated with a post-contact period cemetery.

A 1948 newspaper interview with resident Bartlett Bassett includes recollections of his childhood home, located close to the William Nickerson Homestead Site at Ryder Cove. Mr. Bassett's father purchased a house built by Kimball Ryder

#### Post-Contact Sites

Chatham's potential to contain post-contact period Native American sites is considered to be generally high given the historical documentation of Native people in the community through at least the mid-

eighteenth century.

and noted that Rev. Samuel Treat was paid by the Society for the Propagation of the Gospel to oversee the education of Chatham's Native American residents as well as several Native teachers (1992:105).

The meeting house appears to have served for several decades as a gathering place of Chatham's Native people, but Smith suggests that it was not standing long after 1730, the date of an apparent epidemic that took the lives of many of the Native people still living in the area. Citing Mr. Joseph Paine, Smith writes "The meetinghouse has been spoken of by the old people as gone some years before 1800.

Additional information about this structure was not located as part of the survey project.

One of the highlights of the reconnaissance survey was the recordation of the **William Nickerson Homestead Site** as an archaeological resource in Chatham. As the town's first colonial resident, Nickerson figures prominently in the history of Chatham and was the progenitor of a long line of town residents and historians. The location of the site was reported by Ron Nickerson, Chatham resident and vice president of the Nickerson Family Association on the Association's grounds (Figure 6-1; see Figure 5-3).

Town historian William Smith also described this general location as the one that longtime residents attributed to the first colonial settler (1992:78-79).

The William Nickerson Burial Ground located off A. Leonard Way has been recorded in the MHC's inventory files as an historic cemetery (CHA.815) and is the reported burial place of the original Nickerson family members with the earliest burials dating to 1689. The cemetery is today bounded by an enclosure and contains at least six standing head and footstones (see section above, Figure 6-2). The plaque commemorating the cemetery notes that the site is the "probable" burying place of William Nickerson, his wife Anne, and some of their children. Among the legible headstones within the plot at least one memorializes a member of the Ryder family, also early Chatham settlers.

Local histories refer to this site as "Burial Hill" and indicate that the original 1-acre parcel was bounded on one side by a "hay way" and was designated as a burial ground by William Nickerson before he died. William's daughter, Sarah Covell, retained the rights to the property after her father's death and deeded it to the town in the 1700s. Smith's (1992) description of the property written in the 1940s includes a footnote that "the hay way mentioned has disappeared, and if traditional accounts are true, only a small portion of the original acre lot has been fenced and preserved during the last century. The remainder



Figure 6-1. Photograph of marker at William Nickerson Homestead Site.

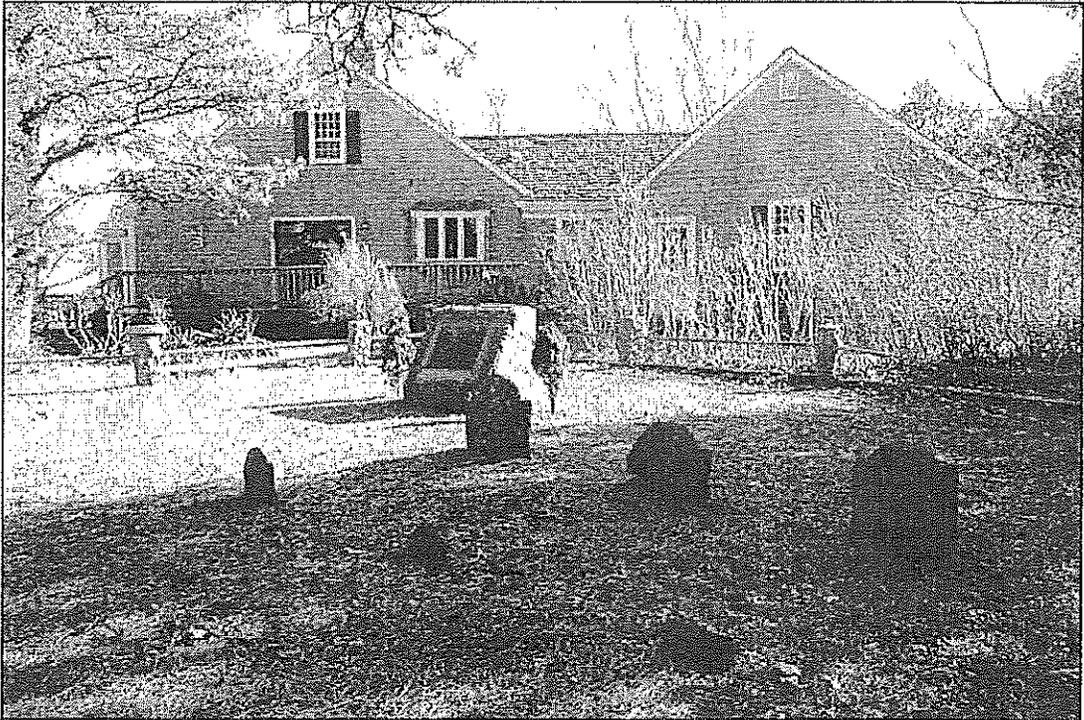


Figure 6-2. Photograph of William Nickerson Burial Ground (CHA.815).

has for years been cultivated by private individuals” (Smith 1992:94). Indeed, the current cemetery comprises a very small area at the end of a cul-de-sac surrounded by modern residences (see Figure 6-2).

This cemetery appears to be the same one described by Bartlett Basset as being located on his father’s property at Ryder Cove. “When father bought the place there was a small graveyard, with a fence made of salt work boards. We used to plow around there and never think nothing about it. Members of the Ryder family were buried there. The property was sold twice after Father’s time. One owner took the stones out and put them on the ground. The town made him put them back. The fence went all to pieces. (Cape Codder 1948:1). This description sounds very similar to that offered by Smith, and suggests that the stones in the plot should not be assumed to mark the original burials. While the enclosed area may well represent the only seventeenth/early-eighteenth-century interment area, it is considered likely that burials could be located anywhere in the vicinity in areas that have not been disturbed by modern construction.

Another area of likely post-contact period archaeological deposits is centered on the original town cemetery and **First and Second Meeting House Site** at the intersection of Old Queen Anne and George Ryder roads (Figure 6-3). The cemetery is divided into two plots. The older parcel is located on the south side of Old Queen Anne Road (and is recorded as CHA.805) and dates to approximately 1718. The cemetery was expanded to the north side of the road (CHA.804) in 1742. Many of the town’s early colonial settlers are buried in these cemeteries, which are well maintained and kept free of underbrush. The south cemetery was created at the site of Chatham’s first meetinghouse, which was built in 1700-1701 within or immediately adjacent to the grave sites. A description of this building appears on the bronze plaque marking the site; “it was 22 feet square and 13 feet in the wall, with a pointed roof, windows without glass, and two sets of benches facing a small pulpit” (this description was taken from Smith 1992:268).

The town’s second meetinghouse was built in front of the north burying ground between 1729 and 1730. The new structure, built to replace the first meetinghouse that was in disrepair and too small to house the growing population, came at the same time Rev. Joseph Lord took over the congregation. This structure was larger than the first to accommodate the town’s growing population and was repaired and/or enlarged in 1773

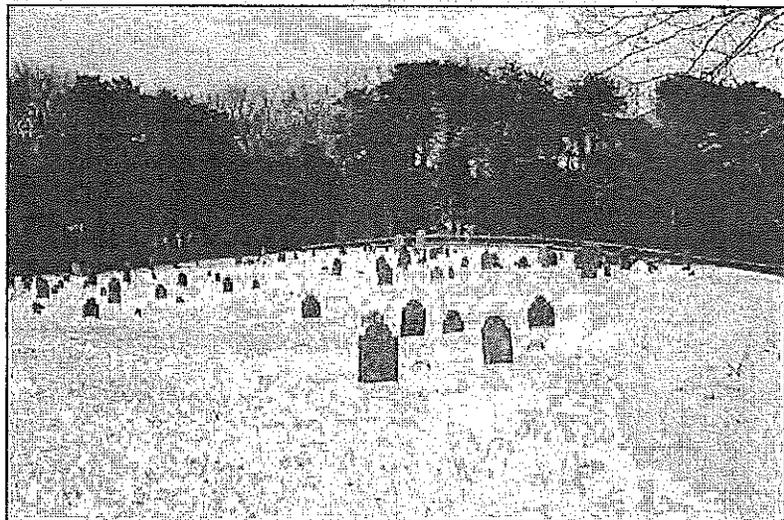


Figure 6-3. Photograph of Old Queen Anne Road North Cemetery (CHA.815) (PAL 2007).

and again in 1792 (Smith 1992:270-271). In 1802 the meeting house was described as being “in good repair” (Smith 1992:379). The second meetinghouse was dismantled in 1830 and a new Congregational church was built on Main Street at the Union Cemetery on the Harwich border (Knapton 1976).

At least two minister's homes were erected near the meetinghouses in the eighteenth century. The Rev. Hugh Adams was called to Chatham in 1711 and was given a 40-acre farmstead located "on the west side of the cross road leading southerly from the old cemeteries and about 40 rods [660 ft] from the meeting house which stood on the lot now forming the south part of the old cemetery (Smith 1992:172). The approximate location of the **Rev. Hugh Adams Farm Site** on the west side of George Ryder's Road has been identified as a potential archaeological site due in part to the lack of development along this section of the roadway. Since the exact location of the homestead is unknown, it is not clear if one or more elements of the farmstead may have been incorporated into more modern structures. Given that there are no standing homes between Old Queen Anne Road and Thompsons Trace, the likelihood that at least some elements of the farm have survived as archaeological deposits is high.

Windmills provided the majority of Chatham's early power for grinding grain, sawing wood, and pumping water into saltworks. The first mill erected in town appears to have been built in 1720 [REDACTED] one of the highest points in Chatham and well positioned to take advantage of ocean breezes. It is unknown how long the mill stood, but it is not depicted on the 1831 (Hales) map of Chatham (see Figure 5-6). Some residential development has occurred in this area, but the existing houses are not tightly spaced and it is considered possible that foundation remains and/or materials associated with the construction or use of the [REDACTED] could still be present on this topographic feature. A windmill was also in operation to the south of the millpond in northwestern Chatham in the vicinity of the present-day Dusty Miller Lane. Julia Purdy reported this site, [REDACTED]

[REDACTED] Smith (1992:381) reported that a mill was built by Simeon Bearse in 1795 in a part of Chatham then referred to as "East Harwich". The mill eventually passed to grandsons Ebenezer and Isaac Bearse. [REDACTED]

[REDACTED] Little is known about the mill operation(s) that occurred in this part of town, although it is clear from a review of the historical map chronology that the string of small kettle ponds in this area was at some point connected, probably to provide either power or water for an industrial/commercial purpose. Additional research on the use of this part of town would be expected to provide more detailed land use history.

Salt production figured prominently in the town's economy during the first half of the nineteenth century and saltworks were located in virtually every coastal section of Chatham. The archaeological survival of these commercial operations is limited by the fact that they were located at or very near the coast, in areas that have often been subjected to erosion and modern construction, and the use of wooden materials in their construction, which generally do not survive the acidic New England soils and were often reused elsewhere. The locations of the many nineteenth-century salt-works appear on historical maps of Chatham, making it possible to tie identified archaeological deposits and/or structural remains with a particular company or operation. The Enoch Harding Salt Works is one of the best documented saltworks in Chatham, and archaeological deposits associated with its operation may survive on Buck's Creek in West Chatham. The Harding salt works were documented by the Historic American Building Survey (HABS) in 1935 and 1936 and the record for the survey (HABS MA-172) includes measured drawings of vats, pipes and other equipment that was still extant at that time (<http://memory.loc.gov>). It is unknown if any elements of this operation survive as the location has been intensively developed. However, architectural historian Julia Purdy indicated that a number of piers are still visible in the marsh area on Forest Beach to the east of Forest Beach Road. This area corresponds to the location of the **Kimball and Levi Eldridge Salt Works** that were recorded as part of the Enoch Harding

documentation. If the visible piers represent elements of the works, it is likely that additional archaeological deposits could survive in this area. Although it is unknown when this saltworks was in operation, the HABS documentation indicates that it was in operation circa 1810.

Lighthouses and other aids-to-navigation have figured prominently in Chatham's history and represent an important archaeological context within the town. Many of the structures that were erected in Chatham were either moved or lost to erosion and storms, creating a patchwork of locations along the eastern and southern shores over the eighteenth, nineteenth and twentieth centuries. One of the older lighthouse structures is the **Monomoy Point Lighthouse**, first lighted in 1828. The tower, a keeper's house and a generator house were restored in the 1980s and are listed on the National Register of Historic Places. The structure was also documented in the 1930s as part of the Historic American Engineering Record (HAER MA-62) project and the data collected at that time could be especially useful for any archaeological investigations (Figure 6-4). The lighthouse parcel has been designated as an archaeological site as it has a high potential to contain deposits associated with the construction and

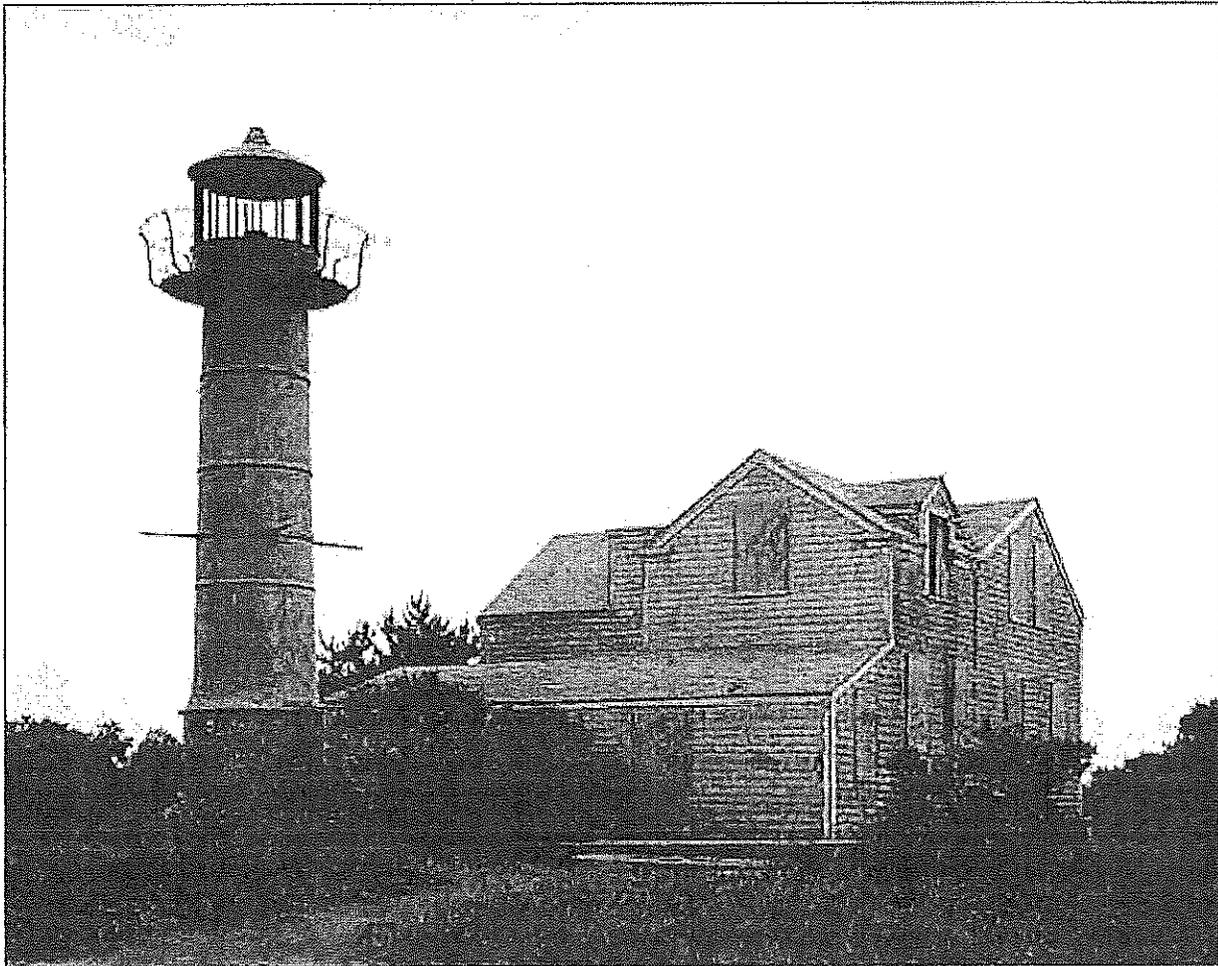


Figure 6-4. Circa 1987 photograph of Monomoy Light and Keeper's House looking southeast (Library of Congress, American Memory Digital Collection).

use of the lighthouse during the nineteenth century. It also represents one of the few areas within the Nauset/Monomoy Zone that has a high archaeological sensitivity.

### Summary

The archival research, informant interviews and survey fieldwork served two main purposes: to identify previously unknown archaeological deposits in Chatham and to collect the information necessary to create the final archaeological sensitivity maps. The tasks completed during these portions of the survey were successful in identifying previously undocumented or underdocumented archaeological sites in Chatham, and represent a wide range of activity areas and site types that characterize the town's history. Chatham's recorded history, particularly the detailed research conducted by William Smith, provided a much of the data that was used to identify archaeological sites in town. The survey's success was due in large part to the efforts of the CHC and CHS and local residents who also provided information used to record archaeological sites in town. The collective knowledge and interest of these individuals can be used in the future as a resource to help identify additional sites through the use of the sensitivity maps and available local historical contacts.

The data collected during the course of the survey allowed the preliminary predictive statements to be modified and refined to reflect the most likely areas for pre- and post-contact archaeological resources to be present. This information is presented in Chapter 7 and Appendix A.

## CHAPTER SEVEN

### ARCHAEOLOGICAL PREDICTIVE MODELS

In addition to collecting information about known archaeological sites in Chatham, one of the primary goals of the archaeological reconnaissance survey was to develop models to predict where unidentified pre- and post-contact cultural resources may be expected within the town. These models were developed using established criteria for site types and locations, and were refined with project-specific environmental and cultural/historical information.

This chapter presents the archaeological predictive models for pre- and post-contact resources within the town of Chatham. It is based on the results of the comprehensive archival research, informant interviews, and field survey. For each predictive model, information has been further categorized and presented within the geopolitical study zones described in Chapter 3. The archaeological sensitivity maps are presented in Appendix A, and the user's guide for these maps appears in Appendix B of the report.

#### **Predictive Model for Pre-Contact Period Resources**

The predictive model has combined all of the collected resources with theoretical expectations applied broadly to the region, which indicate the clustering of pre-contact period sites in settings of high resource potential and the settlement of locations that satisfied adaptive criteria specific to different pre-contact time periods. In general, the model relies upon regional and project-specific information to predict the location of potential sites in Chatham. Data for the archaeological sensitivity model has also been drawn from previous comprehensive studies completed in the Chatham/Pleasant Bay area (Dunford 1987; Seufert 1994) and similar town-wide reconnaissance surveys elsewhere on the Cape (Donta et al. 1996). The mapped locations and descriptions of all identified pre-contact sites are presented in Appendix F.

Only 9 of Chatham's 61 previously recorded pre-contact Native American sites were identified by professional archaeologists. The majority of the known sites in town were identified by avocational archaeologists or collectors and were recorded in the state's files on the basis of recovered artifacts, sometimes from large collections that had been gathered from many sites over many years. As a result, many of the recorded sites, as listed, do not provide detailed information about the location or the content of the site.

Despite the limitations of the site file data, the information that has been recorded does provide a general picture of the types of sites that are present in town, as well as the environmental settings where these sites have been located.

[REDACTED] No archaeological sites have been recorded across much of Chatham's interior or along the outer coastline.

The pattern of recorded artifact find spots as opposed to professionally investigated sites is common in the coastal communities of southeastern Massachusetts. Avocational archaeologists usually favor exposed coastal areas, pond shores, riverbanks, plowed fields, and other areas where cultural deposits can become exposed on the ground surface. Collectors often focus on large, visible sites or sites that are well known in local historical records. This pattern is particularly true for Chatham, where the overwhelming majority of identified sites are located near saltwater wetlands and embayments and/or, especially in South Chatham, in areas that were formerly agricultural fields and pasture.

The reconnaissance survey collected limited additional, site-specific information about archaeological resources located in these areas, but also identified several new pre-contact sites in areas that had not previously been known to contain these deposits. In addition to supporting the environmental predictive model, these sites provide further documentation of pre-contact period Native American land use patterns across the entire town and in a number of different ecozones.

The predictive model for pre-contact period resources is partially dependent on previous archaeological research and is based on a primary assumption: that settlement patterns seen at known sites in Chatham and elsewhere in the region are sufficient to predict where unknown sites of similar size, form, and function are located within the town. All of the recorded site type and locational data were used to help refine the predictive model. The predictive statements for pre-contact period archaeological sites are listed by zone below.

#### Pleasant Bay/Chathamport/North Chatham Zone

The Pleasant Bay Zone encompasses the northern section of Chatham and [REDACTED]

[REDACTED] Avocational collectors and MAS members including Frank Kremp, Ross Moffett and J.O. Brew recorded more than a dozen of the pre-contact sites in this zone (including 19-BN-10 through -20, -54, -55), many of which were identified by eroding shell midden deposits [REDACTED]

[REDACTED] Cleon Crowell documented sites [REDACTED] With a few exceptions, the exact locations and recovered materials and/or features associated with these sites are unknown.

Three of the sites identified by Kremp around [REDACTED] suggesting that they may date to the Woodland Period (2700-450 B. P.). Landowner-reported sites are located [REDACTED]

[REDACTED] The Mattaquason Purchase Site (19-BN-12) was initially identified by avocational archaeologists, but subsequent controlled excavations within portions of the site have provided detailed locational and temporal data for this area (see below).

More recently identified sites in the Pleasant Bay zone are located in and/or near some former avocational collecting areas, but have also documented Native American land use in other portions of northern Chatham. Four sites documented through accidental discovery during construction are located in this zone, [REDACTED]

Artifacts collected from [REDACTED] were dated to the Late Archaic Period, while the [REDACTED] contained partially intact features and artifact deposits that were dateable to the Late Woodland Period. [REDACTED]

Half of the sites in Chatham that have been identified or investigated by CRM archaeologists are located in the Pleasant Bay Zone. [REDACTED]

[REDACTED] These sites document the use of the near-interior wetland margins and indicate that despite modern development, intact archaeological deposits are likely present around other wetland margins in the Pleasant Bay Zone

The existing site file database for this zone indicates a clear collector preference for the coastal margins of Pleasant Bay, [REDACTED]

[REDACTED] also appear to have been favored collection areas, although the majority of the avocational excavation in this area occurred on [REDACTED]. In contrast, no avocational/collector sites have been identified along Chatham's eastern mainland shore between Allen Point and Aunt Lydia's Cove, even though this area possesses many of the same environmental variables. Unlike the protected coves however, sections of Chatham's eastern shoreline have been directly exposed to the Atlantic Ocean in the past. The shifting nature of the Nauset barrier beach, and the movement of breach openings over the past several millennia have resulted in a much less stable shoreline in this area than in the Pleasant Bay estuary.

This zone also contains the Mattaquason Purchase Site, a contact period Native American habitation area that was partially excavated by MAS members and later documented as part of a PAL CRM survey (Etelson et al. 1978; Schafer and Herbster 2003). The results of controlled excavation and analysis at this site make it perhaps the most thoroughly documented archaeological site in Chatham to date, with cultural deposits that span the Middle Archaic through contact periods (7500-450 B.P.). Although this site area and those surrounding [REDACTED] are located very close to the Central Zone boundary, the presence of saltwater resources in proximity to Native American activity areas resulted in their inclusion in the Pleasant Bay Zone. The repeated use of the Mattaquason Purchase Site over a period that spans nearly 7,000 years indicates the overall stability of the environment in this zone and the availability of resources such as fresh water, dry and level land, and a variety of plant and animal species.

The presence of a distinct Contact Period occupation at the Mattaquason Purchase Site also indicates that Native people were interacting with Europeans either through occasional trade or more frequent contact in the 1600s. This contact is documented in many of the town's historical records, which describe the founding Nickerson family's connections with Chatham's Native American inhabitants. Regional studies (Dunford 1987) indicate that the Pleasant Bay area was a core of Native American settlement and activity when Europeans first arrived on the Cape, and the identification of other contact period sites in the neighboring towns of Harwich and Brewster suggests the likelihood that additional contact period sites could be located in the Pleasant Bay Zone.

The North Chatham and Chathamport areas do not contain many identified pre-contact sites but have the same environmental variables found at recorded sites in this zone.

primarily residential areas that have not been extensively developed and contain areas of open and unbuilt land (Figure 7-1). These areas are considered to have high potential to contain pre-contact archaeological deposits dating from the Middle Archaic through Late Woodland periods. Archaeological sites could also be expected

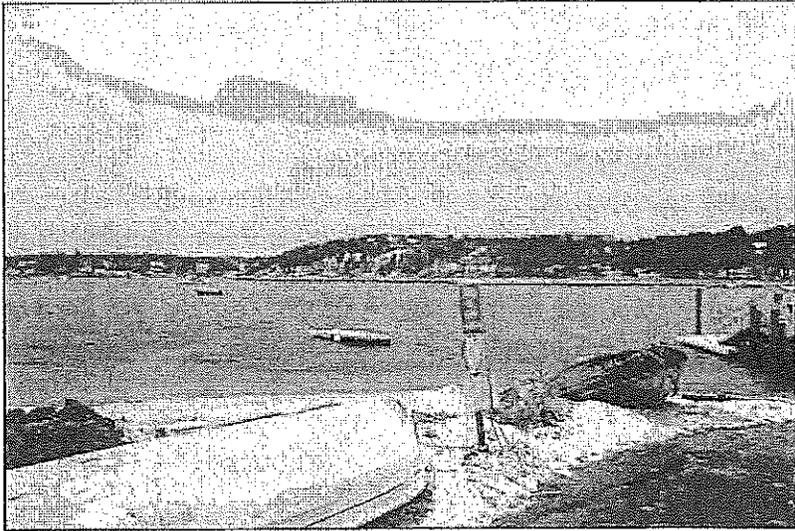


Figure 7-1. Photograph of Seapine Road area looking northwest across Ryders Cove.

Expected site types could range from large, semipermanent habitation and burial areas to small, temporary resource collections or processing areas.

Fred Dunford indicated dating from the Archaic through Woodland periods, based on his analysis of collections in the Pleasant Bay Estuary. Dunford notes (Dunford, personal communication 2008).

Moderate sensitivity areas are located at a greater distance to salt or freshwater wetlands and in areas near coastal resources that have been more intensively developed. The Pleasant Bay zone does not currently contain any high density modern subdivisions, and a review of the town's GIS real estate maps indicates a pattern of fairly well-spaced modern home construction in areas such as Seapine Road/Woodland Way neighborhood. Other areas of moderate sensitivity include the Eastward Ho golf course area. While the grounds of the course have been altered over nearly a century of use, it is likely that some areas along the shoreline could contain intact or partially intact archaeological deposits.

Low sensitivity areas are limited to marshes and other inundated wetland areas, small areas of concentrated modern development and in newly formed shoreline areas that consist only of redeposited soils and/or dunes that have been formed in the modern period.

While not specifically included in the archaeological sensitivity maps, sections of Chatham's near-shore shallows also have the potential to contain pre-contact period resources. A newspaper article from 1948 includes recollections by Chatham resident Bartlett Bassett, who described harvesting peat

with his father in Ryders Cove. Bassett noted that 5 feet below the ground surface, with inundated areas, he saw the remains of "cedar trees two feet in diameter" (Cape Codder 1948). This reference supports the environmental history of the Pleasant Bay area and indicates that prior to the stabilization of ocean levels, portions of the bay may have been dry or seasonally wet, rather than completely inundated. These areas, if once dry, may have been utilized by pre-contact Native Americans for habitation and/or resource collection.

### Central Chatham Zone

The Central Chatham Zone contains eight previously recorded pre-contact period sites. The lack of previously recorded sites is due in large part to the preference of avocational collectors for eroded coastal areas where cultural materials are more often exposed and shellfish middens are often visible. Two of the identified sites in the Central Zone were identified by avocational archaeologists, but both sites are located near the boundary with the Pleasant Bay Zone and in proximity to other favored collecting areas. MAS member Frank Kremp [REDACTED] near the edges of freshwater wetlands that were also close to saltwater/estuarine resource areas.

The Central Zone is defined primarily by a lack of saltwater resources, and includes the sections of Chatham that do not contain shorefront areas. This designation does not mean that the Central Zone was unattractive to Native inhabitants; on the contrary protected interior hills and terraces, freshwater ponds and streams, and woodlands all would have supported Chatham's pre-contact period populations. Archaeological research in other sections of Cape Cod has documented fresh water kettle ponds as focal points for Native American activity and habitation, so it is likely that these resources were utilized in Chatham as well. The identification of two sites in the Central Zone in proximity to kettle ponds provides support for this predictive model.

The five other recorded pre-contact sites in this zone were identified during a professional CRM survey [REDACTED]. All four sites consist of lithic material find spots, suggesting that they may have functioned as activity areas rather than large-scale habitation sites. Like the avocational sites described above, these find spots document the use of Chatham's interior areas by Native Americans in the pre-contact period and the reliance on wetland networks within all sections of town.

To date, none of the sites recorded in the Central Zone have been connected to specific temporal period(s) or site use type through the identification of diagnostic artifacts or features. Additional site information from extant avocational collections or professional archaeological investigations would be extremely helpful, and could help to clarify land use patterns in Chatham. Based on data collected elsewhere on the Cape, pre-contact period sites in Chatham's interior could range from the Early Archaic through Late Woodland periods.

Expected site types would generally follow the pattern seen at other sites in the Cape's interior; small to moderately sized campsites used for resource collection and processing activities and for seasonal habitation. Larger sites could also be present along more substantial year-round wetland margins and along the larger pond shorelines; and near the boundary with the Pleasant Bay and South Chatham zone.

boundaries. Since access to coastal areas from any part of Chatham would have been over a relatively short distance, there is no reason to believe that people relied exclusively on one type of resource over another.

Areas of highest sensitivity are located within 150 m of natural wetlands, including ponds, vernal pools and other seasonal wetland areas and in areas that have not been extensively disturbed by either historic or modern period activities. The area associated with Mill Pond, located near Chatham's northwestern border, likely includes some wetland areas that have been modified in the past to create water power. While this area certainly contained a freshwater wetland during the pre-contact period, the boundaries of the pond itself appear to have changed over the post-contact period as the natural wetland was dammed and channeled (see discussion in post-contact period predictive model, below). Several of the wetlands in the central zone have been modified for use as cranberry bogs; these areas may also have a slightly lower sensitivity and may be less likely to contain intact soils along the wetland margins.

Moderate sensitivity areas are located at a farther distance to fresh water in sections of the interior that have not been extensively disturbed or developed. These include several large woodland areas to the southwest and west of Goose Pond, in the triangular parcel of conservation land bounded by Queen Anne, Old Comers, and Training Field roads and the area southwest of Schoolhouse Pond. Areas of moderate sensitivity are located close to wetland resources but in sections of town that have been more extensively developed in the historic and modern periods, including the main village area in North Chatham; much of Chatham's Main Street neighborhood; and the relatively high density residential subdivision area bounded by Muddy Creek, Old Queen Anne Road, and Training Field Road.

Low sensitivity areas are confined primarily to areas of open water or permanent wetlands, and to large and/or contiguous areas where ground disturbance has been extensive. A number of these low sensitivity areas are located in Chatham's interior and include the municipal airport property, gravel pits and dumps in the northwestern section of town, the town's sewage disposal facility, and the developed area around Commeree Park North Road.

#### South Chatham/Stage Harbor/Chatham Harbor Zone

The South Chatham Zone contains many of the same favorable environmental variables as the Pleasant Bay Zone and consequently contains almost the same number of previously identified pre-contact period sites. Collectors Frank Kremp and later Ray Seamans Jr. were responsible for the identification of many of the sites in this zone, including the first nine sites recorded in Barnstable County (19-BN-1 through -9) by Kremp. Avocational archaeologist Howard Torrey also conducted limited excavations of Late Woodland Period deposits on [REDACTED] (Moffett 1957).

[REDACTED] While the majority of these sites were recorded without a listing of recovered artifacts, they are mostly associated with shell midden deposits that are usually considered indicative of the Woodland Period (3000-450 B.P.). Late Woodland Period projectiles and pottery collected from several of these sites indicate that they probably date to this period.

[REDACTED]

by collectors as well as archaeologists from the R.S. Peabody Museum in Andover, Massachusetts.

The Doane Farm has also been inventoried as a historic structure (CHA.555).

The remains were removed from the display after 1979, and in 1998 were transferred to the MHC for analysis and final disposition with the Massachusetts Commission of Indian Affairs

Details about this site are limited to a report that construction workers identified a burial under a charcoal and shell feature while digging a foundation, and that the remains were later reburied. A 1989 site visit by MHC and Cape Cod Museum of Natural History archaeologists did not identify any physical evidence of the site nor any additional information about the possible reburial location (MHC site form).

Nine recorded sites in the South Chatham Zone (19-BN-261 through -269) were identified in the 1970s by avocational archaeologist Arthur Vantangoli based on his close reading of Samuel Champlain's recorded 1606 voyage around Chatham's shores.

were not identified through any physical remains or artifacts but by a reconstructed map that Champlain and his crew reportedly made of Native American villages. As such, the site locations are very general and are based on Mr. Vantangoli's comparison of historic and modern landscape features and shoreline configurations. These sites would presumably date to the Late Woodland and/or contact period and would have been occupied in early seventeenth century.

Several other pre-contact period sites were documented by the same avocational collectors who frequented the Pleasant Bay area. Frank Kremp identified although at the time the sites were recorded he could no longer recall the specific artifacts associated with them.

is also listed in the MHC files as an area where landowners have

identified cultural materials. While Seamans' collection could not be tied to this particular site, at least one Middle Archaic Period (7500-5000 B. P.) Neville-Variant projectile is associated with this area. Seamans Jr. also identified [REDACTED] as another frequent collection area, indicating the overall high sensitivity of the wetland networks along Chatham's south shore.

To date, no pre-contact sites in the South Chatham Zone have been identified through professional or systematic archaeological survey. The large number of identified sites in this zone and the lack of detailed locational or temporal information for virtually every one of these sites represent a large research gap within Chatham's archaeological database. This is especially true given the number of reported human burial features identified in the southern portion of town in areas where new construction has occurred in the past.

The distribution of known sites in the South Chatham Zone is relatively widespread across the area with representative sites or artifact find spots around almost all of the coastal wetlands. Exceptions include the Mitchell River/Mill Pond area near the eastern shore and the Red River area at the town's southwestern boundary. These two areas could be expected to contain the same types and densities of pre-contact sites as those identified at other areas in the South Chatham Zone.

While sections of the southern shore have been densely settled within organized residential areas, there are still relatively large areas of undeveloped land on Stage Neck, Quitneset, Oyster Pond, and Tom's Neck areas as well as between the shoreline and Main Street. Morris and Stage islands are also considered to have an overall high sensitivity because of the relatively dispersed modern residential development in this area and the previous identification of archaeological sites across virtually all of the island's upland knolls and terraces.

[REDACTED]

[REDACTED] as well as at the wetland margins where construction is less likely to occur.

Expected site types could range from large, semipermanent habitation and burial areas to small, temporary resource collections or processing areas. Shell midden deposits would be expected anywhere in proximity to the shoreline and along all of the coastal ponds and streams.

Moderate sensitivity areas are located at a greater distance to salt or freshwater wetlands and in areas near coastal resources that have been more intensively developed.

Low sensitivity areas are limited to marshes and other inundated wetland areas, small areas of concentrated modern development and in newly formed shoreline areas that consist only of redeposited sands.

#### Nauset and Monomoy Zone

To date, no pre-contact period archaeological sites have been recorded in the MHC site files for the Nauset and Monomoy Zone. This zone represents a unique setting for the town, one that is characterized

by a dynamic environment formed in large part during the modern period and undergoing near-constant change. The landforms that today represent Nauset Beach and Monomoy Island would not have been present, in their current configuration, during most if not all of the pre-contact period (see Chapter 3). According to Dunford (1987), the Nauset barrier began to form sometime after 6000 B.P. Even after the barriers were in place, they continued to be affected by wave and wind erosion and deposition that resulted in the movement both east-west and north-south of both landforms. Today, the movement of Nauset Beach and Monomoy Island is visible- in a matter of days or weeks breaches occur, shoreline is lost, and passages to both the mainland and the Atlantic Ocean are opened and closed. These areas are formed almost exclusively on dune sand rather than glacial soils that have developed over the past 12,000-10,000 years.

The combined environmental data and documented land use for the Nauset and Monomoy zone indicates that it is unlikely that pre-contact archaeological sites are present in either area. The Nauset barrier beach is a relatively recent formation and any evidence of land use over the past 500-600 years has likely been eroded and/or redeposited elsewhere. As a result this entire area is assessed as having a low sensitivity for pre-contact period archaeological resources.

Monomoy Island is also subject to extreme processes of erosion and deposition, especially across the northern portion of the island. The southern portion of the island, however, contains more stable resource areas, including Big and Little Station ponds and the embayment known as Powder Hole. While these features are unlikely to have been present during the entire pre-contact period, they may have existed, in some form, during the later millennia of the pre-contact period and could have been utilized as near-shore resource areas by Native Americans. While the overall pre-contact archaeological sensitivity of Monomoy Island is considered to be low, small areas of moderate sensitivity are located on higher ground in proximity to the wetlands near Monomoy Point.

#### Summary of Pre-contact Sensitivity Model

In general, Chatham contains extremely favorable environmental variables for pre-contact site location. The diversity and abundance of wetlands in each of the mainland geopolitical zones combined with overall sandy, well-drained soils indicates that significant sites could be located in almost any microenvironmental setting. Every recorded pre-contact site is located in proximity to a fresh and/or saltwater wetland. While the majority of the recorded sites are located at or near the protected northern Pleasant Bay and southern shorelines, pre-contact sites have also been identified at near-interior streams, streams, swamps, kettle ponds, and other wetland margins indicating that the full range of wetland resources in Chatham were utilized throughout the pre-contact period. Expected sites could range from small, temporary campsites and resource collection areas to large, semipermanent habitation and ceremonial areas. Given the relatively easy access from coastal locations to the near-interior, Native Americans probably utilized the entire spectrum of available resources and moved seasonally throughout the entire town.

The temporal range of sites within Chatham is expected to span nearly all of the pre-Contact period, roughly 10,000 B.P. through the early seventeenth century. To date, PaleoIndian or Early Archaic sites dating to the earliest periods of human habitation in New England (12,000-7500 B.P.) have not been identified in Chatham. Long-term changes in environmental conditions, erosion and deposition, and

poor preservation all contribute to the lack of early sites along the Cape's outer shoreline. Limited information available from other sections of the Cape indicates that if present, sites dating to these periods would most likely be located along rivers and streams that flow from the interior to the coast. In Chatham, the Red River and Muddy Creek may once have supported the types of environments favored by Early Archaic inhabitants.

Sites dating to the Middle, Late, and Transitional Archaic Periods (7500-2500 B.P.) have all been identified in Chatham through the presence of diagnostic artifacts and features. The available archaeological information suggests that sites may have been reutilized over multiple periods, possibly to take advantage of resources such as fresh water or shellfish beds.

To date, sites dating to the Woodland and/or contact periods (3000-450 B.P.) are the most common in Chatham. Nearly one-third of the previously identified sites in Chatham are recorded as either Woodland or contact period sites or contain Woodland/contact period deposits in addition to materials dating to earlier periods. While the majority of these sites have been identified on the basis of diagnostic artifacts including shell midden deposits or through ethnohistoric research, the avocational and professional excavations conducted at the Mattaquason Purchase Site provide important details about land use patterns during this period in Chatham.

The MHC's archaeological files for Chatham also indicate that at least six sites contain known or reported human remains indicating their use as ceremonial burial sites. In each case, the human remains that were reported have been collected by MHC personnel and repatriated to Native American groups (in the case of accidental discovery during recent construction and under the authority of the Massachusetts Unmarked Burial Law), or in the case of burials found in the past and reported in local papers the location of any remains is unknown. Regardless of the method of identification, the presence of numerous reported Native American burial sites in Chatham's northern, southern, and eastern sections indicates the overall likelihood that additional burials could be present in archaeologically sensitive areas. In general, areas with a high to moderate sensitivity for pre-contact period archaeological sites would also have the potential to contain unmarked human burials.

The information about pre-contact sites gathered during the reconnaissance survey provides additional documentation of the use of Chatham from the Archaic through Late Woodland periods. The survey results also support the predictive model that Native inhabitants extensively utilized the northern and southern shorelines as well as estuarine and freshwater wetlands. The number and location of archaeological sites suggests that areas that have not been intensively developed in the modern period may contain undisturbed or minimally disturbed sites that were created thousands of years ago.

#### **Predictive Model: Post-Contact Archaeological Sites**

The sensitivity assessment for post-contact period archaeological sites in Chatham relies primarily on documentary and cartographic materials, with a secondary emphasis on environmental attributes and features. Local historical references, historic maps, and current town street maps were the most useful tools for guiding the field survey and generating statements about the location and types of historical period sites within various sections of Chatham. Informant interviews provided an extremely important source of information and in many cases bridged the gap in the written record or clarified conflicting historical accounts.

Predictive criteria developed in regional reconnaissance surveys, such as those on Cape Cod (Holmes et al. 1997) and in other southeastern Massachusetts towns (Binzen et al. 1998; Donta et al. 1996; Herbster and Cherau 2000; Mulholland et al. 1998) was used to suggest likely locations for post-contact archaeological resources not specifically identified in historical texts or on available historical period maps.

This general predictive scheme assures that some environmental attributes and aspects of the cultural landscape can be used to locate functional categories of sites, including those relating to the specific research contexts developed for the survey. In particular, these contexts related to the post-contact period Native American communities, agricultural activities, maritime and land-based industries, religious and civic organizations, military activities, tourism/resort development, and transportation and communication (see Chapter 5 for a more detailed discussion of these topics).

These research themes, together with settlement and residential resource groupings, have been developed to more fully understand post-contact period development at the town-wide and regional levels. Thematic research, coupled with information about temporal periods (e.g., contact, Colonial, Industrial, Modern) provides a comprehensive way to predict and interpret post-contact archaeological resources.

The history of land use and settlement in Chatham is represented by an extremely rich and diverse resource database. Although Native American land use patterns in the post-contact period are not well known, the Euro-American history of the Chatham is well-documented, particularly with regard to the various geographic areas that make up the town.

Chatham's historic architectural resources are extremely well-documented. More than 1,000 buildings and structures, 15 burial grounds, 19 objects, and 25 areas have been inventoried and are listed in the MHC files (MACRIS database). Five areas and more than 250 individual properties have been determined eligible for or listed in the National Register of Historic Places. In sharp contrast, Chatham's recorded post-contact archaeological database is represented by five sites, two of which are shipwrecks (see Appendix F).

The survey had two goals with respect to post-contact period archaeological resources. The first was to document and record new archaeological sites in town through the combined efforts of archival research and field survey. The second goal was to develop a predictive model around the types of post-contact resources that could be expected to be present. Rather than attempt to list every potential site, object, burial ground, and structure that may have been present over the last four centuries, the model relied on broader geographic and historic contexts to build a framework for future post-contact site identification. In this way, specific archaeological resources can be anticipated as site-specific data becomes available.

The predictive statements for post-contact period sites are listed by zone below.

#### **Pleasant Bay/Chathamport/North Chatham Zone**

The Native American inhabitants of Chatham continued to live in the area well after the first permanent Euro-American settlers established the Plymouth and Massachusetts Bay colonies. Based on the presence of several Late Woodland Period sites in the Pleasant Bay zone, it is likely that the same rich estuarine

resources that had sustained the pre-contact populations continued to be utilized by Native people in the sixteenth and seventeenth centuries (Dunford 2001). The Mattaquason Purchase Site is one of the few professionally excavated archaeological deposits in Chatham and contains deposits that span the Late Woodland and contact periods, providing clear evidence that Native Americans were occupying their traditional homelands after the period of European contact.

The death in 1622 of the Indian guide known as Tisquantum or Squanto has been reported to have occurred on a Pilgrim vessel anchored in Pleasant Bay, [REDACTED]

[REDACTED] (Nickerson 1981). While it is unlikely that any archaeological investigation could connect any individual burial site to a particular person, the continued reference to Squanto's Grave as a specific location the Pleasant Bay area suggests that it has some origin in fact.

Based on numerous town histories, the Pleasant Bay area was home to a large Native American population at the time of William Nickerson's arrival. Based on the identification of Late Woodland Period sites [REDACTED] within this section of town, it is likely that additional archaeological deposits associated with the early post-contact period could be expected in this zone. Some of Chatham's oldest houses are located in this area, many of which were erected without cellars or underground utilities. As modern period improvements have been made or as old homes have been replaced by new ones, many archaeological sites have been identified during construction. Even small areas of relatively intact and/or undisturbed ground have the potential to contain archaeological deposits associated with contact Period and Post-Contact Period Native American land use. This would include the North Chatham area, especially those sections of North Chatham where residential development has remained relatively spread out.

The Ryders Cove/Crow's Pond section of Chatham is documented as the first permanent Euro-American settlement area within the town. William Nickerson arrived from Yarmouth in 1656 and established his homestead at the head of Ryder Cove (see Figure 5-3). The accounts of Nickerson's purchase from the sachem Mattaquason and his son, [REDACTED]

[REDACTED] The Nickerson family quickly expanded and a number of prominent eighteenth-century colonial families (e.g. Ryder, Hawes, Eldredge, Covell) also settled here.

The Nickerson's Neck area has been utilized for a wide variety of commercial and military purposes over the last 150 years. The tip of the neck was known as "Jesse's Folly" before the Naval Air Station was built there, named for Jesse Nickerson who operated a salt-works and shipbuilding operation in the nineteenth century (Figure 7-2). W. Sears Nickerson recalled playing in the ruins of the saltworks when he was a child (in the late 1800s). Many other saltworks were located on the Neck in the early nineteenth century, as indicated in the 1831 (Hales) map, and evidence of these works including wooden supports,



Figure 7-2. Circa 1935 photograph entitled "Jesse Nickerson's Salt Works, Chatham." Arthur C. Haskell, photographer (Library of Congress, American Memory Digital Collection).

vats, and windmill bases could be expected along and near the shoreline in these mapped locations. Jesse Nickerson's operation failed when imported salt began to replace locally produced sea salt, and the decline in the fishing industry left maritime trades with little new work. Nickerson's works were reportedly the last in operation in Chatham and closed in 1886 (Town of Chatham 1921:54). The name "folly" carried over the Navy's occupation; W. Sears Nickerson reported that the plan to launch sea planes from this site was flawed by the strong currents and tides in this part of town (Nickerson 1981).

The archaeological integrity of the Chatham Country Club/Eastward Ho golf course area on Nickerson Neck is unknown. The construction and demolition of the massive Hotel Chatham, followed by the construction of the golf course links has undoubtedly altered significant portions of the property. However, modifications along the shoreline itself and away from the fairways and greens may be minimal to moderate and it is possible that evidence of the earlier use of this area could survive. In addition to

The North Chatham and Old Harbor sections of Chatham also contained numerous saltworks in the early nineteenth century, and shoreline areas that have not been significantly eroded could be expected to contain remnants of vats, windmills, and/or piping. Old Harbor functioned as the main port of entry to Chatham for part of the nineteenth century and contains many structures along the shoreline that date to this period. Numerous residential structures dating the eighteenth and nineteenth centuries have been inventoried in both areas, including the homes of some of the town's well known mariners and ship captains. As the early port village, the North Chatham area contained some of the earlier commercial institutions such

Erosion along the eastern shore in North Chatham has been an ongoing problem that is closely associated with the movement of Nauset Beach. Many of the original structures and especially wharf and shoreline improvements that were once located in this area are unlikely to have survived storm surges and falling sand bluffs. Areas of archaeological sensitivity would be closely tied to environmental variables and would be lowest in areas where erosion/shore loss is greatest. Areas that have been modified for modern wharf use, such as the Municipal Fish Pier at the end of Barcliff Avenue, also are expected to possess a low archaeological sensitivity.

### Central Chatham Zone

While details about this structure and a possible associated burial ground are limited,

While structural remains of the building may not be visible on the ground surface, expected archaeological deposits could include small depressions or level terraces on the old footprint. Evidence of the burial ground could include small unmarked fieldstones set into rows and/or a small stone walled enclosure. The presence of European trade goods and traditional Native American stone tools mixed into artifact assemblages could also be



a good indicator for the site. If any intact deposits from this structure or the use of the site as a school and meeting-house remain, they would be considered to be especially significant for the documentation of Chatham's Native American population.

This zone contains the original "town center" which was organized around Chatham's first (circa 1700) and second meeting-houses and north and south burying grounds on Old Queen Anne Road (see Figure 6-3). While this locale was largely abandoned as a civic gathering spot by the late eighteenth century, for more than one hundred years it served as the core of Chatham's colonial community. In addition to the meeting-houses and cemeteries,

The town's militia training field is located to the west at the area bounded by Old Comers, Old Queen Anne, and Training Field roads. This parcel also contains the circa 1765 smallpox cemetery set off when an epidemic claimed the lives of 37 residents, including the town's minister Samuel Lord. While this site has been identified as a post-contact period cemetery (CHA.810) it is unknown if the boundaries of the cemetery have been verified or if any structures or other activities that occurred at that location could contain associated archaeological deposits.

The archaeological sensitivity of the Meeting House area is considered to be high given the relative lack of post-contact period development. The two cemetery plots have been maintained but it is unknown how accurately the current standing head and footstones mark grave locations. Archaeological deposits associated with the two eighteenth-century meetinghouses (including the later structure, which was moved rather than dismantled or destroyed) could be expected immediately adjacent to the burial area in either cemetery, as well as along the outer margins of the plots and adjacent to the current roadway. Indications of other structures, such as the homesteads of the Revs. Adams and Lords, the town pound, or the reported windmill could also remain in the areas located to the north, south, and west of the cemeteries where there has been limited development.

The Central Zone also contains the Mill Pond located along the Harwich town boundary. This area has been identified as the site of the Bearse Windmill, one element of what may have been a multi-purpose commercial concern in this area. The present-day Mill Pond represents a manipulated form, as this area originally held three smaller ponds, likely kettle holes that at some point after 1858 were merged into a large water source. Although this area has undergone dramatic alterations as a sand and gravel yard, there is still the potential for archaeological resources associated with mill operations and/or associated residential settlement in the areas surrounding the pond's shoreline. Remnant features such as spillways, dams, or wheel pits could be present, as could elements of the windmill base and or grinding stone that may have stood on the southwestern side of the pond.

Remnants of other community structures such as schools, taverns, and churches that are documented in written town histories and on historical maps could also be expected along the main roadway corridors, including Main Street, George Ryder Road, and Old Queen Anne Road. Although many of the documented eighteenth- and nineteenth-century community structures (especially churches and schools) have been moved or dismantled, their original locations, if still relatively undeveloped, could be expected to contain archaeological deposits such as cellar holes, foundations, and artifacts associated with group activities.

The eastern boundary of the Central Zone is located along Main Street and includes the western half of Chatham Village (Figure 7-4). This area represents the twentieth century center of town and contains the majority of the town's civic and educational structures. This area also includes many historic structures that date to the nineteenth century. The "Old Village" Section of Chatham includes a number of inventoried residential structures that are also associated with the commercial operation of the town and highlight the types of archaeological resources that could be expected even in this densely developed area.

#### South Chatham/Stage Harbor/Chatham Harbor Zone

The southern portions of Chatham were not immediately settled by Euro American colonists and town histories suggest that Native Americans continued to live in this part of town well into the eighteenth century. This appears to be particularly true for the Stage Harbor area, where Native inhabitants would have had access to a wide range of salt and freshwater resources to support large-scale habitation. Champlain's seventeenth century description of an Indian village is supported by the numerous archaeological sites and burials that have been classified as "prehistoric" sites. Because most of the sites have been reported with little additional information other than approximate location, it is impossible to determine if these sites date to the period before or after colonists arrived in Chatham. As has been established on the Cape and Islands through ethnohistoric and archaeological research, Native people did not abandon their traditional lifeways once Europeans arrived, and continued to practice essentially the same domestic and ceremonial activities from the pre-Contact Period after colonial settlers were established nearby. As a result, this zone is assessed as having a high potential to contain sites, features, and artifacts associated with Native American habitation and ceremonial use in the seventeenth and early to mid-eighteenth centuries.

The Old Village National Register District is located within this zone and there is a high probability that archaeological resources associated with extant and/or former historic structures may be located within the district. A number of standing nineteenth century homes were moved from their original locations near the beachfront and the potential exists for archaeological deposits including structural remains to be present in the original house area. Examples identified in the National Register nomination include the 1824 Joseph and Abigail Nickerson House originally located on the east side of Main Street; the James and Phebe Gould House and Store originally located at the northeast corner of Main and Water streets; and the Marcellus Eldredge summer estate which was demolished in 1941 (National Register files).

The areas closest to the shoreline and surrounding the near-interior waterways have the highest potential to contain sites associated with post-contact period Native American habitation and ceremonial use. This is especially true for the Morris Island, Tom's Neck, and Stage Neck areas and the lands surrounding Stage Harbor, Oyster Pond, Sulphur Springs, and Taylors Pond. These areas were not immediately settled by Euro American colonists and were likely occupied by Native Americans in the late seventeenth and eighteenth centuries. Although historic and modern residential development has occurred in all of these areas, the density of housing varies and there are likely small sections of land that have remained undeveloped or partially undisturbed. Sensitivity would be highest in the areas previously identified as pre-contact period sites.

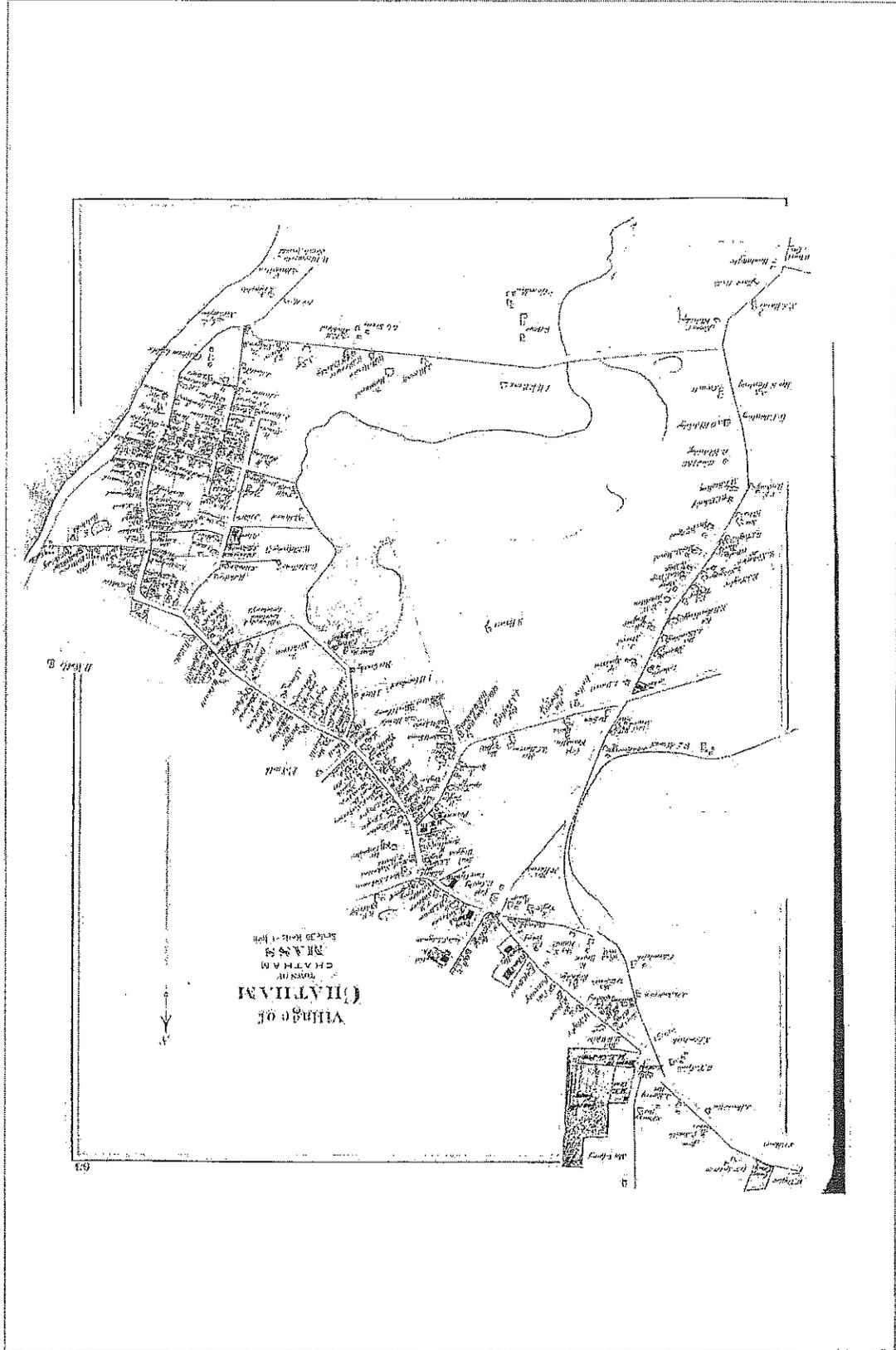


Figure 7-4. Detail map of Chatham Village in 1880 (source: Walker 1880).

The Stage Harbor area contained a wharf as early as 1711 (Baisly n.d.) and this area also served as a shore whaling station during the period (MHC 1984). Although the use of the Stage Harbor area for commercial operations has not been as well documented as other parts of town, it is likely that features such as piers, pilings, and landings could be expected around the shoreline, which has remained more protected than the outer coast in the historic and modern periods. Areas closest to the water that have remained largely undeveloped would have the highest potential to contain archaeological resources.

The Enoch Harding Salt Works is one of the best documented salt works in Chatham, and archaeological deposits associated with its operation may survive on Buck's Creek in West Chatham. The Harding salt works were documented by the Historic American Building Survey (HABS) sometime after 1930 and the record for the survey (HABS MA-172) includes measured drawings of vats, pipes and other equipment that was still extant at that time (<http://memory.loc.gov>). Other salt works locations in this zone were located on Tom's Neck, Forest Beach, and Pleasant Street Beach. Remnant piers that may be associated with the Kimball and Levi Eldridge Salt Works on Forest Beach are still visible in the marsh and suggest the possibility that archaeological deposits associated with this industry could survive, especially in inundated/wet areas where wood may be preserved.

Many sections of the South Chatham Zone have the potential to contain archaeological resources associated with the residential summer cottage communities that were established in the mid-to-late nineteenth century and early twentieth century. While several small hotels were built in this part of town, development followed a smaller scale here beginning along roadways south of Main Street (e.g. Barn Hill Road, Young's Road) and spreading to satellite roads as more and more residents arrived. Deposits associated with the summer cottages, many of which have been converted into year-round homes, could include nineteenth century domestic refuse and structural remains, as well as outbuildings and recreational structures such as pavilions and bathing houses.

Another potential archaeological resource is located at the Sailor's Cemetery located at the southwest corner of Chatham Light Park. As noted in the Old Village National Register District nomination, unmarked graves (and/or graves whose markers have been lost or removed) may be present within the boundaries of the cemetery or the area surrounding it. Other archaeological features dating to the circa 1800 cemetery may be present including former fence posts and memorial or marker bases.

#### **Nauset and Monomoy Zone**

The southern section of Nauset Beach located within Chatham is commonly known as "North Beach." Two distinct cottage communities developed on North Beach in the early part of the twentieth century. Captain Oscar Nickerson gained title to the whole of Nauset Beach in 1924 from a farmer who was unable to pay a bill. The farmer had reportedly gained his title from an orphan boy he had taken in. The farmer apparently also deeded the same property to garage owner George Barse, also in payment of a debt (Higgins 2004:67). In 1926 Nickerson's descendants passed title to a 4-mile section on the southern end of the beach just south of the Old Harbor Coast Guard Station to the Town of Chatham.

Other landowners on North Beach established small camps on their property, generally small wooden buildings that were occupied over the summer months or sporadically during other times of the year. By the early 1950s, North Beach contained numerous camps, and after a Massachusetts court cleared

title to the beach properties in the late 1950s, the original owners sold off parcels to many more individuals who initiated a mini "building boom" (Higgins 2004).

The North Beach Area (CHA.S) has been inventoried and 18 individual structures designated as camps, cottages, or shacks have been recorded. The construction dates for these structures ranges from 1896 (Seymour Nickerson Camp) to several built in 1992. The majority were constructed in the 1930s and 1940s. Several other buildings have been inventoried on North Beach, including the circa 1926 Nickerson Lumber Company Storage Shed and the circa 1920 Old Harbor Coast Guard Boat House.

The creation of the Cape Cod National Seashore in 1961 led to the end of unregulated construction. Each of the town's with seashore property retained the ownership of roads, parking areas, beaches and undeveloped lands and any private dwellings erected before September 1, 1959 were also retained in private ownership. Owners of structures built after 1959 were offered life tenancy by the National Park Service (Higgins 2004).

Monomoy's changing shoreline and its back-and-forth history as both a peninsula connected to the mainland and an independent island are well documented in geological texts and local histories. A tavern for sailors was present at Wreck Cove near the current Hospital Pond area as early as 1711 (Roscoe 1993; USFWS 2005). Smith (1992:208-209) indicates that the cove was "used as a harbor for vessels seeking to round the Cape and waiting for favorable winds" and that the dangerous winds and currents had given the place its name. William Eldredge built "a house and tavern" at the cove in 1711, selling it to Morris Farris. The property was acquired in 1725 by Joseph Stewart who ran the tavern for about 20 years at the place known then as "Stewart's Knoll" (Smith 1992:208-209).

Sometime in the early nineteenth century a small settlement known as "Whitewash Village" was established on the western shore of Monomoy above a cove known as Powder Hole. By 1852 the small village apparently had a schoolmaster and for three decades the village served as a small fishing port and layover for sailors. Shifting sands around the southern tip of Monomoy slowly closed off the harbor, eventually forcing the residents to abandon the village as a permanent settlement. The village continued to be occupied seasonally through the 1930s, primarily as a summer community.

By 1862 the Brant Club was established near the northern end of Monomoy Island, and likely consisted on one or more buildings to accommodate the periodic hunters and birders who visited. In 1872 Simeon Deyo reported that "government buildings and a government landing" had been washed away, a possible reference to the village that had been abandoned in the 1850s (cited in Roscoe 1993).

Lighthouses were erected on the southeastern shore of Monomoy in 1823 and 1854. The first lighthouse was commissioned by the federal government on a 4-acre parcel and the east iron, brick-lined tower was lit by oil for the first time in 1828. Although the lighthouse was decommissioned in 1923, the light tower and keeper's house were restored in 1988 and listed on the National Register and today serve as a visitor center (USFWS 2005) (see Figure 6-4). This area is likely to have a relatively high sensitivity for archaeological deposits to be present and may contain features and materials associated with the 1820s construction of the lighthouse and/or the operation of the light throughout the nineteenth century.

The first Humane Society lifesaving hut was established around 1802 somewhere near the northern end of the island, and at least two lifesaving stations were built on the more protected western shore in 1886 and 1902, in addition to one on the eastern shore built in 1872.

In 1970 the majority of Monomoy was designated as a National Wildlife Refuge and remaining summer cottages were allowed to be occupied until they fell into disrepair. The last camp that stood on the point was lost in the spring of 2000 (USFWS 2005).

The post-contact period archaeological sensitivity of the Nauset and Monomoy Zone is closely tied to the presence of standing structures on both landforms. Because so much of the shoreline has eroded and been redeposited, it is unlikely that elements of the Whitewash Village on Monomoy or early lifesaving stations and lighthouses on Nauset Beach survive as archaeological deposits. The areas immediately surrounding the pre-1950s North Beach shacks, the Coast Guard Boat House and the Nickerson Lumber Shed have the highest potential to contain archaeological deposits associated with the construction and seasonal/temporary use of these buildings. Deposits could include foundation piers, refuse, and recreational artifacts. The area of highest archaeological sensitivity on Monomoy Island is the immediate area surrounding the lighthouse tower, keeper's house and generator buildings.

#### Summary of Pre-Contact Sensitivity Model

Prior to the survey Chatham's historic period archaeological database was limited to five sites that represented only a narrow range of activities and geographic locations within the town. By contrast, more than 1000 structures and objects had been inventoried as aboveground historic properties. The survey resulted in the documentation of archaeological sites in each section of town, and representative of a larger range of residential, civic, and commercial activities in the post-contact period. These identified sites probably represent only a fraction of the deposits that are still present within the town.

The survey collected a large amount of documentary evidence indicating that Chatham's Native American population remained largely in place in the period immediately after colonial settlement began. Many of the sites that have been recorded as "prehistoric" could also date to the post-contact period. The documentation of the Indian Meeting House and Cemetery as an archaeological site can serve as a starting point to more fully articulate the interactions of Native and Euro American residents in the town's formative period.

Euro-American post-contact period archaeological deposits in Chatham had not been documented prior to the survey, despite the recordation of a large number of standing historic structures. This is due in part to the renovation and reuse of historic homes and properties. Research themes for post-contact period resources should be aimed at developing a comprehensive archaeological model for historic sites that focuses on variations within the town's numerous village communities, as well as on different historic site uses (e.g., residential, civic, commercial/industrial, maritime). Based on the rich and varied historic character of Chatham, expected archaeological sites in the town will span the entire post-contact period. Information about post-contact archaeological sites collected after the completion of the survey can supplement the large volume of written historic data as well as that documented by the CHC, CHS and other local history groups, and can be used to refine the research contexts and predictive models summarized above.

The town contains a broad spectrum of post-contact period resources spanning more than 400 years of Native and Euro-American settlement. Although the history of Chatham is well studied and understood, the addition of archaeological data provides an added (and extremely important) layer of interpretation to various research-specific contexts, and allows the town to be tied into larger regional models of historic archaeological site occurrence and survival.

The post-contact archaeological sites recorded as part of the survey are meant to provide a base upon which additional research can be built. An attempt was made to record one or more sites representing each of the major research contexts identified in Chapter 5 of the report, as well as to document as many resources as possible that were reported by local residents and informants. Even in cases where an MHC archaeological site form has not been filed, the information collected about a potential cultural resource has been recorded as part of the research context or in the predictive model sections of this report. The goal of the survey was not to record every possible historic site in town (a task well beyond the scope of this project), but to provide a database that can be used to help identify additional archaeological sites as new information becomes available.

## CHAPTER EIGHT

### CONCLUSIONS AND MANAGEMENT RECOMMENDATIONS

The archaeological reconnaissance survey of Chatham relied on archival research, fieldwork, and predictive modeling to identify important cultural resources that reflect the town's rich and diverse history. This report section provides a summary of the survey's research and field investigations, conclusions about Chatham's potential archaeological resource base, and recommendations for future management of both identified and unidentified archaeological sites.

#### Summary and Conclusions

The reconnaissance survey of Chatham attempted to bring together the broad spectrum of resources that the town contains to better understand the past history of this community. By drawing on the written and cartographic historical record, the findings of avocational and professional archaeologists, and the knowledge of local historians and residents, the survey was able to document many important cultural resources within Chatham, as well as predict what types of archaeological deposits may be present and where they can be expected.

The results of the survey are represented in the predictive models and archaeological sensitivity maps prepared for known and expected pre-contact and post-contact period resources in Chatham. Like the rest of southeastern Massachusetts and Cape Cod, the archaeological record shows that Chatham's natural environment has drawn and supported human populations for thousands of years. The rich cultural heritage of Chatham is documented throughout the town by Native and Euro-American habitation and activity areas, a pattern that is not as well documented in some other coastal communities. Many of the same features that attract people to Chatham today drew both Native and Euro-American residents in the past.

The pace and scope of modern development have increased in Chatham, but many sections of town retain the historic character that defined the eighteenth- and nineteenth-century maritime community and the later summer tourism industry. Sections of Chatham's interior are still relatively undeveloped and several large wooded parcels are extant. The field survey determined that the town does not have large areas that possess a low archaeological sensitivity because of extensive disturbance. The lowest sensitivity areas consist mainly of gravel pits, dumps, and areas that have experienced substantial belowground soil disturbance and would not be expected to retain archaeological deposits, such as the airport area and densely populated modern commercial zones. The survey did determine that even within these areas of generally low and moderate sensitivity, limited intact pre- and post-contact archaeological deposits could still remain.

The predictive models indicate that many portions of Chatham possess a moderate to high sensitivity for both Native American and Euro-American archaeological resources to be present. Pre-contact Native American sensitivity is highest along wetland margins (both interior and coastal), which extend across almost every portion of the town. Post-contact Native American archaeological sensitivity is highest near the documented site of the Indian Meeting House, near the coastline and in near-interior sections of town, especially in proximity to Pleasant Bay and Stage Harbor. Euro-American sensitivity is highest in and around the town's village centers, along historical roads and paths, in proximity to documented historical structures and/or businesses, and along the shoreline where maritime industries, salt making, and milling likely occurred.

The remaining portions of Chatham maintain a moderate degree of sensitivity. Moderate sensitivity areas possess some or all of the variables for the presence of archaeological sites, but do not contain known or documented archaeological resources (see Chapter 2 and Table 2-1). Determinations of the microenvironmental conditions and actual sensitivity of these portions of town must be completed on a case-by-case basis, with careful consideration given to the physical integrity of specific areas.

Much of Chatham's history is documented in written and cartographic sources. In addition to the comprehensive general town history written by William Smith (1992), there are numerous published and unpublished volumes that detail the history of particular sections of Chatham or specific types of resources (Derick 1998; Henderson 1989; Higgins 2004; Nickerson 1981). The reconnaissance survey attempted to utilize as many of these resources as possible to draw general conclusions about archaeological site location within the town, and to suggest areas where future research could address gaps in the record. The survey also attempted to identify individuals within the town who have knowledge about historical and archaeological resources, and who can help identify and rank areas of historical significance within Chatham.

Chatham's high potential to contain undocumented post-contact period archaeological resources is highlighted by the number of post-contact period structures that survive in the town. To date, more than 1000 individual resources (buildings, structures and objects) have been inventoried within Chatham along with several areas and individual properties that have been listed in the National Register of Historic Places. While each one of these resources may not contain an associated belowground archaeological site, it is considered likely that a great many of them possess at least some archaeological sensitivity. When these documented resource areas are combined with the additional high and moderate sensitivity areas identified through the reconnaissance survey, it is clear that Chatham has the potential to contain a great number of archaeological sites ranging from the contact period through the mid-twentieth century.

Ultimately, Chatham's residents present the greatest potential to identify archaeological resources in their community. Several of the sites recorded as part of the survey were located and identified by community members who shared information about town history and archaeological resources.

### Management Recommendations

Collecting information about the cultural heritage of the town must be an ongoing process. The survey was most useful for compiling a database that can grow with the needs of the town. Included in this

report are research contexts, local contact names, and predictive statements that can guide planning projects. **In order for the reconnaissance survey to be effective for the future management of archaeological resources, new and updated information must be added.** This information includes the recordation of new archaeological sites identified through excavation or accidental discovery; the collection of additional information from knowledgeable local residents and historians, avocational archaeologists, and Native groups; and the documentation of activities that generally affect archaeological sensitivity (e.g., development, erosion). By viewing the reconnaissance report as a resource to be utilized and improved upon, the town can take a more active role in its own history. The CHC has taken a lead role in funding the survey and providing access to information and individuals. The CHC should continue to serve as a clearinghouse for information about archaeological resources

As part of the reconnaissance survey, a review of existing town bylaws or ordinances regarding the protection of archaeological resources in Chatham and elsewhere in the region was undertaken (see Appendix G). Chatham currently has several local cultural resource review procedures, most notably a demolition delay bylaw enforced by the CHC. This regulatory device provides a public review process to identify and protect standing structures located in designated historic districts, but at present appears to be confined to aboveground historic resources. Federal, state and local jurisdiction also affords review authority to impacts planned in most of Chatham's wetland areas and watersheds.

The most effective regional models come from the Martha's Vineyard and Cape Cod Commissions, both of which review projects that meet certain criteria or thresholds in consultation with the MHC. In particular, the Cape Cod Commission (CCC) has a set of "Minimum Performance Standards" that apply specifically to historic resources within Developments of Regional Impact (DRI) (attached). These standards include a provision (6.1.3) that any development proposed for an area with known archaeological resources, or considered to have a high archaeological sensitivity requires additional review and/or archaeological investigations during the site planning phase. Importantly, this provision gives jurisdiction over this provision to the MHC and the Local Historical Commission. The CCC and the MHC provide technical assistance with this process and should be considered important resources for the CHC to consult in situations of cultural resource review.

Prior to the current town-wide reconnaissance survey, 12 professional archaeological (CRM) investigations had been completed in Chatham, and none of these was conducted within the past five years. These surveys and evaluations were undertaken through federal and/or state review and coordination with local agencies. Half of the projects were associated with road or utility construction projects and were completed within a predefined narrow land corridor.

The CHC and the CHS have members in common and appear to share the same goal of identifying and preserving Chatham's heritage. The CHS serves as a repository for a large volume of historical information and includes a strong membership base. This private organization does not, however, have the authority of the town-sponsored historical commission. The two groups could combine their resources to more effectively identify potential projects that may impact cultural resources and initiate action.

A program of archaeological site protection could involve the establishment of town-sanctioned regulations outlining the CHC and other town committees (e.g. Planning Board) responsibility and jurisdiction to review certain construction projects. The legislation would identify the key town boards

and departments that would notify the Planning Board and CHC in advance of construction. The Planning Board and CHC could review any town-sponsored, private, or commercial construction of a predetermined size and nature. The Planning Board and CHC could determine if an area of proposed construction lies within an archaeologically sensitive area as depicted on the archaeological sensitivity maps provided in this report and/or on town assessor's maps. If the project is located in a sensitive area, the Planning Board and CHC would consult with the MHC to determine whether the area requires a professional archaeological survey. If so, the scope of work for location, identification, and evaluation of significant archaeological resources would be developed by the Planning Board and CHC in consultation with the MHC. Information sharing between the CHS and CHC could facilitate the identification and review of these projects.

It is important to note that should this type of review program be adopted by the town, careful consideration should be given to the threshold used to trigger local review for archaeological resources (e.g., single-family homes, subdivisions of a specific size), and the source of funding for the archaeological investigations. In most cases, the landowner/agent would be responsible for all professional archaeological expenses from the initial identification survey through site evaluation, and mitigation measures, if warranted, for a significant site that cannot be avoided and preserved in place during project construction.

Reasonable thresholds for the local review of archaeological resources could be established in consultation with the CHC, CCC, MHC and interested Native American groups (in the case of Native American archaeological sites). These include the Massachusetts Commission on Indian Affairs, the Mashpee Wampanoag Tribe, the Wampanoag Tribe of Gay Head (Aquinnah), and any local tribal entities. The town could request input from these groups on a case-by-case basis regarding a particular area's cultural significance to the Native American community. Laws within Massachusetts protect the accidental discovery of human remains and provide for consultation with descendant communities, if identifiable (see Appendix H).

The archaeological site protection program would need to be formalized in a town bylaw, the purpose of which would be to add legitimacy and strength for the protection of the town's archaeological resources. The bylaw would be intended to address the public interest in protecting resources that represent the pre- and post-contact period heritage of Chatham. This bylaw could follow the format of existing subdivision, wetlands, or demolition delay bylaws, in such a way as to integrate archaeological resources into current project review requirements. Thresholds for project review of archaeological resources under the bylaw would be concisely and clearly stated. As part of the bylaw, the town could include a stipulation that minimizes unnecessary earthmoving disturbances during site preparation activities, particularly for single-family homes. In this case, the machine stripping of topsoil/loam would be limited to the direct building, driveway, and utility areas rather than from the entire lot or building envelope.

A good example of a comprehensive municipal land use bylaw has been recently put forth by the town of Aquinnah on Martha's Vineyard. This bylaw includes a detailed set of special protections for the town's unique archaeological and cultural resources. Prior to any development in the Aquinnah District of Critical Planning Concern (which encompasses the entire town), the town's Planning Board Plan Review Committee is responsible for determining what actions will be taken to locate, identify, and

evaluate any significant historic and archaeological resources that may be present within a proposed development. This committee consults with the MHC, the Tribal Historic Preservation Officer of the Wampanoag Tribe of Gay Head (Aquinnah), and any local agencies as it deems necessary for guidance. If determined necessary by these groups, the landowner/agent is responsible for implementing an archaeological survey to be conducted by a qualified professional at his/her own expense. If significant cultural resources are found and they may be affected or disturbed by the proposed development, then at the landowner/agent expense, the resources are further evaluated, and perhaps mitigated to avoid adverse effects from the development. In all cases, the Planning Board Plan Review Committee decides what action will be taken, and issues an order of conditions under which the proposed development may proceed through the local permitting process.

Other types of land use protection programs that could include special considerations for Chatham's historic and archaeological resources include the following:

- Establishment of **districts of critical planning concern (DCPC)** in sections of the town that contain important archaeological sites and sensitive natural and cultural areas, such as the Pleasant Bay estuary, the areas around interior kettle hole ponds, or village centers. The town could require a comprehensive permitting procedure for the location, identification, evaluation, and preservation/mitigation of important cultural resources in these DCPCs.
- **Acquisition of open spaces** that contain important archaeological sites and sensitive areas, particularly in estuarine regions and in the wetland margins around Chatham's estuaries. This type of land acquisition could target even limited undeveloped parcels located between modern homes, marsh areas, and small remnant fields. The types of activities that are allowed or are likely to occur on these lands, such as hiking, hunting, nature observing, and swimming, are usually non-destructive to archaeological resources. Archaeological resources situated on conservation lands are protected from impacts resulting from such earthmoving activities as residential and commercial developments. Local and regional land planning organizations (e.g., The Trustees of Reservations, Friends of Pleasant Bay) could consider the locations of identified archaeological sites and areas having moderate and high potential to contain additional archaeological resources in their short and long-term land acquisition and management plans in Chatham.
- The CHC along with town agencies (e.g., Planning Board, Conservation Commission) could encourage private landowners and developers to set aside (donate) portions of their properties containing archaeological sites and sensitive areas to local or regional land trusts. Such donations are generally in the form of **preservation restrictions** on private property to preserve the architectural or archaeological integrity of a particular property and prevent alterations that would compromise the property's historic character (see Appendix H: MHC Know How #1 Preservation Restrictions; sample conservation and preservation restriction for the protection of natural and archaeological resources). The CCC can also provide technical assistance and information on this type of land protection.

A preservation restriction is a legal agreement between a property owner and another party, usually a nonprofit organization or government body. Such an agreement "runs with the land," governing the use

of the property by the current and future owners. Properties that are eligible for preservation restrictions include structures or sites historically significant for their architecture, archaeological deposits, or associations. Any property listed in the state register of historic places qualifies, but such a listing is not required. Preservation restrictions can be conveyed in the form of a restriction, easement, covenant or condition, in any deed, will, or other instruction. It can be conveyed for value or as a donation. The grant of a preservation restriction may qualify as a charitable deduction for federal income tax purposes, under the federal Tax Treatment Extension Act of 1980. A preservation restriction under Chapter 184 must be approved by the MHC or a local government agency.

- Finally, **public education and partnership/constituency building** should be encouraged between the CHC, CHS, various town boards and agencies, local historical and preservation groups, local Native American groups and individuals, federal agencies (including the NPS and USFWS), and other interested parties. Public education and partnering often constitute the least expensive and most effective means of identifying and protecting important cultural resources. These organizations and individuals should focus their collective efforts on constituency building among the town's residents, school system, and elected officials of local governing bodies. Public information forums, newsletters, and archaeology days hosted by the CHC, CHS or other historical groups could be used to increase awareness and understanding of the importance of archaeological resources to the town as a whole, and would be an important way to connect with avocational collectors and others who may have knowledge of archaeological resources. **The process by which significant archaeological resources are identified, primarily through CRM surveys and investigations conducted by qualified professionals, should be included in all aspects of public outreach sponsored by the town.**

These types of public outreach activities could be used to add to the town's inventory of known and potential archaeological resources. As the general level of public awareness rises regarding the importance of documenting, protecting, and preserving significant cultural resources on the island, the impacts to these resources through development may be lessened. Awareness may lead to the avoidance and protection of potential archaeological resources at the earliest stages of project planning, which lessens the burden on landowners and review agencies and helps to maintain the environmental and historic characteristics of Chatham, and the region as a whole.

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2023 Appendix C- List of Informants

Don Aikman, Chatham Historical Commission

Janet Daly, President, Chatham Historical Society

Frederica Dimmick, archaeologist, National Park Service, Cape Cod National Seashore

Fred Dunford, staff archaeologist, Cape Cod Museum of Natural History, Brewster

Mary Ann Gray, Chatham Historical Society

Stephanie Hynds, Chatham resident and anthropology major

Ron Nickerson, Vice President, Nickerson Family Association

Norm Pacun, Chatham Preservation 2007 Committee

Julia Purdy, Architectural Historian, Laughing Otter Architectural Survey Consulting, Vermont

Chris Seufert, Chatham resident, director, *Natives of the Narrowland*, Mooncusser Films LLC

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Appendix G

SAMPLE BY-LAWS AND ARCHAEOLOGICAL SITE PROTECTION  
PLANS IN OTHER MASSACHUSETTS TOWNS

## EXAMPLES OF SAMPLE BYLAWS AND PROTECTION OF ARCHAEOLOGICAL RESOURCES IN OTHER MASSACHUSETTS TOWNS

There are several towns that review potential impacts to historical and archaeological resources in Massachusetts. These local reviews are in addition to federal, state, and regional processes that also protect cultural resources. For example, any project that requires Section 106 review under the National Historic Preservation Act of 1966, as amended, or the Massachusetts Environmental Policy Act, or the Massachusetts unmarked burial law, could involve an archaeological survey or other phase of investigation. In the majority of these cases, the local historical commission would be contacted as part of the state or federal review of the project, and copies of any technical reports produced are forwarded to the local commission upon completion of the work.

The following appendix presents a review of several Massachusetts towns that have adopted legislation for cultural resources or have established informal procedures through partnerships to handle the protection of these resources. The manner in which reviews are triggered and the procedures followed in different towns are discussed. A sample bylaw for the protection of cultural resources recently drafted by PAL for the town of Medfield is also included. This information is provided as part of the Chatham town-wide archaeological reconnaissance survey to give the local governing bodies models upon which to base their own system of cultural resources protection, per the recommendations provided in Chapter 8 of this report.

**Aquinnah.** The town of Aquinnah on Martha's Vineyard passed (May 24, 2000) a set of amendments to the town's zoning bylaws as part of a town-wide district of critical planning concern (DCPC). Among the measures included in the DCPC oversight is the island's first archaeological resource protection bylaw. The *Town of Aquinnah Historic and Archaeological Resource Protection Bylaw* (attached) contains a detailed set of special protections for the unique archaeological and cultural resources in the town. One important aspect worth noting is the specification that any and all archaeological survey, evaluation, and mitigation work that may need to be done as part of a development project will be at the owner/agent's own expense. Including this requirement in the bylaw indicates that the town recognizes the limited public funding for such archaeological surveys, and makes it very clear up front that the applicant is responsible for this expense along with other more conventional development-related costs.

**Barnstable.** The Barnstable Conservation Commission has the authority to review archaeological resources through a town wetlands protection bylaw. This bylaw authorizes the commission to require archaeological surveys where proposed work within identified resources areas may have an impact on archaeological sites. The conservation commission works with the Barnstable Historical Commission to determine which projects are likely to impact historic sites. The historical commission reviews the conservation commission agenda, and if impacts are determined, the conservation commission is notified and it takes over the review. In order for a potential impact to be identified, the cultural resource must be in the resource area and must be listed in the state inventory or other lists.

The resource area is defined as a surface water body, vegetated wetland or unvegetated wetland, and land under said waters, and any land subject to flooding or inundation by ground water, surface water, tidal action or coastal storm flowage (e.g., a coastal bank), but not the 100-foot upland buffer. This definition is limited in that only those areas of the town within wetlands and streams are protected for cultural resources. There are many other areas in the town that contain important resources that are not covered under the conservation commission's jurisdiction, and thus are not subjected to any sort of protection measures unless federal, state, or regional reviews are required. Nonetheless, when sites are found within a resource area, the conservation commission recommends an archaeological survey according to the

three-phase approach defined in the MHC's permit regulations. The conservation commission then confers with the MHC, and includes the requirements in the Order of Conditions of the wetland permit.

**Brewster.** New construction is reviewed under town regulations by a development Plan Review Committee. The committee coordinates the review of "substantial" development proposals (Brewster Code, Development Plan Review, Chapter 83). The purpose of the committee is to facilitate communication among several regulatory boards and committees. The committee is made up of the Building Commissioner and one member from each of the various town commissions including the Brewster Historical Commission. Projects that trigger a review include: 1) proposed construction other than single-family or two-family homes and include a new principal building; 2) an increase in lot coverage by more than 800 square feet through construction of a new accessory building, or increasing coverage of the lot by 10 percent or more; 3) substantial alteration of a parking facility having ten or more spaces; 4) removal of vegetation from more than 10,000 square feet; or 5) any subdivision of land into two or more lots. The purpose of the review is to avoid damage to the historic or archaeological value of cultural resources that may be located within proposed development areas. The committee can require that project proponents obtain documentation concerning cultural resources from the MHC, and that applicants make every feasible effort to avoid, minimize, or compensate for any potential damage or impairment to cultural resources.

**Medfield.** The Medfield Archaeological Committee is a recognized group that functions within the Medfield Historical Commission. Notice of building permits and other reviewed projects are sent to the various review committees of the town, including the Medfield Archaeological Committee. The committee reviews the projects that may impact cultural resources and refers them to the MHC for comment. The committee is allowed to review development projects that fall within archaeological sensitivity maps developed by the town. If proposed projects are likely to impact archaeological resources, the committee can establish an order of conditions governing the steps to be taken to protect them. The committee can require that the project proponent conduct an archaeological survey prior to construction. There is no size threshold that triggers a survey.

The town of Medfield undertook a town-wide reconnaissance survey for historic and archaeological resources to update its inventory of historic properties and sensitivity maps. Also, the Medfield Historical Commission sought assistance in the drafting of a comprehensive bylaw to provide a consistent procedure to protect the public interest to avoid, minimize, or mitigate harm to historic and archaeological resources in the town (see attached *Final Bylaw Amendment, Town of Medfield, Historic and Archaeological Resource Protection*). The bylaw is comprehensive in that any private or public project that requires review or approval by a permit granting authority or official of the town would be subject to review by the Medfield Archaeological Committee as part of the historical commission to determine if the project could harm historic and archaeological resources.

**Westborough.** The Westborough Historical Commission reviews proposed development upon notification by the Planning Board, Zoning Board of Appeals, and Building Inspector. The commission reviews the project plans for potential impacts to historic and archaeological resources. If the project is sponsored by the municipality or state, the commission refers review to the MHC. If the project is proposed by a private developer and areas of resource potential are to be impacted, the Westborough Historical Commission recommends that a survey be conducted at the developer's expense. There is no size threshold that triggers the jurisdiction of the Westborough Historical Commission. Areas of historic and archaeological concern have been predetermined and mapped by the commission. The maps are used in the review, but any size project can trigger a recommendation for an archaeological survey. The commission has been reviewing projects in this way since 1977, yet there is no legislation in the town

concerning cultural resources. This is possible because of ample public interest among the townspeople and local government to protect their cultural resources.

**Wayland.** The town of Wayland does not have any formal mechanisms for protecting cultural resources, but through a long-standing practice of local partnerships, has been successful at avoiding impacts to important sites when threatened by development. For example, if construction in the vicinity of an archaeological site is reported, the Wayland Historical Commission will review the project. If the project is a small private development, the commission may monitor construction. If the project is a larger development, the commission will defer review to the MHC; it does not prescribe archaeological surveys on its own. For nearly two decades, the Wayland Historical Commission, through the Wayland Archaeology Group, has been conducting excavations of archaeological sites on town-owned and private properties. The Historical Commission is provided a modest budget by the town to purchase equipment and analysis data. Space for curation of artifacts is provided in the town hall.

## TOWN OF AQUINNAH

### 5.0 HISTORIC AND ARCHAEOLOGICAL RESOURCE PROTECTION

5.1 Goals. Historic and Archaeological resources are fragile features that embody the significant prehistoric and historic cultural heritage of the Town of Aquinnah and The Wampanoag Tribe of Gay Head (Aquinnah); they provide a material record to understand and explain our past, and enhance and enrich the Town's quality of life. The purpose of this by-law is to protect the significant historic and archaeological resources of the town and provide a means for review of activities that may affect these non-renewable resources. The provisions of this by-law do not waive applicable Federal and State laws regarding the discovery of unmarked human burial or skeletal remains (which require development activity to cease immediately) or the inadvertent or unexpected discovery of significant historical and archaeological resources.

5.2 Prior to any development in the ADCPC, it must be determined if there are significant historic and archaeological resources at the site. Significant historic and archaeological resources are those that meet the criteria for evaluation for listing in the National Register of Historic Places (36 Code of Federal Regulations, Part 60), or the State Register of Historic Places. This requirement applies to both developed and undeveloped lots and includes any activity, such as perc tests, well drilling, utility *trenching*, demolition, road construction, clearing, excavation or use of heavy machinery that may destroy or disturb historic and archaeological resources. The Planning Board Plan Review Committee shall determine what actions shall be taken to locate, identify, and evaluate, any significant historic and archaeological resources that may be affected by the development. If any significant historic and archaeological resources are found, The Planning Board Plan Review Committee shall determine what actions shall be taken and avoid, minimize, or mitigate adverse effects to said resources. In making the above determinations, The Planning Board Plan review Committee shall consult with The Massachusetts Historical Commission (MHC), The Tribal Historic Preservation Officer of The Wampanoag Tribe of Gay Head (Aquinnah), and such local agencies as it deems necessary for guidance.

5.3 The owner/agent must submit a Project Notification Form (950 CMR 71) and the required maps and plans (a complete list is available at the town hall) to The MHC by certified mail, and to the Planning Board Plan Review Committee. Within thirty (30) days of receipt by certified mail of adequate project documentation, The MHC will make its recommendations to the Planning Board Plan Review Committee. Within forty-five (45) days of receipt by certified mail of adequate project documentation by The MHC, The planning board Plan Review Committee will hold a meeting to determine whether an archaeological survey of the site is required, and if so, the type and extent of the survey,

If a survey is *required*, it will be conducted by a qualified professional at the owner/agent's expense. The results of this survey will be presented to the MHC for technical advice and the Planning Board Plan Review Committee. If significant historic or archaeological resources are not found, the development may proceed through the normal permitting process. If the survey identifies areas of the site that are known or are likely to contain significant historic or archaeological resources, and the owner/agent agrees that these areas will not be affected or disturbed by the proposed development, the planning Board Plan Review committee will issue an order of conditions under which the proposed development may proceed through the normal permitting process. If the survey identifies areas of the site that are known or are likely to contain significant historic or archaeological resources that will be affected or disturbed by the proposed development, a more extensive survey may be conducted, at the owner/agent expense to locate, identify, and evaluate said resources. If significant historic or archaeological resources are found, the survey will also develop plans to avoid, minimize, or mitigate the adverse effects of the development.

The results of this final survey will be presented to the MHC and the Planning Board Plan Review Committee. The Planning Board Plan Review committee shall then hold a meeting to determine what

actions should be taken to avoid, minimize, or mitigate for any potential damage or impairment to any historic and archaeological resources and issue an order of conditions under which the proposed development may proceed through *the normal permitting process*.

FINAL BY-LAW

AMENDMENT

TOWN OF MEDFIELD  
HISTORIC AND ARCHAEOLOGICAL RESOURCE PROTECTION

**Section 1. Intent and Purpose**

The purpose of this bylaw is to provide a consistent procedure to protect the public interest to avoid, minimize, or mitigate harm to historic and archaeological resources in the Town of Medfield, whenever a private or public project that requires review or approval by a permit granting authority or official of the Town of Medfield, may harm historic and archaeological resources. Historic and archaeological resources are fragile and non-renewable features that embody the significant cultural heritage of the Town of Medfield; they provide a material record to understand and explain our past, and enhance and enrich the Town's quality of life.

**Section 2. Definitions**

**2.1 Alteration(s):**

Activities that modify the natural or existing topography and conditions of areas within archaeologically sensitive zones, and that may adversely affect the historic, archaeological, architectural, or cultural qualities, integrity, or preservation of historic and archaeological resources. These activities may include, but are not limited to: removal (excavation or grading) or placement (filling) of soil, sand, gravel, stone or other earth materials; removal of ground cover vegetation or trees; dredging or filling of wetlands; the construction, modification, expansion, neglect, or demolition of proposed or existing buildings or structures; and the construction, modification, or expansion of subsurface utilities (e.g., septic systems, telephone, television, electrical, gas, security services, or water supply), roadways, or parking areas.

**2.2 Archaeologically Sensitive Zone(s):**

Areas of the town known or likely to contain historic or archaeological resources determined on the basis of environmental attributes such as soils, proximity to wetlands or other water sources, documentary or cartographic evidence, written or oral tradition, and discoveries of historic and archaeological resources. These areas also include the Archaeological Protection District established by the existing Historic and Archeologic Demolition bylaw (Article XVI) for the Town of Medfield. The Archaeologically Sensitive Zones are shown on the map entitled "Archaeological Sensitivity Map of the Town of Medfield, Massachusetts."

### 2.3 Commission:

The Medfield Historical Commission

### 2.4 Historic and Archaeological Resources:

Locations, structures or sites used for prehistoric and historic period occupation, subsistence, industry, trade/commerce, transportation, agriculture, burial and other cultural purposes, containing material remains of human activity.

### 2.5 Permit Granting Authority or Official:

A board, commission, authority, or official of the Town of Medfield that is authorized by law or regulation to issue a permit, determination, order, or other action, including the issuance of a lease, license, permit, certificate, variance, approval, or other entitlement for use. For the purposes of this bylaw, "permit, determination, order, or other action or approval" shall not include the issuance of a general entitlement to a person to carry on a trade or profession or to operate mechanical equipment which does not depend upon the location of such trade or operation, nor shall it include the issuance of permits or licenses that are independent of and unrelated to a geographical area of impact (e.g., birth or death certificates, marriage or dog

licenses), nor shall it include the issuance of permits or licenses for existing facilities where no alteration(s) are proposed (e.g., common victualers license).

### **Section 3. Jurisdiction/Regulated Buildings, Structures and Sites**

The provisions of this bylaw shall apply to the following areas, buildings, structures and sites whenever a permit, determination, order, or other action, including the issuance of a lease, license, permit, certificate, variance, approval, or other entitlement for use, granted by a permit granting authority or official of the Town of Medfield will be required for alteration(s) of:

3.1 Areas located within the boundaries of the Archaeologically Sensitive Zones.

3.2 Properties included in the Inventory of Historic and Archaeological Assets of the Commonwealth, and/or the Medfield Historical Commission's Inventory of Historic and Archaeological Sites.

3.2 Properties listed in the National or State Registers of Historic Places.

### **Section 4. Procedure**

4.1 Upon receipt of an application for a permit, determination, order, or other action or approval that may result in alterations to historic and archaeological resources, the permit granting authority or official shall direct the applicant or project proponent to: (1) supply the Commission with a copy of the application and any other materials and plans the Commission requires for review and comment; and (2) supply the Massachusetts Historical Commission with the same for review and comment. The Commission shall develop guidelines for applicants and permit granting authorities or officials to assist in implementing this bylaw. The permit granting agency or official shall not issue its permit, determination, order, or other action or approval until the

Commission has responded to the application, but said agency or official may continue to review and comment on the application. Failure of the Commission to respond within thirty (30) days of its receipt of the application shall indicate that the permit granting agency or official may proceed with issuing approval.

4.2 Within fourteen (14) days of receipt of the application by the Commission, the chairperson shall post the date for a meeting of the Commission at which the application shall be heard. The hearing shall take place no fewer than twenty eight (28) days and no more than forty two (42) days after the receipt of the application material from the applicant. The Commission shall give public notice of the hearing by publishing at least fourteen (14) days before the hearing an announcement in a local newspaper of the time, place and purpose of the hearing. The Commission shall also mail or otherwise provide a copy of said notice to the permit granting agency or official, the applicant, to all abutters, to the owners of all properties deemed by the Commission to be affected by the proposed project, to the Medfield Historical District Commission and to any others the Commission deems entitled to notice. The Commission may seek comments from the State Archaeologist and the Massachusetts Historical Commission to assist the Commission in evaluating the application.

4.3 If upon review of the application, the Commission finds that the proposed application may adversely affect historic and archaeological resources, the Commission shall issue a decision with recommendations to the permit granting authority or official that the applicant make adequate provision for the protection of said resources. These provisions can include, but are not limited to conducting archaeological investigations by a qualified archaeological team under a permit (950 CMR 70) issued by the State Archaeologist to locate, identify, evaluate, or mitigate historic and archaeological resources, and the preparation of historic and archaeological preservation, protection, or mitigation plans. All such provisions shall be implemented by the applicant in

consultation with the Commission, the State Archaeologist and the Massachusetts Historical Commission. The permit granting authority or official shall incorporate the Commission's recommendations in issuing, conditioning, or denying its approval to the applicant.

**Section 5. Enforcement, Remedies and Appeals**

5.1 The Commission and permit granting authorities and officials are each authorized to institute any and all proceedings in law or in equity as they deem necessary and appropriate to obtain compliance with the requirements of this bylaw or to prevent a violation thereof.

5.2 Decisions made by the Commission may be appealed to the Selectmen within twenty one (21) days from the date of the decision of the Commission.

**Section 6. Severability**

If any section, paragraph or part of this bylaw be for any reason declared invalid or unconstitutional by any court, every other section, paragraph and part shall continue in full force and effect.

## Appendix H

### MHC KNOW-HOW REFERENCE FORMS

# KnowHow #1

INFORMATION AND ASSISTANCE FROM THE MASSACHUSETTS HISTORICAL COMMISSION

## Preservation Restrictions

### 1. What is a preservation restriction?

A preservation restriction is a legal agreement between a property owner and another party, usually a non-profit organization or government body. Such an agreement "runs with the land," governing the use of the property by the current and future owners. It is a vehicle for preserving the architectural integrity of a property by requiring maintenance of the property and preventing alterations which would compromise the property's historic character. See, Massachusetts General Law, chapter 184, section 31.

A preservation restriction under chapter 184 must be approved by the Massachusetts Historical Commission or a local government agency.

### 2. What are the benefits of a preservation restriction?

Under the federal Tax Treatment Extension Act of 1980, the grant of a preservation restriction may qualify as a charitable deduction for federal income tax purposes. It may also reduce the value of the owner's estate for federal estate tax purposes. In addition, the federal gift tax or capital gains tax payable on property given or sold after it is placed under the restriction may be reduced because of the property's reduced value. On the state and local level, M.G.L. chapter 59, section 11, allows a property with a perpetual preservation restriction to be reassessed on January 1 of the year following the implementation of the restriction. This can result in a savings in local property taxes and state estate taxes.

### 3. What properties are eligible for preservation restrictions?

A structure or site historically significant for its architecture, archaeology, or associations is eligible for a preservation restriction. Any property listed in the state register of historic places qualifies, but such listing is not required.

### 4. Who can be a grantor of a preservation restriction?

An owner of eligible property or an authorized person on behalf of the owner can grant a preservation restriction and must sign the preservation restriction agreement.

### 5. Who can accept a preservation restriction?

Any government body, including the Massachusetts Historical Commission, or local historical commission, or charitable corporation or trust which has the power to acquire land can accept a preservation restriction.

### 6. How is a preservation restriction conveyed?

A preservation restriction can be conveyed in the form of a restriction, easement, covenant or condition, in any deed, will, or other instrument. It can be conveyed for value or as a donation.

### 7. What conditions can a preservation restriction contain?

A preservation restriction can forbid or limit any or all (a) alterations in exterior or interior features of the structure, (b) changes in appearance or condition of the site, (c) uses not historically appropriate, (d) field investigation, or (e) other acts or uses detrimental to appropriate preservation of the structure or site. It may also contain other restrictions as well, depending upon the particular circumstances of the restriction grantor and grantee.

If the property being considered for a restriction is located on a lot of land with more acreage than is necessary to preserve the structure's setting, or if the land is not an intrinsic part of the structure's historic significance but should be protected, then the owner should consider combining a conservation restriction on the remaining acreage with the preservation restriction. Massachusetts General Law chapter 184 also deals with Conservation restrictions.

### 8. Must the preservation restriction be recorded?

A preservation restriction must be recorded in order for it to be generally binding on future purchasers.

## Know How #1

### 9. How long does the preservation restriction remain in effect?

A preservation restriction can be for a term of years or in perpetuity.

### 10. How is the property which is the subject of the preservation restriction administered?

Government bodies or charitable corporations who agree to hold a preservation restriction, often require the establishment of an endowment sufficient to cover administration expenses, including the monitoring of the preservation restriction conditions.

### 11. Can the preservation restriction be terminated? If so, how?

A preservation restriction under chapter 184 can be released in whole or in part by the holder of the restriction for such consideration, if any, as the holder may determine, but only after a public hearing.

## BIBLIOGRAPHY

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Know How #1 has been financed in part with Federal funds from the National Park Service, U. S. Department of the Interior. However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior.

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[www.state.ma.us/sec/mhc](http://www.state.ma.us/sec/mhc)

# KnowHow #4

INFORMATION AND ASSISTANCE FROM THE MASSACHUSETTS HISTORICAL COMMISSION

## *What to Do When Human Burials are Accidentally Uncovered*

### **1. Why are bones sometimes found?**

In Massachusetts, many unmarked graves exist without gravestones, fences, tombstones, or other surface indications of their presence. These are chiefly the graves of prehistoric and historic Indians, which may never have been marked at all; and graves which had been identified at one time in the past, but the markings are no longer visible. As a result, bones are often found during ordinary ground disturbance activities such as the construction of new homes, utilities, or roads; in the agricultural or industrial use of a site; or the excavation of sand or gravel borrow. Bones are also sometimes found eroding out of areas exposed by natural erosion, floodwater scouring, or sand dune formation.

A new law has been enacted which establishes procedures to follow when human bones are accidentally discovered.

### **2. Who is involved?**

Private citizens, State and Local Police, Medical Examiners, State Archaeologist, and the Commission on Indian Affairs.

### **3. What should you do if you discover bones?**

Do not touch or disturb the bones. Notify the state or local police and the regional medical examiner about the discovery and location.

### **4. What does the Medical Examiner do?**

The Medical Examiner investigates the discovery to determine whether the bones are human, and whether they are recent or more than 100 years old. If the bones are less than 100 years old, a criminal investigation may be warranted. If the bones are more than 100 years old, the Medical Examiner then notifies the State Archaeologist, who immediately conducts an archaeological investigation of the site. Throughout these investigations, the police authorities must insure that the site is protected from further damage.

### **5. What does the State Archaeologist do?**

The State Archaeologist investigates the site to determine the age, cultural association and identity of the burial. If the State Archaeologist determines that the burial is that of a Native American, the Commission on Indian Affairs is notified. The State Archaeologist consults with the landowner to determine whether the burial can remain undisturbed. In the case of development projects, the owner and State Archaeologist discuss whether there are prudent and feasible steps the owner can take to protect the burial. If it is impossible to avoid future harm to the burial, the State Archaeologist removes the remains.

### **6. What does the Commission on Indian Affairs do?**

The archaeological investigation of Indian burials is monitored by the Commission on Indian Affairs to insure that the remains are treated respectfully.

Please remember: Once bones or artifacts are removed from the site, valuable information concerning the identity and age of the human remains is lost. Therefore, it is important not to disturb the site in any way until the State Archaeologist can conduct an investigation and record the discovery.

### **BIBLIOGRAPHY**

Massachusetts General Laws, Chapter 38, section 6B; Chapter 9, sections 26A & 27C; Chapter 7, section 38A; Chapter 114, section 17; as amended by Chapter 659 of the Acts of 1983 and Chapter 386 of the Acts of 1989.

### **For Further Information:**

Please contact the State Archaeologist at the Massachusetts Historical Commission.

William Francis Galvin  
Secretary of the Commonwealth  
Chairman, Massachusetts Historical Commission  
Massachusetts Archives Building, 220 Morrissey Boulevard, Boston, MA 02125  
Phone: (617) 727-8470 Fax: (617) 727-5128  
Website: [www.sec.state.ma.us/mhc](http://www.sec.state.ma.us/mhc)

# KnowHow #6

INFORMATION AND ASSISTANCE FROM THE MASSACHUSETTS HISTORICAL COMMISSION

## *Historic Properties Inventory Forms*

### **1. What is an MHC inventory form?**

Massachusetts Historical Commission inventory forms are the primary means for recording information on historic and archaeological resources in the Commonwealth. The forms are designed to record information on the location, appearance, and condition of these resources. They also allow the recording of information on the history of the resources, including their uses and the people and activities associated with them over time. Finally, inventory forms provide an evaluation of the significance of resources relative to similar properties and sites in a local or statewide context. Current photographs are attached to the forms, which also include a map showing the location of the resource.

### **2. Are there different types of inventory forms?**

Yes. The MHC has developed standard inventory forms for ten categories of cultural resources: buildings, structures, objects, bridges, areas, parks and landscape features, burial grounds, streetscapes, historic archaeological sites, and prehistoric archaeological sites.

### **3. Who fills out MHC inventory forms?**

Most inventory forms are completed by local historical commissions or by professional historic survey consultants working for local historical commissions. Inventory forms also are completed by municipal planning and community development offices and by local historic district commissions. Avocational and professional archaeologists complete inventory forms for historic and prehistoric archaeological sites. State and federal agencies complete inventory forms for historic properties under their ownership or properties that may be affected by their activities. Planners for both public and private projects subject to state or federal licensing, funding, or permitting may prepare inventory forms for historic properties potentially affected by the project. Historic preservation organizations, local historical societies, property owners, and other individuals and groups all regularly submit inventory forms for historic properties to the MHC.

### **4. Where are these inventory forms kept?**

The Inventory of Historic and Archaeological Assets of the Commonwealth, also known as the statewide inventory, is a public record and therefore available for public use at the MHC office. Information on an estimated quarter-million historic properties is included in these files. The historic properties inventory forms are arranged by town and indexed by street address. In addition to the inventory forms, the statewide inventory files include information recorded on maps, in reports, and on computer database files.

Within local government, local historical commissions maintain a duplicate set of inventory forms, with original photographs, for their respective communities. Photocopies of local inventory forms often are available for public use at municipal libraries, offices, town halls, or other local repositories. Contact your local historical commission for more information on the location and availability of forms in your city or town. Remember that the MHC receives inventory information from many sources statewide, and may have forms and other materials not included in local files. Only forms on file with the MHC, however, are considered part of the Inventory of Historic and Archaeological Assets of the Commonwealth.

### **5. Can users search for specific information in the statewide inventory?**

Yes. The MHC has developed a computer database, the Massachusetts Cultural Resource Information System (MACRIS), that has significantly improved a user's ability to locate information in MHC's inventory files. MHC staff is able to search the historic properties database for a wide variety of attributes or combination of attributes, including (to name just a few) historic name, date of construction, architect's name, architectural style, historic use, or building material. Researchers can then use the resulting database reports to locate more detailed information on the inventory forms.

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## KnowHow #6

### 6. In what other ways are inventory forms used and who uses them?

Inventory forms are the foundation of municipal historic preservation efforts, and local historical commissions should keep other local government boards and officials aware of the availability of the inventory as a planning tool. Local inventories support the establishment of specific historic preservation tools, such as local historic districts and demolition review measures, and aid in their administration. Information from inventory forms finds its way into local classrooms, walking tours, historic marker programs, local comprehensive plans, and publications. Through their use, inventory forms help to raise public appreciation for and understanding of historic properties and sites.

Inventory forms also are the fundamental research and planning document supporting the MHC's efforts to evaluate and protect cultural resources. At the MHC, project planners and MHC staff consult the inventory files to determine whether historic resources are present in a project area and, if so, to assess the potential impacts of projects on historic resources. MHC staff also uses the inventory to determine whether historic properties are eligible for listing in the National Register of Historic Places; information from the inventory can be the basis for preparing a National Register nomination. Historians, students, property owners, realtors, and journalists are among the users who consult inventory forms regularly at the MHC. Location scouts even use the inventory to find possible settings for film and television shoots!

### 7. Does completing an inventory form place a property in the State or National Registers of Historic Places?

No. The inventory form is simply a record of information on a historic property. It does not give a property any official historic designation. Properties are listed in the State Register of Historic Places only when they have received one of several historic designations established under local, state, or federal law. A list of these designations is available from the MHC. Properties are listed in the National Register of Historic Places through a multiple step nomination process

administered by the MHC and the National Park Service. For further information, see MHC's *Know How #3: What You Need to Know About Listing in the National Register*.

### 8. Does inclusion in the statewide inventory place any restrictions on a property or its use?

No. However, inventory forms may be used to implement various locally adopted historic preservation mechanisms. Local demolition review, site plan and design review, and zoning overlays may cite the local inventory as a basis for identifying properties that are subject to the provisions of the ordinance or bylaw.

### 9. Where can I get inventory forms or help in preparing an inventory form?

First contact your local historical commission or the MHC to determine whether an inventory form has already been completed for the property in question. If not, ask your local historical commission for assistance in completing a form. Detailed instructions for completing all inventory forms are included in MHC's *Historic Properties Survey Manual*, on file with your local historical commission, and also available from the State Bookstore (617) 727-2834. Blank inventory forms and instructions for completing specific forms are available from the MHC.

Know How #6 has been financed in part with Federal funds from the National Park Service, U. S. Department of the Interior. However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior.

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William Francis Galvin  
Secretary of the Commonwealth  
Chairman, Massachusetts Historical Commission  
Massachusetts Archives Building, 220 Morrissey Boulevard, Boston, MA 02125  
Phone: (617) 727-8470 Fax: (617) 727-5128  
Website: [www.sec.state.ma.us/mhc](http://www.sec.state.ma.us/mhc)

Appendix I

PROJECT CORRESPONDENCE



The Commonwealth of Massachusetts  
William Francis Galvin, Secretary of the Commonwealth  
Massachusetts Historical Commission

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PERMIT TO CONDUCT ARCHAEOLOGICAL FIELD INVESTIGATION

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Permit Number 2928 Date of Issue January 4, 2007  
Expiration Date January 4, 2008

PAL is hereby  
authorized to conduct an archaeological field investigation pursuant to  
Section 27C of Chapter 9 of General Laws and according to the regulations  
outlined in 950 CMR 70.00.

Chatham Town-wide Archaeological Reconnaissance Survey, Chatham

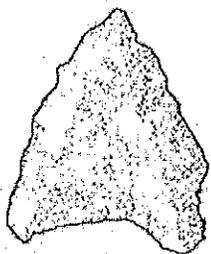
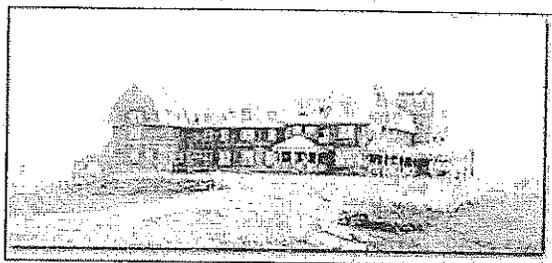
Project Location

  
\_\_\_\_\_  
Brona Simon, State Archaeologist  
Massachusetts Historical Commission

# CHATHAM HISTORY AND ARCHAEOLOGY LECTURE PRESENTATION AND PUBLIC INFORMATION DAY

Researchers from **PAL** (Public Archaeology Laboratory) together with the **Chatham Historical Commission** invite area residents to share knowledge about the town's heritage at a lecture/PowerPoint presentation and Public Information Day.

PAL is conducting an **Archaeological Reconnaissance Survey of the Town of Chatham**. The survey will compile information on Native American and historic period archaeological sites within Chatham to help identify and protect these important resources.



*Richie 1971*

PAL would like to record information about the types and locations of Native American **artifacts** (such as stone tools, arrowheads, shell piles, and pottery) collected in town, as well as areas where **historic activities** occurred (such as mill ruins, cellarholes, or old cart paths). PAL archaeologists will be present to collect information and answer questions about the history and archaeology of the town. Please plan to attend!

If you are unable to attend, but would like to share your information, please contact Holly Herbster at PAL (401) 728-8780 or [hherbster@palinc.com](mailto:hherbster@palinc.com). The presentation will also be televised live on Ch. 18 and will be rebroadcast periodically.

MONDAY, MAY 21, 2007

4:00 P.M.

DOWNSTAIRS MEETING ROOM OF TOWN HALL,

540 MAIN STREET

