

ARCHAEOLOGICAL RECONNAISSANCE SURVEY
ARCHAEOLOGICAL RESOURCES MANAGEMENT PLAN
YANKEE NUCLEAR POWER STATION

Rowe and Monroe, Massachusetts

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MANAGEMENT ABSTRACT

PAL completed an archaeological reconnaissance survey at the Yankee Nuclear Power Station (Yankee Rowe) in Rowe and Monroe, Massachusetts. The approximately 2,200-acre project area straddles both banks of the Deerfield River and is composed primarily of undeveloped woodland and steep slope. Fourteen historic period resources dating to the nineteenth century were field verified during the walkover survey. These resources include: eight farm complexes and residences; one sawmill; one cemetery; one barn; two sugarhouses; and the abandoned Hoot, Toot & Whistle (HT&W) Railroad alignment. Moderate to high historic archaeological sensitivity was assigned to those areas with documented historic period resources and adjacent lands likely to contain associated structural remains and/or cultural material. The steep topography, lack of arable land, and soil disturbance precipitated by the construction of the HT&W, Sherman Dam, and the nuclear plant resulted in a predominantly low historic archaeological sensitivity assessment for the majority of the project area. No prehistoric period resources were identified during the survey. The project area was assessed with predominantly low prehistoric archaeological sensitivity for the same reasons cited in the historic sensitivity assessment. Moderate prehistoric sensitivity, however, was assigned to those areas adjacent to wetlands or on isolated upland areas in proximity to small streams or brooks.

An Archaeological Resources Management Plan (ARMP) was developed for the Yankee Rowe project area as a means to assist current and future property owners in planning for land reuse by establishing baseline archaeological resource information and long-term stewardship guidelines. The ARMP provides clear and concise recommendations about how to treat historic properties, including archaeological resources and standing structures, within the project boundaries. Components of the plan include: identification and survey of historic properties; types of activities that may impact historic properties; protection of historic properties and mitigation of adverse effects; monitoring (short and long-term) of archaeological sites, archaeologically sensitive areas, and historic structures; unanticipated discovery of previously unidentified historic properties and human remains; the development of conservation and curation plan; and, a public education program about the historic and archaeological values of the project area.

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CHAPTER ONE

INTRODUCTION

This report presents the results of an archaeological reconnaissance survey and Archaeological Resources Management Plan (ARMP) for the Yankee Nuclear Power Station (Yankee Rowe) in Rowe and Monroe, Massachusetts (Figure 1-1). Yankee Atomic Electric Company (YAEC), the owner and operator of Yankee Rowe, has contracted with CLF Ventures, Inc. (CLFV) to assist with a site closure strategy as part of the plant decommissioning and license termination process initiated in 1993. The property comprises approximately 1,800 acres of land bordering the southern and eastern shores of Sherman Pond running north to the Vermont border (Figure 1-2). A small portion of the property also lies on the west side of the Deerfield River immediately north of the village of Monroe Bridge.

Scope and Authority

As part of its decommissioning and site closure strategy, YAEC is considering land reuse and management options for a portion of the 2,200 acres. The purpose of the reconnaissance survey and associated

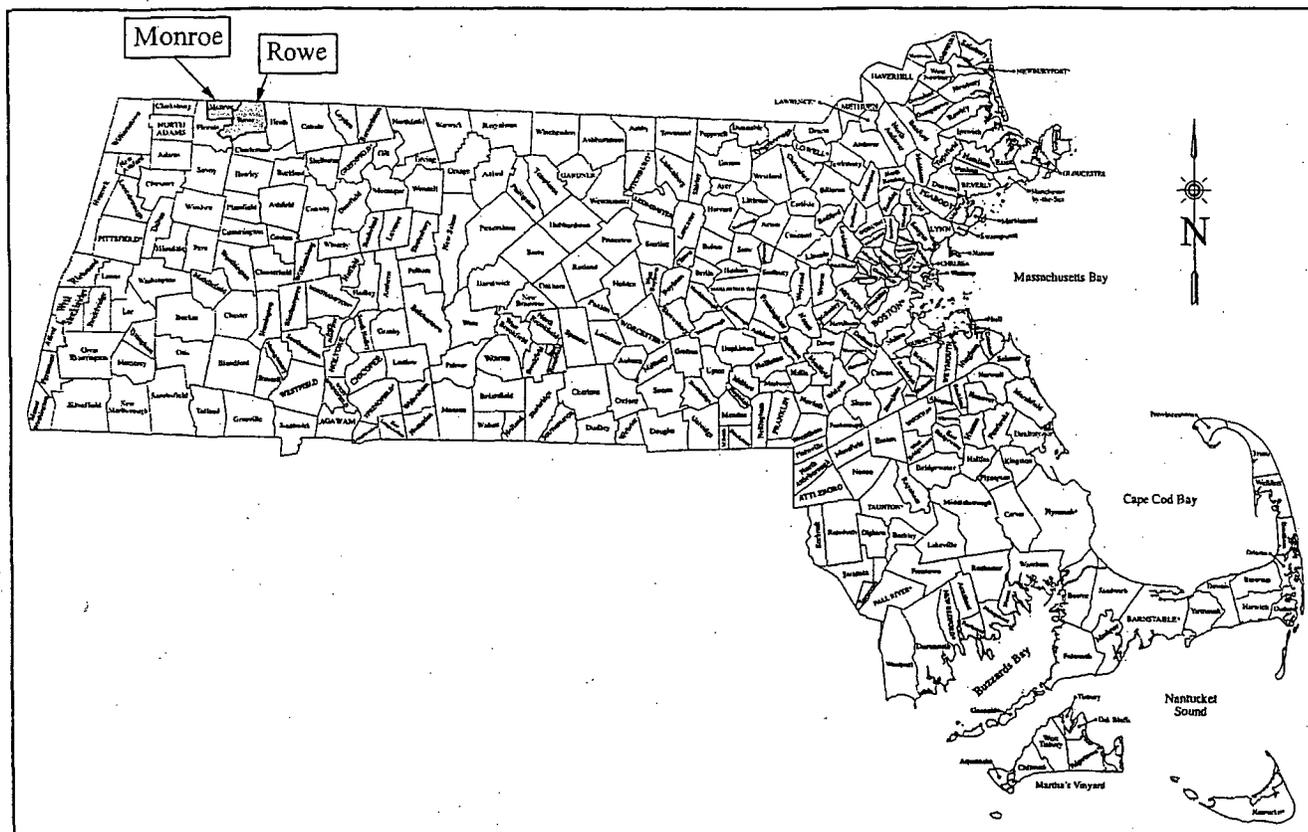


Figure 1-1. Map showing the location of Rowe and Monroe, Massachusetts.

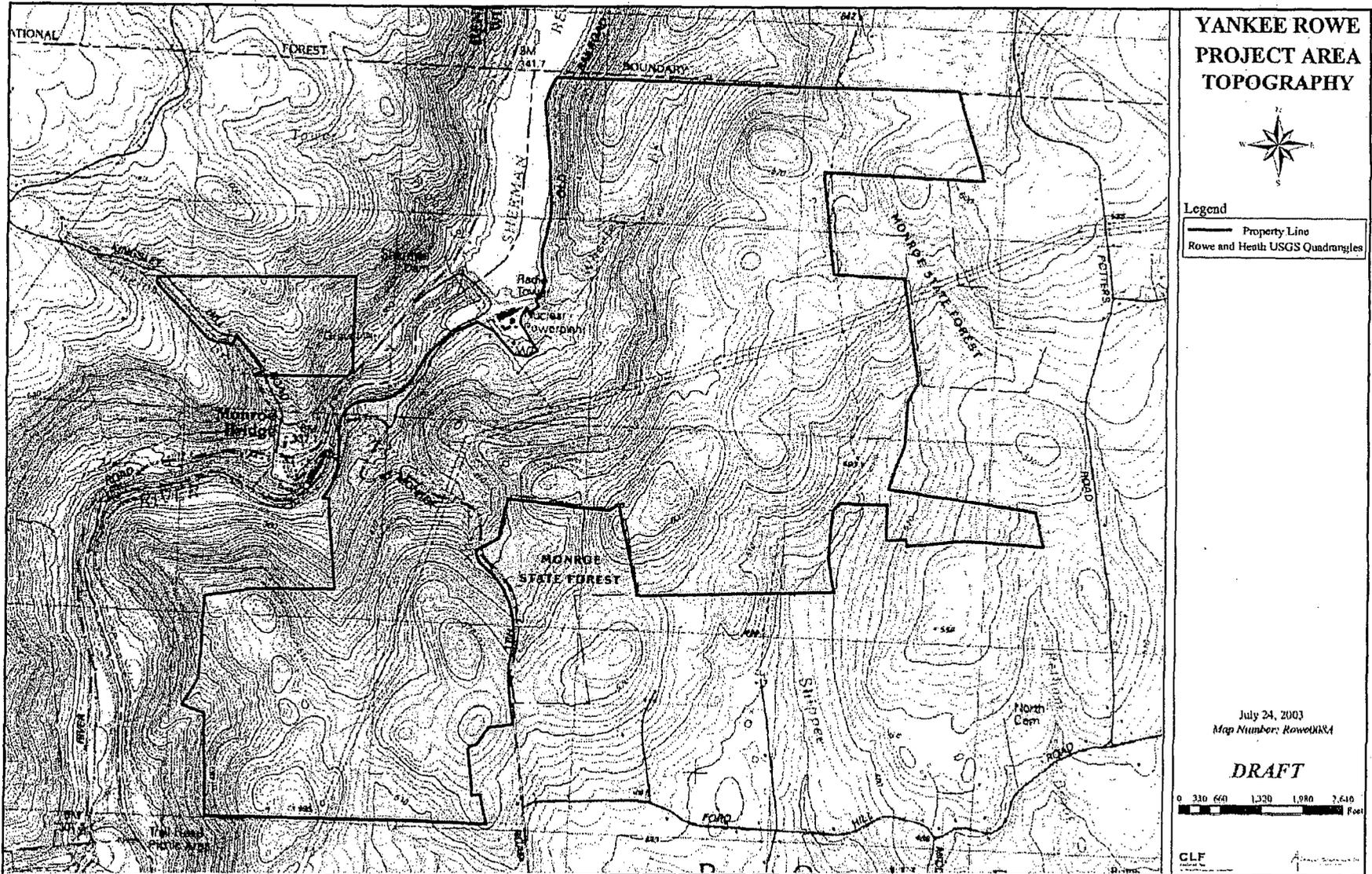


Figure 1-2. Map showing the location of the Yankee Rowe project area on the Heath and Rowe, MA topographic quadrangles, 7.5 minute series.

ARMP is to assist YAEC in planning for land reuse by establishing baseline archaeological resource information and long-term stewardship guidelines. The decommissioning process is being conducted under a License Termination Plan issued by the Nuclear Regulatory Commission (NRC) and, as such, falls under the purview of Section 106 of the National Historic Preservation Act of 1966, as amended.

The reconnaissance survey was designed to collect information about the environmental and cultural history and resources of the Yankee Rowe property that can be used to create archaeological sensitivity maps for future development planning. The walkover survey was conducted under an archaeological permit, in compliance with Massachusetts General Laws, Chapter 9, Sections 26-27C, as amended by Chapter 254 of the Acts of 1988 (950 CMR 71). As mentioned above, the survey also was conducted in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

The ARMP provides clear and concise directions about how to treat historic properties, including archaeological resources and standing structures, within the project boundaries. The plan meets the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44738-39) and the MHC guidelines.

CHAPTER TWO

RESEARCH DESIGN AND FIELDWORK METHODOLOGIES

The goal of the reconnaissance archaeological survey was twofold: to locate and identify any potentially significant prehistoric and historic cultural resources within the Yankee Rowe project area; and to identify areas that possessed prehistoric and/or historic archaeological sensitivity. To accomplish this goal, two research strategies were used:

- archival research, including a review of literature and maps, and local informant interviews;
- field investigations, consisting of a walkover survey.

The archival research and walkover survey provided the information needed to stratify the project area into zones of expected archaeological sensitivity. Archaeological sensitivity is defined as the likelihood for prehistoric and historic period resources to be present and is based on various categories of information. These categories include:

- known locational, functional, and temporal characteristics of identified prehistoric and historic sites in the project area or vicinity; and
- project-specific, local and regional environmental data in conjunction with project-area conditions observed during the walkover.

This report section describes the methods used during each of the background research and field activities. The results of the research and field investigations are discussed and evaluated in Chapters 6 and 7.

Archaeological Significance and Historic Contexts

The different phases of archaeological investigation (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 (NRHP). The National Register is the official federal list of properties 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 any resource.

The standards for determining the significance of cultural resources, a task required of federal agencies, are the guidelines provided by the NPS (36 CFR 60): the National Register Criteria for Evaluation. The following four criteria are given for determining if the “quality of significance in American history,

architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association" (36 CFR 60):

- 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 significant 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.

Most archaeological sites listed in the NRHP have been determined eligible under criterion A or D. For eligibility under these criteria, a number of issues must be addressed, including the kind of data contained in the site, the relative importance of research topics suggested by the data, whether these data are unique or redundant, and the current state of knowledge relating to the research topic(s) (McManamon 1990:14–15). A defensible argument must establish that a site "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 used to evaluate the significance of cultural resources are applied in relation to the historical contexts of the resources. A historical context is defined as follows:

At minimum, a historical context is a body of information about past events and historic processes organized by theme, place, and time. In a broader sense, an historic context is a unit of organized information about our prehistory and history according to the stages of development occurring at various times and places (NPS 1985).

Historical contexts provide an organizational format that groups information about related historical properties based on a theme, geographic limits, and chronological periods. A historical context may be developed for Native American, historic, and/or modern cultural resources. Each historical context is related to the developmental history of an area, region, or theme (e.g., agriculture, transportation, waterpower), and identifies the significant patterns that particular resource can represent.

Historical contexts are developed by:

- identifying the concept, time period, and geographic limits for the context;
- collecting and assessing existing information about 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 historical contexts with properties illustrating those ideas (NPS 1983:44719).

A summary of an area’s history can be developed by a set of historical contexts. This formulation of contexts is a logical first step in the design of any archaeological survey. It is also crucial to the evaluation of individual properties in the absence of a comprehensive survey of a region (NPS 1983:9). The result is an approach that structures information collection and analyses. This approach further ties work tasks to the types and levels of information required to identify and evaluate potentially important cultural resources.

The following research contexts have been developed to organize the data relating to the Native American and Euro-American cultural resources identified within the proposed project area:

- Native American land use and settlement in the Deerfield River drainage, ca. 12,500 to 300 years before present (B.P.); and
- historic land use and settlement patterns of Rowe and Monroe, ca. A.D. 1650 to present.

Historical contexts, along with expected property types and locational patterns, are discussed in detail in Chapters 4 and 5. The potential research value of the known and expected prehistoric and historic archaeological resources identified within the Yankee Rowe project area is evaluated in terms of these historical contexts. This evaluation, along with management recommendations, is presented in Chapter 7.

Background Research

Finding the information necessary to develop a historical context and assess the potential for archaeological resources begins with the examination of primary and secondary documentary sources. These sources include written and cartographic documents relating both to past and present environmental conditions and to prehistoric and historic period resources in or close to the project area. This background information assists in the formulation of predictive models or statements about the project area, and is an integral part of an intensive (locational) survey. Variables within each category of background data are used to define the overall archaeological and historical context of the project area.

The following sources were reviewed as part of the background research for the proposed Yankee Rowe project area:

State Site Files and Town Reconnaissance Surveys

The state site files at the MHC were reviewed to locate any known prehistoric or historic period sites in or close to the project area. These inventories include cultural resources listed or eligible for listing in

the NRHP. In addition, the MHC town reconnaissance survey reports for Rowe and Monroe were reviewed to provide general historical information about the towns (MHC 1982a, 1982b).

Cultural Resource Management and Academic Reports

Cultural resource management (CRM) reports conducted in the project vicinity were reviewed. Because most of the archaeological work within the upper Deerfield River valley has been done in association with the relicensing of hydroelectric facilities, reports pertaining to that data provided the bulk of the comparative material. These reports include *A Phase I Archaeological Survey of the Deerfield River Gorge, Stillwater Bridge Hydroelectric Project* (Mulholland et al. 1982); *Intensive (locational) Archaeological Survey, Fife Brook Put-In Recreation Area, Bear Swamp Development, and Zoar Whitewater Take-Out and Put-In Recreation Area, Deerfield River Hydroelectric Project, Florida, Massachusetts* (Heitert et al. 2001); *Archaeological Site Examination, Fife Brook 5, Bear Swamp Development, Florida, Massachusetts* (Heitert and Cherau 2002a); and, *Phase IB Archaeological Survey, Deerfield River Hydroelectric Project, Stratton, Searsburg, Whitingham, and Wilmington, Vermont, and Charlemont, Massachusetts* (Heitert and Cherau 2002b). William W. Fitzhugh's report on a Late Archaic site cluster on the banks of the Deerfield River, *Archaeological Surveys and Excavations at Fife Brook on the Upper Deerfield River*, provided detailed information about prehistoric cultural resources just to the south of the current project area on the west bank of the river (Fitzhugh 1970).

Histories and Maps

General histories and historical maps and atlases were examined to assess changes in land use, to locate any documented structures, and to trace the development of transportation networks, an important variable in the location of historic sites. Town and regional histories, photographs, and maps housed at the Rowe Library and Rowe Historical Society were reviewed. These resources included *Franklin County and the North Quabbin Region* (Blagg 2003); *History of Rowe, Massachusetts* (Brown 1960); *History of Western Massachusetts* (Holland 1855); excerpts from the Rowe Historical Society Bulletin; and the 1858 and 1871 Beers maps of Rowe and Monroe. In addition, archival photographs of the construction of Sherman Reservoir were reviewed at the offices of USGEN New England, Inc. (USGen NE), located in Monroe Bridge. These photographs provided information about the level and extent of landscape modification during the construction of the reservoir, and also contained images of historic structures formerly within the impoundment.

Environmental Studies

Bedrock and surficial geological studies provide information about the region's physical structure and about geological resources near the project area. The United States Department of Agriculture (USDA) Soil Conservation Service soil survey for Franklin County (USDA 1967) supplied information about soil types and surficial deposits within the project area and the general categories of flora and fauna that these soil types support. In addition, studies of past environmental settings of New England were consulted.

Informant Interviews

Local historical associations and local informants were consulted during the course of the survey. Alan Bjork, curator of the Rowe Historical Society, provided copies of historical photographs and maps of the project area. Nancy Williams, a longtime Rowe resident and local historian, provided valuable information about the history and families of the town, as well as accompanying PAL personnel during part of their walkover survey to point out the location of several historic sites. Kenneth Dow, Environmental Supervisor for Yankee Atomic, provided project area maps showing the location of remnant foundations, contacted local residents about their recollections of the project area, and also accompanied PAL during a portion of the walkover survey. Matthew Cole, External Relations Specialist for USGen New England, Inc. (USGen NE), provided access to and digital copies of the archival photographs of the construction of Sherman Dam.

Walkover Survey

A walkover survey was conducted to collect environmental information and to examine the current physical condition of the project area. Environmental information noted the presence, types, and extent of fresh water; drainage characteristics; presence of bedrock outcrops and level terraces; and the steepness of slopes. The current physical condition of the project area is largely defined by the presence, absence, and degree of previous disturbance to the natural landscape.

The current physical condition of the project area may have been affected by plowing, gravel or soil mining, or previous construction and site preparation activities. Such disturbances can affect the potential for the presence of cultural resources, reducing the probability they will be found in their original archaeological contexts. Plowing, which can move artifacts from their original vertical and horizontal contexts, is the most common type of disturbance in New England. The consequences of plowing, however, are not as severe as the effects of soil or gravel mining, which may completely remove archaeological deposits.

Another purpose of the walkover was to note surface indications of archaeological sites. While prehistoric sites in New England are most often found belowground, artifact scatters are sometimes exposed on the surface through cultural and natural processes such as road use, gravel pitting, construction activity, or erosion. Historic site types that might be visible include stone foundations, stone walls, trash deposits, and dams. If a historic farmstead is present within the project area, it is possible a cellar hole and associated landscape features such as stone walls, orchards, fields, and ornamental herbage may be observed.

The information collected during the walkover was recorded on project maps and allowed for the development of prehistoric and historic archaeological sensitivity maps for the Yankee Rowe project area.

Archaeological Sensitivity Assessment

Information collected during background research and the walkover survey was used to develop a predictive model to assess the potential for the presence of Native American and Euro-American resources, the types of sites that might be found, and their cultural and temporal affiliation. The

development of predictive models for locating cultural resources has become an increasingly important aspect of CRM and planning.

The predictive sensitivity model used criteria to rank the potential for the project area to contain Native American or Euro-American sites. The criteria used to assess the Yankee Rowe project area were proximity of documented cultural resources, local land use patterns, environmental characteristics, and the area's physical condition. The project area was stratified into zones of expected archaeological sensitivity to determine which areas would be tested.

Native American Archaeological Sensitivity

Sets of key environmental variables used to predict the location of Native American sites have been compiled from research conducted by professional archaeologists. These studies have demonstrated that certain environmental and topographical settings are strongly associated with the presence of Native American sites. The most productive studies have been of large areas with a variety of environmental settings that were field tested to determine the validity of the predictive model. For example, analysis of several hundred sites in southeastern New England (Thorbahn et al. 1980) found that the highest density and greatest clustering of prehistoric 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 confirmed this observation (Thorbahn 1982).

Other studies have found that site locations are strongly associated with modern wetland densities (Mulholland 1984). Wetlands provide both a home and breeding habitat for a diverse set of animals, support foods, and other vegetation. Prehistoric Native Americans sought the most productive wetlands, including those with a wide variety of resources and those with consistent and reliable resource availability (Hasenstab 1991; Nicholas 1991; Thorbahn 1982; Thorbahn et al. 1980).

Geologic data provides information about lithic resources and about current and past environmental settings and climates. Bedrock geology helps to identify where raw materials for stone tools were obtained by prehistoric groups 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 impacted 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 prehistoric groups 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).

Euro-American Archaeological Sensitivity

The landscape of a project area is used to predict the types of Euro-American sites likely to be present. Major locational attributes differ according to site type. Domestic and agrarian sites (houses and farms) characteristically contain water sources and are located near arable lands and transportation networks. Industrial sites (e.g., mills, tanneries, forges, and blacksmith shops) predating the late nineteenth century are typically located close to waterpower sources and transportation networks. Commercial and public or 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 Euro-American archaeological sensitivity. Historic 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 provide information about important sites including previous functions, ownership, local socioeconomic conditions, and political development. These details assist in placing the Euro-American site within its historical context, facilitating assessments of the potential importance of a particular site.

Background research alone, however, is not sufficient to locate underdocumented historic period archaeological sites. 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. Walkover inspections and subsurface testing are required to locate and identify underdocumented historic sites.

CHAPTER THREE

ENVIRONMENTAL SETTING

The Yankee Rowe project area is located in Rowe and Monroe, Massachusetts, in the Deerfield River valley drainage at the northwest corner of Franklin County (see Figure 1-1). The majority of the project area lies east of the Deerfield River, stretching north to the Vermont border, south to roughly Ford Hill Road, and east to approximately Potters Road (see Figure 1-2). A significantly smaller portion of the property lies west of the river, northeast of Kingsley Hill Road. Elevations within the project area range from 300–550 meters above sea level (masl). The property is characterized by steep, heavily wooded slopes cut by small streams and interspersed with small areas of flat meadowland.

Geology and Geomorphology

The project area lies within the Green Mountain section of the New England physiographic province (Figure 3-1). This section is generally characterized by a linear north-south uplift of resilient rocks belonging to the Archean core and old and deeply metamorphosed sediments (Fenneman 1938).

The underlying bedrock in the Rowe and Monroe portion of the Deerfield River valley is composed mainly of gneiss, schist, and marble. While the marble formations were heavily exploited during the historic period for construction and ornamental purposes, none of these native lithic sources appear to have been of great value prehistorically.

Soils

The primary soil association within the project area is the Lyman-Berkshire-Peru association, characterized by shallow and deep, well-drained and moderately well-drained soils with a reddish subsoil (USDA

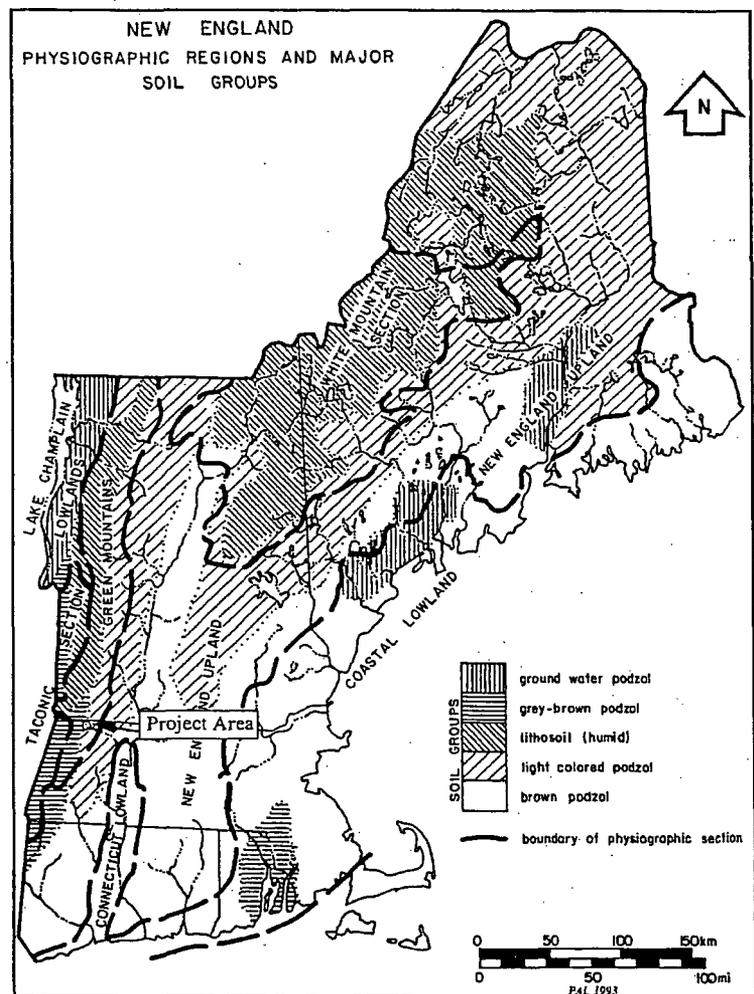


Figure 3-1. Map of the New England physiographic regions and major soil groups showing the location of the Yankee Rowe project area (source: Fenneman 1938).

1967). The two major specific soil types within the project area include Berkshire very stony fine sandy loam (BdD, BdF) and Lyman extremely rocky loam (LxC, LxF). Smaller pockets of Marlow, Peru, Ridgebury and Westminster stony loams, and at least one pocket of Merrimack fine sandy loam, can also be found scattered across the project area.

Berkshire soils comprise well-drained fine sandy loams formed in glacial deposits derived mainly from micaceous schist material. Typically, these soils are extremely stony, composing about 10 percent of the surface and 10–15 percent of the soil mass below surface. Permeability is moderate to moderately rapid, and the soils have a moderate moisture-holding capacity. Both the BdD (8–25 percent slopes) and BdF (25–65 percent slopes) soil sub-categories are limited to unimproved pasture, woodland, or recreational purposes, due largely to their extreme stoniness and steepness.

Lyman soils comprise slightly droughty, shallow loams that have formed in glacial deposits derived largely from schist. In both the LxC (3–15 percent slopes) and LxF (25–80 percent slopes) soil sub-categories, stones and boulders are common on the surface and, in a few areas, the land surface is characterized by sheer bedrock escarpments. Land use is limited to woodland, unimproved pasture, and logging in those areas where the slope is not excessively steep.

Drainage Patterns and Topographical Relief

The Yankee Rowe project area lies within the Deerfield River basin (Figure 3-2). Beginning in Stratton, Vermont, the river traverses 70.2 miles to its confluence with the Connecticut River in Greenfield, Massachusetts, draining a total area of 665 square miles including the central upland portion of the Green Mountains and parts of the northeastern Berkshire Hills. Terraces occur at irregular elevations along the river and tend to be rather narrow and floodplains are equally restricted, with a tendency to occur along the major and minor tributaries branching off from the river. One of the cleanest and coldest rivers in Massachusetts, the Deerfield is fed by several major tributaries including the North, Green, Chickley and Cold rivers, and contains several excellent stretches of whitewater and miles of trails that are a magnet to campers, hikers, and rafters (Bickford and Dymon 1990).

Unlike many other river basins in Vermont and Massachusetts, the Deerfield watershed contains several stands of old growth hardwood-conifer forests on slopes considered too steep to log during the eighteenth and nineteenth centuries. The unusually wet conditions and cool temperatures also have helped to maintain peat in bogs and fens and encourage the growth of unusual mosses (Bickford and Dymon 1990).

The pristine nature of the Deerfield River Basin is, in large part, a consequence of an excessively steep and rugged terrain that has discouraged widespread settlement and industry in the area. A notable exception to that rule is the network of hydroelectric facilities that spans the river from north to south, an engineering feat that began in the first decade of the twentieth century and ended with the construction of the Bear Swamp development in Rowe, Massachusetts in 1975.

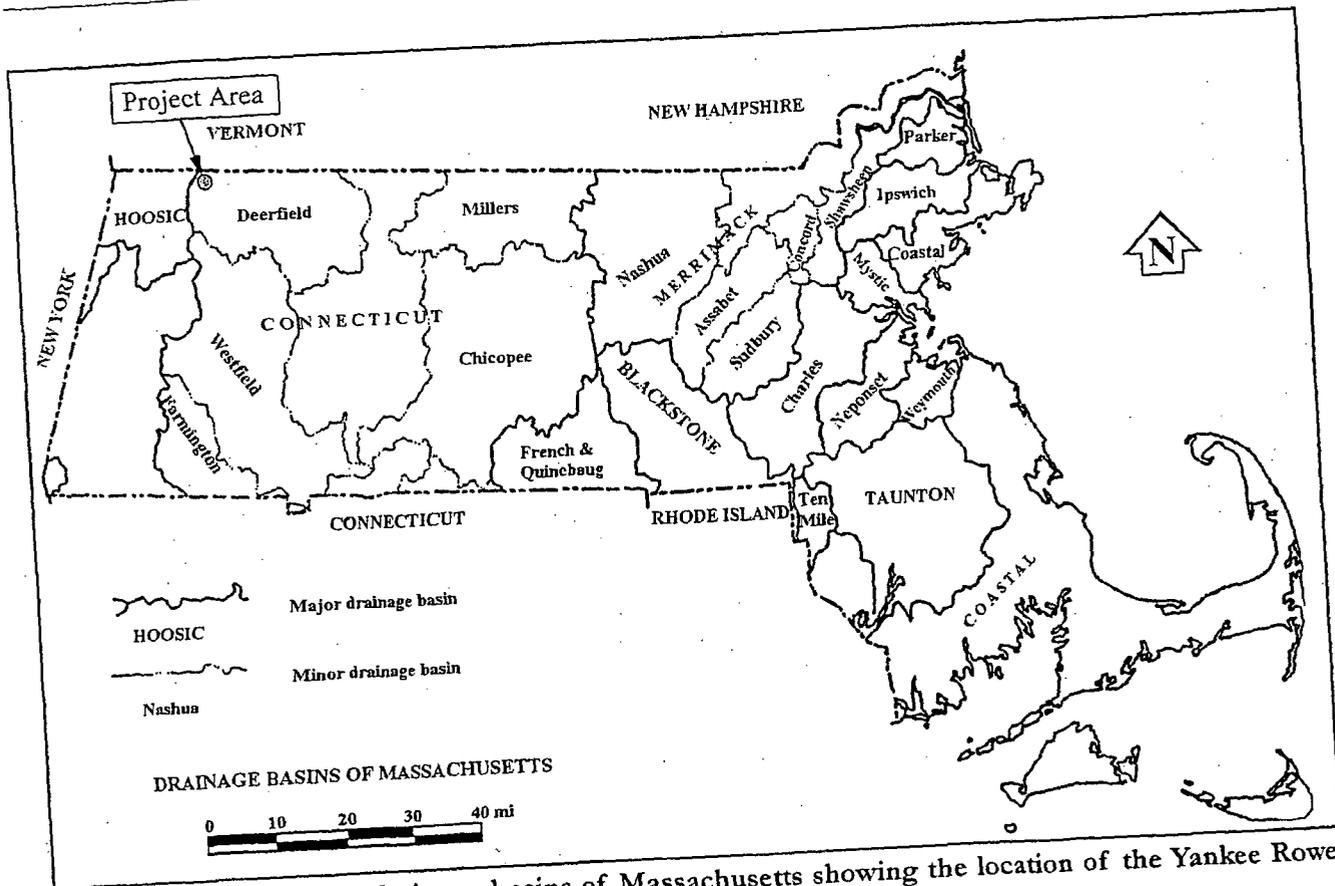


Figure 3-2. Map of the drainage basins of Massachusetts showing the location of the Yankee Rowe project area.

CHAPTER FOUR

NATIVE AMERICAN CONTEXT

This chapter provides regional and local information regarding the known cultural patterns of Native American groups who lived within the Deerfield River drainage of northwestern Massachusetts. This database has been assembled as a result of professional CRM surveys in adjacent sections of Massachusetts (Davin 1990; Fitzhugh 1970, 1972; Hasenstab and McArdle 1987; Johnson and McArdle 1987; Johnson and Mahlstedt 1984; McBride 1990; Nassaney 1988; Nassaney et al. 1989) and Vermont (Hasenstab and McArdle 1988; Mulholland et al. 1982; Thomas 1979; Thomas and Campoli 1979). A prehistoric cultural chronology for New England is presented in Table 4-1.

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

The earliest documented prehistoric occupation in the vicinity of the Deerfield River drainage in northwest Massachusetts dates to the PaleoIndian Period. Diagnostic fluted projectile points are reported from locations in Deerfield, Gill, and Montague in the nearby Connecticut River valley (MHC 1984). The DEDIC Site (19-FR-42), located in Deerfield at the bottom of the former glacial Lake Hitchcock, underwent systematic archaeological investigation, yielding a Clovis-like fluted projectile point (Ulrich 1978). Another PaleoIndian site, 19-FR-313, is exposed by wind erosion on a high dune near Turners Falls Airport. It yielded numerous fluted points, fluted end scrapers, gravers, and associated red and yellow jasper chipping debris, as well as evidence of subsequent reuse during the Middle and Late Archaic periods (Hasenstab 1987).

The paucity of documented PaleoIndian sites in the Deerfield River drainage is not unique to that area, but characterizes much of the archaeological record of the Northeast as a whole. This low visibility is variably attributed to dramatic changes in the environment from the Late Pleistocene to early Holocene that destroyed or buried many sites under alluvium; the marginal habitability of the area during that period; and a preservation bias against site preservation proportional to the amount of time the site has been buried underground.

No PaleoIndian sites are listed within the Yankee Rowe project area.

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

Archaeological evidence of Early Archaic Period occupation in this area is equally scant. Single bifurcate base projectile points, the most diagnostic stone tool artifact from this period, are recorded for locations in Deerfield and Gill, including the Mackin Site (19-FR-12), located in the Riverside District (Hight 1979). Reasons for the low visibility of Early Archaic sites are generally similar to those cited for PaleoIndian sites (see above). Environmentally imposed restrictions on settlement during the Early

Table 4-1. Prehistoric Cultural Chronology for New England.

<u>General Period</u>	<u>Identified Temporal Subdivisions</u>	<u>Cultural Aspects</u>
PaleoIndian		
12,500-10,000 B.P.** (10,500-8000 B.C.)	(1) Eastern Clovis (2) Plano	Hunting of migratory game animals by small groups with a specialized, sophisticated lithic technology was the rule for highly mobile bands of hunter-gatherers.
Early Archaic		
10,000-7500 B.P. (8000-5500 B.C.)	(1) Bifurcate-Base Point Assemblages	Few sites are known, possibly because of problems with archaeological recognition. This period represents a transition from specialized hunting strategies to the beginnings of a more generalized hunting and gathering adaptation due in part to changing environmental conditions.
Middle Archaic		
7500-5000 B.P. (5500-3000 B.C.)	(1) Neville (2) Stark (3) Merrimack (4) Otter Creek (5) Vosburg	Regular harvesting of anadromous fish and various plant resources is combined with generalized hunting. Major sites are located at falls and rapids along major river drainages. Ground-stone technology is 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.)	(1) Brewerton (2) Squibnocket (3) Small Stemmed Point Assemblage	Intensive hunting and gathering were the rule in diverse environments. Evidence for regularized shellfish exploitation is first seen during this period. An abundance of sites suggest increasing populations, with specialized adaptations to particular resource zones. Notable differences between coastal and interior assemblages are seen.
Transitional		
3600-2500 B.P. (1600-500 B.C.)	(1) Atlantic (2) Watertown (3) Coburn (4) Orient	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.

* Termed Phases or Complexes
** Before Present

Table 4-1. Prehistoric Cultural Chronology for New England.

<u>General Period</u>	<u>Identified Temporal Subdivisions</u>	<u>Cultural Aspects</u>
Early Woodland		
3000–1600 B.P. (1000 B.C.–300 A.D.)	(1) Meadowood (2) Lagoon	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. (300–950 A.D.)	(1) Fox Creek (2) Jack's Reef	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. (950–1500 A.D.)	(1) Levanna	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. (1500–1650 A.D.)	(1) Algonquian	Groups such as the Wampanoag, Narragansett, and Nipmuck were settled in the area. Political, social, and economic organizations were relatively complex, but underwent rapid change during European Colonization.

Archaic would have been less severe than during the PaleoIndian Period, particularly in the river valley lowlands, and suggests that there are more sites to be found than previously imagined (Dincauze and Mulholland 1977).

However, no Early Archaic sites have been identified in the Yankee Rowe project area.

Middle Archaic Period (7500–5000 B.P.)

Middle Archaic Period sites, identified primarily on the basis of diagnostic Neville and Stark projectile points, are more numerous in this area than those of the preceding periods. This is generally true for most river drainages throughout southern New England. Sites with Middle Archaic components have been identified at the Riverside Archaeological District and the nearby WMECO Site in Gill (Curran and Thomas 1979; Thomas 1980). The WMECO Site (19-FR-15) produced a well-defined Middle Archaic component that was considered strikingly similar to the Neville Site located on the Merrimack River in New Hampshire. The WMECO Site yielded 52 Neville-like and five Stark projectile points in deep cultural deposits, along with several Stark-like points high in the stratigraphic sequence (Thomas 1980). The Mackin Site reportedly yielded an assemblage of more than 100 Middle Archaic projectile points, made of local quartzite (Nassaney 1988). A crystal quartz plano-convex scraper and an Otter Creek projectile point were found on Fort Hill (Sites 19-FR-13 and 14), and in the Riverside Archaeological District. In addition to these finds, one site on the south bank of the Deerfield River in Deerfield, identified during the survey of the Stillwater Bridge Hydroelectric Project, yielded a Neville projectile point and associated chipping debris (Mulholland et al. 1982).

In general, Middle Archaic sites are located in both lowland and upland sections adjacent to large rivers and small streams. The location of Middle Archaic sites in the Riverside District, a well-documented anadromous fishing area, along with abundant fish remains recovered at these sites, indicates that anadromous fish were an important part of the prehistoric diet during this period. Supplies of anadromous fish would have been most plentiful in larger rivers such as the Deerfield, where the effects of microhabitat fluctuations affecting small tributaries would have been negligible (Moore and Root 1979). Concentrations of prehistoric sites near falls, rapids, and at confluences of narrower tributaries with the large rivers would be expected. Despite changes in the course of the river, the locations of falls and rapids would have changed little over time, since they are usually associated with bedrock sills, which once exposed, are eroded very slowly. Narrows or confluences formed in alluvial deposits, however, would be more ephemeral over time, since river channels are much more unstable flowing through alluvium than flowing over bedrock.

No Middle Archaic sites have been identified in the Yankee Rowe project area.

Late Archaic Period (5000–3000 B.P.)

All three traditions (Laurentian, Small Stemmed, and Susquehanna) of the Late Archaic Period in southern New England are represented in the vicinity of the Deerfield River valley in Massachusetts. In fact, in the lower portion of the valley, it appears that the most extensive prehistoric settlement occurred during the Late Archaic Period (Mulholland et al. 1982). Area sites with Laurentian components consist of the WMECO and Walnut Street sites in the Riverside Archaeological District in nearby Gill (Curran and

Thomas 1979). The WMECO Site yielded Laurentian Tradition Brewerton and Vosburg projectile point types (Thomas 1980). Several of the sites identified in Deerfield for the Stillwater Bridge Hydroelectric Project contained diagnostic Small Stemmed, Squibnocket Triangle, and Susquehanna Broad projectile points (Mulholland et al. 1982).

Fitzhugh's survey work along a 5-mile stretch of the Deerfield River and Bear Swamp resulted in the identification of the Fife Brook Site Cluster, located on a terrace roughly one-quarter mile south of the confluence of Fife Brook and the Deerfield River in Florida (Fitzhugh 1970, 1972). Yielding quartzite lunate knives, bifaces, preforms, chipping debris, hammerstones, and fishing weights, the sites were interpreted as temporary, task-specific camps dating to the Late Archaic Period. Six common characteristics linked the sites into a coherent settlement profile including: location on small Pleistocene or post-Pleistocene river terraces; location near a small tributary (Fife Brook) entering the main branch of the Deerfield; association with rapids on the main river; lack of pottery; severe erosion; and single component, short-term occupation.

Recent work at Fife Brook 5 provided additional data about prehistoric exploitation of this section of the Deerfield River valley. Located on a small terrace overlooking a series of rapids, excavations at the site yielded diagnostic materials including a complete Cheshire quartzite Atlantic/Snook Kill projectile point and seven small fragments of mineral- and shell-tempered aboriginal pottery (Heitert and Cherau 2002a, 2002b). While the site did not yield dramatically new information about the prehistoric exploitation of the Great Bend portion of the Deerfield River, its environmental complementarity with Fitzhugh's Fife Brook Site Cluster does corroborate Fitzhugh's earlier conclusions concerning settlement patterns of the area.

Late Archaic occupations occur in a wide variety of environmental locations, including near falls, on the banks of large and small rivers and streams, on floodplain terraces, on lake-bottom soils, and in upland locations. Activities present on sites include fishing and fish processing along with caching and quarrying lithic materials. Two important lithic materials, diabase or "traprock" and steatite or "soapstone," were quarried from source areas in the Deerfield and larger Connecticut River valleys in northwest Massachusetts (MHC 1984). Traprock is a major component of the Holyoke and Mount Tom ranges with additional outcrops scattered up and down the valleys. This material was well suited for use in ground-stone tools needed for woodworking, quarrying, cultivation, and processing nuts and other plant foods (Dincauze 1979). The steatite quarries are found further south in the Swift, Wilbraham, and Westfield River drainages. This material was used to make polished tool implements, smoking pipes, and stone bowls during the Late Archaic, Transitional Archaic, and Woodland periods.

No Late Archaic sites have been identified in the Yankee Rowe project area.

Woodland Period (3000–450 B.P.)

The Woodland Period in the Deerfield and adjacent Connecticut River valleys is more visible in the archaeological record than any of the earlier periods. This may be because of the development of pottery technology and the presence of ceramic sherds in many of the area sites. In addition, Woodland settlement may have focused on the arable lake bottom and alluvial soils of the river valley lowlands, making it more likely for sites dating to this period to be exposed by plow or floods (MHC 1984).

Excavated Woodland Period sites in the area exhibit a wide range of sizes, contain diverse evidence of subsistence-related activities, and occupy a variety of habitats. For example, large fishing station middens were discovered in the Riverside District and at the WMECO Site in Gill, in both cases overlying Archaic components representing similar activities (Curran and Thomas 1979).

Sites dating to the Early, Middle, and Late Woodland in the area are found predominantly on floodplains within the river drainages. Small upland sites, however, have been reported, including an Early Woodland occupation in Belchertown (Mulholland and Ham 1980) and a Middle Woodland site on Wills Hill in Montague (Thomas 1979). The Wills Hill Site (19-FR-37) is interpreted as a camp occupied by one or two families during the late summer. The artifact assemblage suggests that stone tool production was the dominant activity at the site, with dolomitic mudstone used most frequently in production (Thomas 1979). Excavations at the WMECO Site and Fort Hill in the Riverside Archaeological District in Gill have produced Early Woodland assemblages consisting of diagnostic Meadowood points, Adena-type blocked end tube pipes, and Vinette I pottery (Hight 1979). Late Woodland pottery has been recovered from Fort Hill at the Casley Site (19-FR-14), and diagnostic Levanna projectile points at the WMECO Site in the Riverside Archaeological District (Thomas 1980).

Several of the sites located along the Deerfield River in Deerfield, Conway, and Shelburne during the survey of the Stillwater Bridge Hydroelectric Project contained Early to Late Woodland Period components (Mulholland et al. 1982). Early Woodland occupations are represented by diagnostic Vinette I (exterior/interior cord-marked) pottery, and Middle to Late Woodland components similarly identified by the presence of thin-walled, grit-tempered pottery. These pottery assemblages were found in association with calcined bone, fire-cracked rocks, and quartz, quartzite, and chert chipping debris. All of the sites identified during this survey are situated on well-drained alluvial floodplains or intact terrace/bluff landforms within 330 ft of the Deerfield River (with the exception of one site found on a tributary) (Mulholland et al. 1982).

No Woodland occupations have been identified within the Yankee Rowe project area.

Contact Period (400–150 B.P.)

The lower Deerfield River valley in Massachusetts was occupied by a Native American group known as the Pocumtucks during the Contact Period. Dutch and English traders had contact with this group before 1636 (Snow 1980). Early historic accounts describe the Pocumtucks as living in sedentary agricultural villages, presided over by a principal sachem (Snow 1978; Washburn 1978). Clans or families appear to have controlled separate tracts of land, which they sold to newly arrived colonists (Sheldon 1984). In 1663, the Pocumtucks were massacred at their fort near Deerfield by a group of invading Mohawks. Following this battle, the colonial government granted the Mohawks 8,000 acres of Pocumtuck land. By the end of the seventeenth century, the surviving Pocumtucks had become integrated into colonial society as laborers, and Native American settlement shifted from dispersed hamlets to the colonial villages (Sheldon 1984). There are no known village sites in the Deerfield River valley dating from this period (MHC 1984).

CHAPTER FIVE

EURO-AMERICAN CONTEXT

This chapter presents the results of historical background research for the Yankee Rowe project area. The first section provides a brief regional overview, followed by a specific discussion of the historical development of Rowe and Monroe.

Regional Overview

English Settlement

Northwestern Massachusetts was first settled beginning in the mid-seventeenth century. John Pynchon bought the Native American title to Deerfield (Pocumtuck) between 1666 and 1672 on behalf of the proprietors of Dedham, and then was invited to become one of the proprietors of the newly acquired property (Martin 1991:51; Melvoin 1989:56). The tract of land acquired by Pynchon encompassed what are now today the towns of Deerfield, Conway, Shelburne, Greenfield, and Gill (Barber 1839:246).

English settlement began in Deerfield in 1670, and the trials and tribulations associated with that earliest community had widespread repercussions for settlement throughout the rest of the lower Deerfield River valley as well as the Connecticut River valley. The theological and political conflicts among the Deerfield leadership throughout the seventeenth and eighteenth centuries provided the catalyst for the settlement of additional Deerfield River communities (i.e., Conway and Shelburne), and were influential in guiding the course of social and political change over time.

Settlement Patterns

Anglo-Indian warfare reached a climax during King Philip's War (1675–1676), but continued sporadically until the 1760s. Other major conflicts included King William's War (1688–1689), Queen Anne's War (1703–1712), King George's War (1729–1745), and finally the French and Indian War (1766). Each left a devastating mark on valley communities, both Native American and European.

Rowe and Charlemont originally played an important role in the security of the Deerfield River valley, in particular the town of Deerfield, in the mid-eighteenth century. Initial settlement within the present boundaries of Rowe occurred in 1744 with the construction of Fort Pelham. The fort was part of a larger "line of forts" established by the colony of Massachusetts to check French and Indian attacks on the lower Deerfield and Connecticut River valleys. By the mid-1740s, the defensive line stretched from "Fort No. 4" a few miles east of Brattleboro, Vermont, to Fort Dummer on the Connecticut border, and then proceeded westward toward New York with Forts Sheldon, Morrison, Pelham, and Massachusetts spaced 5 to 10 miles apart (Melvoin 1989:279).

Fort Pelham's defenses included a wooden stockade situated on a hill a short distance northwest from Pelham Lake. It was occupied by a small garrison until its abandonment in 1754. The first civilian settlement of the town was not organized until 1762, when Reverend Cornelius Jones became the sole proprietor (Williams 2004). Later settlement took place near the present village of Rowe.

At about the time Fort Pelham was abandoned, small palisaded forts were built around the remaining three settlements in Charlemont. These forts, Hawk's Fort, Rice's Fort, and Taylor's Fort, were built on lands abandoned by previous English settlers.

While war and violence raged on the frontier during King George's War and the final French and Indian War, Deerfield's population expanded from 310 inhabitants in 1729 to 737 by 1765 (Melvoin 1989:279). This dramatic population increase caused overcrowding and political instability.

Deerfield spawned a number of new settlements, including Shelburne in 1742, and Conway in 1750 (Melvoin 1989). Shelburne was recognized as a separate political entity in 1768, and later became an incorporated town in 1775. Conway was recognized in 1767, and also was incorporated in 1775 (Melvoin 1989). Permanent settlement of these towns was not immediate.

Early Economic Activities and Growth

Economic productivity suffered as a result of Anglo-Indian tensions during the seventeenth and early eighteenth centuries. In some communities it even prevented farmers from improving needed land, a situation that served to hinder community growth and stagnate economic prosperity (Melvoin 1989). Towns, crippled by fear, could not support their own defenses and suffered great losses of life and property.

The colonial economies of the lower Deerfield River valley were dominated by agriculture. In general, crops were cultivated along the Deerfield River floodplain, while the uplands were used primarily for livestock grazing, with the exception of the central and north-central uplands of Shelburne where high-quality cropland occurs.

Pre-Industrial Economic Activities and Evolution

In general, pre-industrial economic activities and patterns in the lower Deerfield River valley were closely tied to the major economic enterprise of the region, agriculture. Historic adaptation to the Berkshire foothills also depended on non-agricultural economic activities. Before industrialization and the construction of adequate intrastate and interstate transportation routes (pre-1850), cottage industry was an essential component to the upland Massachusetts farming communities.

Small craft and cottage industries, such as sawmills and gristmills, were integral to the economic development of the towns in the lower valley. From humble beginnings, many of these towns developed a variety of specialized industries. For example, entrepreneur Ruel Thayer built a dam and power canal on the Deerfield River in Charlemont in 1800 to power a sawmill, foundry, edge tool factory, tannery, and clothing works (MHC 1982c). Josiah Pratt subsequently established a triphammer in 1832, and produced axes and other edge tools. Not all non-agricultural pursuits in Charlemont were powered by

water. It is reported that at least two shops in town, during the early nineteenth century, put out material for the home production of palm leaf hats (MHC 1982c). The economic development experienced by Charlemont was typical of the region.

As early as 1808, a fulling mill was established in the town of Rowe by Selah Munson. Late in 1812, Erastus and Moses Gleason, expanded the operation to handle the spinning of satinets (Nancy Williams, personal communication, 2004). Rowe's shepherders benefited enormously from this development. By 1837, there were 302 saxony, 1,630 merino, and 364 other varieties of sheep, producing wool valued in that year at \$4,249.80 (Barber 1839:270). Raising sheep for wool was also an important business in Charlemont, where in 1837, the value of wool produced was \$7,460 (Barber 1839:242). Monroe and Shelburne farmers also participated in the wool industry, with product valued on par with Rowe. A small "broadcloth" mill was started in Conway, circa 1812, but failed shortly after (MHC 1982d). Because of the paucity of documented carding and fulling mills in these towns, it is likely wool was carded, spun, dyed and woven in the home.

Unique industries also arose in the region during the early nineteenth century. Joseph Griswold invented a machine to cut wooden boxes out of maple planks in Colrain, circa 1828 (MHC 1982e), a technology soon exported to Shelburne and Buckland so that by 1832 both communities were manufacturing "shaving boxes." Griswold also is credited with adapting machinery capable of manufacturing sash, doors, and blinds. Another industry unique to the area was a comb shop operated by John Ware, begun in 1832 in Conway. Ware's shop produced bone combs worth \$13,900 in that year. Most of the combs were shipped to Albany (MHC 1982d).

Industrial Revolution in the Deerfield River Valley

The coming of the railroads to western Massachusetts in 1867 (the Troy and Greenfield Railroad) ushered in a new age of industrialization and commercialism. Participation in the industrial revolution for the Lower Deerfield towns, however, was primarily in a consumption rather than production role.

While the Industrial Revolution reached several of the towns in the region sooner than others, it never reached some. In 1837, two incorporated textile companies emerged in Conway: the Conway Manufacturing Company, under Edmund Burke, which began milling woolen fabric in what is now Burkeville, and the same Conway Mills, located farther downstream on the Deerfield (MHC 1982d). In 1846, two cotton mills were started near Burkeville. The intensification of textile production was felt in other towns. The Franklin Manufacturing Company, a woolen mill, was started in Rowe in 1836 (MHC 1982b), and two satinet mills were begun in Shelburne in 1945.

In Shelburne, one of the most viable economic pursuits to arrive in the 1870s was the cutlery industry. By 1880, the town's leading employer was J.W. Gardner, an Englishman and former cutlery superintendent at Lamson & Goodnow in Buckland, Massachusetts. He retired in 1876 to form a pocket cutlery firm on the Shelburne side of the river (Prendergast 1948). This industry, along with other manufacturing interests (e.g., edge tools) in the area, were given an enormous boost in production by the introduction of hydroelectric power with the construction of the Somerset Reservoir, circa 1911-1912. The village of Shelburne Falls quickly became the hub of local industrial activity with the establishment of the New England Power Company's "great hydroelectric power center" along the

Deerfield River. The early-twentieth-century prosperity of the village also was because of the establishment of the Mayhew Steel Products Company. By 1830, this industry employed nearly 200 persons in the manufacture of a variety of forged tools.

The establishment of the village of Shelburne Falls on the Buckland and Shelburne sides of the river is attributable to the prosperity of Lamson & Goodnow cutlery factory (see above). A patent on the crooked scythe snath was reportedly secured by Silas Lamson circa 1800. Around 1833, Lamson erected a snath shop on the Shelburne side of the falls. By 1845, he employed 75 individuals producing snaths valued at \$60,000 (Kendrick 1937). The manufacture of cutlery had been added to the company's production line around 1842. In 1851, the cutlery was moved to a new site on the Buckland side of the river, where it dominated the town's industrial sector for the next 50 years. In 1875, for example, the value of Lamson & Goodnow products was \$400,000, representing 94 percent of the total value of manufactured goods in the town.

The establishment of Silas Lamson's scythe snath shops at Cumington and Shelburne Falls in the 1830s influenced the growth of industrial activities in several nearby towns. In Charlemont, the manufacture of scythe snaths began in the 1830s, and by 1855 the industry was producing \$15,000 worth of tools, and constituted the town's largest industry through the second-half of the nineteenth century (MHC 1982c). The establishment of additional tool industries complemented these shops. In 1891 W.M. Pratt founded a rake handle factory, and the following year H.H. Frary built a carriage shop in the town (MHC 1982c). Like in Shelburne, the manufacturing potential of all these industries was boosted by the arrival of hydroelectric power in the Deerfield River valley circa 1911-1912.

A unifying environmental aspect of most of the industries discussed above is their proximity to the Deerfield River. Industrial operations such as tanneries and sawmills absolutely required abundant waterpower, while the flat terraces that lined the river provided a convenient and relatively cost-effective avenue for the installation of both light and heavy rail line. These operations tended to work in concert as production and distribution centers and often encouraged the settlement of nucleated village complexes. Historic domestic settlement, however, always had been focused on the banks of the river as a means to capitalize on the relatively flat and fertile floodplains and terraces.

The Historical Development of Rowe and Monroe

The history of the first formal settlement of Rowe begins in 1762. During this year, the General Court of Massachusetts appointed a committee to sell "nine Townships and 10,000 acres of the Province Lands" in what was then Hampshire and Berkshire counties. Cornelius Jones, a Congregational minister from Sandisfield, purchased the 10,000-acre, 4-square-mile tract at auction in Boston for 380£ on June 2, 1762. As a condition of the sale, Jones was granted five years to settle the property with 25 people, each with his own dwelling house and seven acres of cleared and fenced land. Jones, along with his wife and children was the first to occupy the parcel, where he is said to have "erected a small house of split planks . . . where there was not another house within six or seven miles" (Brown 1960:29).

Jones dubbed this vast expanse of heavily wooded land along the river Myrifiel, meaning "a field of 10,000 acres". The name was corrupted over the succeeding years to "Merryfield" or "Murryfield", leading to no small amount of confusion as to the parcels original title (Brown 1960: 29-30; Williams

2004). Settlement of Myrifield proceeded apace with families hailing from Worcester County and encouraged, no doubt, by the low land prices offered by Jones.

In 1779, Jones sold his 4,000-acre stake in Myrifield to William Parkhurst and Company of Brookfield for the sum of 9,000£. The deed for this transaction describes the property as including all of Jones' land west of the Deerfield (now within Monroe), the barren land on the east slope of the river, and an irregular strip that included his farm, the site of the old fort, and part of the swamp lands now comprising Pelham Lake (Brown 1960: 31). Percy Brown's history of Rowe relays that after the sale of his interest in Myrifield, Jones retired to New York and died a poor man; more recent genealogical research suggests, however, that while Jones did in fact resettle in Whitehall, he died anything but a poor man (Williams 2004).

By 1775, Myrifield claimed 28 families and by 1784 there were 88 polls, 77 of which were "ratable." Community funds were collected to support "Gospel Schools, Roads and other Necessary charges," and officers were chosen to administer the day-to-day activities of the settlement. In response to a growing population, Myrifield representatives presented a petition for incorporation to the General Court in 1779. After several stops and starts, the petition was granted in 1783, at which time a portion of the Green & Walkers land grant also was appended to the eastern side of the new town of Rowe.

Not long after the incorporation of Rowe, Daniel Canedy of Colrain ventured across the Deerfield to become the first settler of the western portion of Rowe in 1800. He was followed in rapid succession by Ebenezer Hayward, Samuel and Daniel Gore, and three brothers by the names of David, Benjamin, and Nathan Ballou (Brown 1960:119). From the very beginning, the new settlers found it difficult to cross the river to attend church services and participate in town government, and often had to travel as far north as Readsboro and Whitingham, Vermont, to find a passable portion of the river before heading back south into Rowe.

In 1801, the families petitioned Rowe to be set off as a separate entity, but the Massachusetts General Court was reluctant to grant this privilege. As a compromise, the town of Rowe voted in 1803 "that the inhabitants of the town west of the Deerfield River, be exempt from paying their School and Highway Taxes and that they have the privilege of Schooling and working out their own money in their own neighborhood" (Brown 1960:119). By 1821, the land west of the Deerfield was finally set off as its own town, and was incorporated in 1822 as Monroe in honor of President James Monroe.

The rugged environmental profile of Rowe and Monroe restricted development of the area throughout the nineteenth century, with most economic pursuits focused on small-scale farming and industry. Mid-to late nineteenth-century maps of the towns depict several blacksmith shops and sawmills, a woolen mill and tannery along Pelham Brook dating to 1858, and a satinet factory. At least one of the blacksmith shops, the Sibley, Richards and Hunt shop (ca. 1866) and the Charles S. Newell shop survived into the twentieth century before they were destroyed by fire in 1941 (Blagg 2003). Larger-scale industries included the Davis Mine (ca. 1882–1911), Foliated Talc Company (ca. 1900) in Rowe, and Hoosac Quarry Company, and the Ramage Paper Company (ca. 1887) in Monroe (Blagg 2003). The Ramage Paper Company, the forerunner of Deerfield Specialty Papers, Inc., was responsible for the construction of the store, post office, and various factory houses that currently make up the center of town at Monroe Bridge.

Perhaps the most dramatic change for both towns was the construction of the Hoosac Tunnel and Wilmington Railroad (HT&W) in 1885, known colloquially as the Hoot, Toot & Whistle Railroad. Built by the Newtown brothers of Holyoke, Massachusetts, as a means to haul pulp from Readsboro, Vermont to Holyoke, the railroad was an impetus to the development of several other industries along the river including the paper factory in Monroe, and Lime Hollow, a lime kiln operation in the village of Sherman. The arrival of the railroad resulted in a massive population explosion as the railroad construction and burgeoning industries demanded a large and inexpensive workforce. Many of the new arrivals hailed from Poland, Ireland, and Italy and introduced new cultural ideals and religious practices to the predominantly English-derived, Protestant population of the area (Burns 2003).

The railroad continued operation well into the twentieth century and underwent several relocations in order to accommodate the construction of the massive hydroelectric developments within the river valley. During the late 1950s it was used to haul materials for the construction of Yankee Rowe. By the 1960s, however, the preferred transportation method was trucking, and use of the HT&W dropped off precipitously. By the late 1960s, the Deerfield Glassine Company, formerly the Ramage Paper Company, was the only business in the valley that continued to use the service. Lack of funds and usage forced the closure of the line on July 15, 1971 (RHS 1971:14) the last run was conducted on August 2, 1971.

Another major development in the history of Rowe and Monroe was the creation of the Deerfield River Hydroelectric development, stretching from Somerset, Vermont, to Conway, Massachusetts. The rapid adoption of electricity for industrial and domestic uses during the 1880s created a demand for hydroelectric power plants in communities throughout the nation.

The hydroelectric power potential of the Deerfield River was first realized in 1897, when the Shelburne Falls Electric Light and Power Company (SFELPCO) constructed a waterwheel-driven generator that provided the first electricity to the town of Shelburne Falls. In the first three decades of the twentieth century, the Deerfield River was developed intensively as a source for hydroelectric power.

In the second decade of the twentieth century, Malcomb Chace and Henry Harriman formed the New England Power Company (NEP) with the intention of creating an integrated hydroelectric power generating and transmission system that would meet the growing demand for electricity in central New England. The Deerfield River was to play an integral role in NEP's plans. Surveys to determine areas with potential for hydroelectric development were undertaken by NEP between 1908 and 1911. The initial phase of the Deerfield River Hydroelectric Project system started with construction of the Somerset storage reservoir in 1912.

After World War I, the regional demand for electricity increased sharply. NEP attempted to keep up with the market by adding several new plants to its system. The Searsburg Development, which was constructed in 1922, was the first addition to the NEP system on the Deerfield River during this second phase of construction. The Harriman Development, the largest in NEP's Deerfield River Hydroelectric Project system, was completed in 1924 at Davis Bridge, Vermont. The Sherman Development, a fully automated hydroelectric facility completed in 1927 in Rowe, Massachusetts, was the last facility constructed as part of NEP's original Deerfield River system.

The construction of Sherman Dam resulted in the inundation of flat, arable lands along the immediate shoreline of the Deerfield River and the destruction of homes that occupied those lands, including several within the current project area. By the mid 1950s, the promise of nuclear energy encouraged several electric utilities to form the Yankee Atomic Electric Company (YAEC) for the purpose of generating power from the new technology. Between 1955 and 1958, YAEC acquired 1,800 acres along the Deerfield River in Rowe and Monroe, and construction began in 1957. The plant generated power and provided jobs in the area until 1992, at which time the facility was shut down and decommissioning procedures were implemented.

CHAPTER SIX

RESULTS OF FIELDWORK

Historic Period Resources

During the nineteenth century, the Yankee Rowe project area was home to a small agrarian community nestled within the steep slopes and deep valleys of the Deerfield River. Grand houses and more modest homes and farms dotted the landscape along with apple orchards, open pastures, sugar bushes, and a wide network of roads spreading from the river valley through the uplands. Between 1955 and 1958, Yankee Atomic acquired all of the property that comprises the current project area east of the Deerfield River. In addition to acquiring land, Yankee Atomic also purchased all of the houses, barns, outbuildings, and mills on that land.

The following section provides detailed descriptions of the field-verified historic sites identified during the walkover survey. In several instances, property ownership information presented for field-verified historic sites contradicts information provided by Rowe historian Nancy Williams. These contradictions are noted in the text where appropriate. The resolution of these disparities through detailed deed and probate research present an excellent future research opportunity for the property.

Field Verified Historic Resources

The Noyes Wheeler Farm Complex

The 544-acre Noyes Wheeler Farm was the largest and most profitable farm in the area, so much so that it was dubbed "Rowe's Golden Egg" for the amount of tax revenue it generated each year (RHS 1971). This revenue was made possible by Noyes' successful farming strategy that included specialized sheep and cattle husbandry, horse breeding, and timbering. Located on the hills east of the nuclear plant, the Wheeler property comprised a large two-story frame house of 20 rooms, an enormous barn, a sugarhouse, apple orchards, pastureland, and a sawmill (Figure 6-1). This house was built to replace a smaller log home built by Noyes' father, Jesse Wheeler, sometime before Noyes' birth in 1837. The new home was completed in

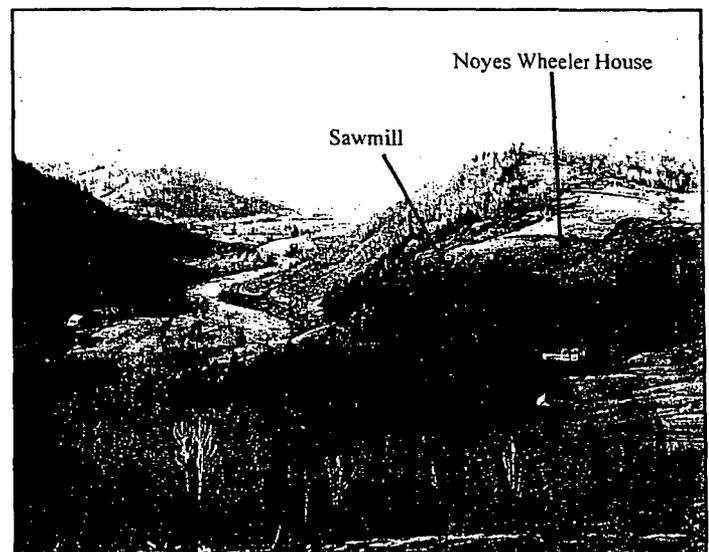


Figure 6-1. Photograph of the Noyes Wheeler house, pre-1927. (Note the smaller building in the foreground, possibly a sawmill that would have been used as part of Wheeler's timbering business).

1847 with the help of Noyes' brother, Marlin, who stayed on to help work the farm before building his own home closer to the banks of the Deerfield.

The remains of this impressive complex were identified west of an abandoned farm road that runs north to the Vermont border. The area is lightly forested with beech, birch, maple, and fern and the three surviving foundations are clearly visible from the road. The house foundation measures roughly 24-x-7 m and is built of dry-laid fieldstone walls roughly 2-m deep (Figure 6-2). Several portions of the foundation have been set or repointed with cement. A set of intact stairs leads into the cellar hole from a bulkhead entrance at the southeast corner of the structure (Figure 6-3). At the base of the stairs, a 1-x-1-m cold storage space has been built into the base of the western wall. The top of the western wall is inset with two small openings that once accommodated window wells/lights. The center of the foundation is dominated by a roughly 2-m square dry-laid fieldstone chimney base rising 6-ft from the cellar floor (Figure 6-4). An 8-x-1-m arrangement of stone slabs paves the southeast corner of the house and may have served as the base for a small covered porch.

The ell-shaped barn foundation measures approximately 18-x-9-m and is constructed of quarried and natural stone. The height of the walls varies from 50-cm to 2-m deep. A 5-m wide main entranceway marks the eastern wall of the structure, as well as two smaller openings at ground level, possibly for sheep or pigs (Figure 6-5). The structure maintains a distinctly "barnyard" odor. Several pieces of iron strapping and door hinges were found along the tops of the walls, but no additional cultural material was identified. The barn does not appear on the archival photograph taken of the property before the construction of the dam (see Figure 6-1), nor does it appear on any historic maps of the property.

Two smaller outbuilding foundations and the remains of a sugarhouse also were identified as part of the Noyes Wheeler Farm complex. Both outbuildings are built of



Figure 6-2. Photograph of the Noyes Wheeler house foundation, view northwest, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-3. Photograph of cellar stairs, Noyes Wheeler house foundation, view northwest, Yankee Rowe project area, Rowe, Massachusetts.

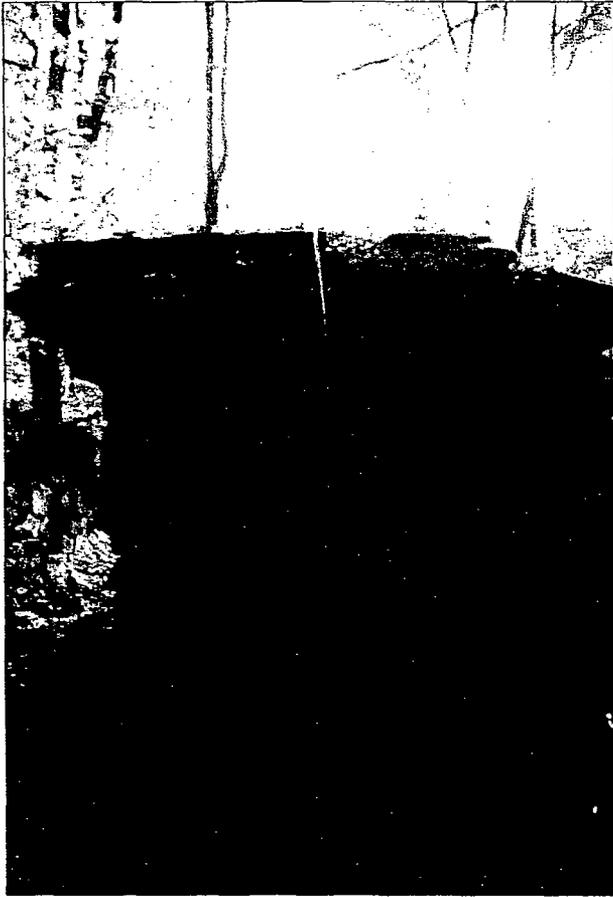


Figure 6-4. Photograph of chimney stack, Noyes Wheeler house foundation, view southeast, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-5. Photograph of the west wall of the Noyes Wheeler barn foundation, view west, Yankee Rowe project area, Rowe, Massachusetts.

dry-laid fieldstone to a height of roughly 1 foot. Outbuilding 1, located approximately 7-m north of the main house foundation, has only one clearly identifiable wall along its eastern side measuring roughly 5-m long. Two indistinct rubble walls extend from either side of this surviving wall into the adjacent slope at a distance of 2 m. The foundation elements of Outbuilding 2 are equally amorphous, with the eastern and western walls measuring 8 m in length and the southern wall measuring 3-m long. This building also appears to have been built into the adjacent slope, and a large pile of exposed bedrock and boulders lies at the northwest corner of the structure.

The Wheeler sugarhouse is located 22 m north of the main farm complex and is set back off the road at a distance of nearly 6 m. The structure comprises an unmortared fieldstone chimney stack measuring 1.5 m tall connected to a 6-x-1.5-m fieldstone firebox (Figure 6-6). An iron syrup pan survives next to the firebox and is cluttered with iron grates, pipes, and brick fragments.



Figure 6-6. Photograph of Noyes Wheeler sugar house, view southwest, Yankee Rowe project area, Rowe, Massachusetts.

Finally, across the farm road from the house foundation, the drylaid fieldstone remains of a former bridge crossing are visible. The abutments descend into a small stream and appear to mark the former road alignment to the Wheeler Brook sawmill (see below).

Wheeler Brook Sawmill

The Wheeler Brook Sawmill lies southwest of the Noyes Wheeler Farm complex. A building that conforms to the same general configuration and location of a foundation identified as a sawmill in the pre-1927 photograph of the Wheeler Farm (see Figure 6-1).

The existing foundation remains are located west of Wheeler Brook and consist of two dry-laid fieldstone walls measuring 34-x-16-m long and 1.7-m deep. The surrounding landscape has been heavily disturbed and bermed, and the large walls appear to have originally been built directly into the intact hillside along the brook. No cultural material was visible within or around the foundation.

Wilcox Pasture Barn

The remains of the Wilcox Pasture Barn were located near the top of the steep hillside running north from the Noyes Wheeler Farm. This part of the Wheeler Farm was alternately referred to as the Wilcox Place or the Wilcox pasture during the Wheeler tenure on the property, and was used by Noyes as pasturage and a source of pulpwood (RHS 1967:7, 1971:5-6). The 1971 Rowe Historical Society Bulletin states that "Not too many years ago, the old barn was on the Wilcox place, but the house seems to have been gone much longer - it was just left and gradually fell into decay and ruin" (RHS 1971:5).

The barn foundation is situated on a broad terrace overlooking Wheeler Brook to the east and lightly wooded with maple, beech, birch, fern, goldenrod, and wild aster. Several relict apple trees, possibly of the heirloom St. Lawrence variety, also still survive in the pasture (RHS 1971:7). The unmortared fieldstone walls measure roughly 12-x-6 m, with an irregularly shaped addition extending from the southeast corner (Figure 6-7). A second, amorphous configuration of stones extends at an angle from the southwest corner of the building, roughly parallel to the farm road. The main exterior walls of the foundation measure, on average, 1-m deep, with shorter segments defining the partitions inside of the foundation. The irregularly shaped walls attached to the barn are barely visible in many places. An iron wagon wheel also was observed lying on the ground about 6 m from the southern barn wall.



Figure 6-7. Photograph of the Wilcox Pasture Barn, view northwest, Yankee Rowe project area, Rowe, Massachusetts.

The Wilcox/Wheeler Cemetery

A portion of the Noyes Wheeler Farm suggests a much earlier occupation of the property in the form of a small cemetery located at the top of the hill north of the house (see Figure 6-1). The cemetery contains six headstones, two of which date to 1814 and 1824 and bear the names of Thomas and Renewed Wilcox, respectively (Figure 6-8). This elderly couple, aged 77 and 85, also are interred with an infant burial dating to 1811. The displaced marble headstone associated with this burial identifies the baby as the son of Jesse and Lydia Wheeler. The remaining three headstones are unmarked fieldstone and likely mark the burial of three other infants. The marked headstones read as follows: *In*



Figure 6-8. Photograph of the Wilcox/Wheeler Cemetery, view southeast, Yankee Rowe project area, Rowe, Massachusetts.

Memory of Thomas Wilcox Died Sep 29 1814 Aged 77; In Memory of Renewed Wife of Thomas Wilcox Died Jan 16 1824 Aged 85 (Figure 6-9); and, *Infant Son of Jesse & Lydia Wheeler Died April 27 1811*.

The cemetery lies at the edge of the abandoned farm road overlooking the Wilcox pasture and Wheeler Brook, and does not appear on any available historical maps of the project area. The area is marked by several large stone piles, some of which may have been created during the excavation of the grave shafts, and is lightly wooded with maple, birch, and beech. While the location of the cemetery now

seems rather remote, it was likely much more easily accessible during the nineteenth century as it lay only about $\frac{3}{4}$ of a mile from the old road to Readsboro and not too far from the Vermont line (RHS 1967:7).

The identity of Thomas and Renewed Wilcox and their relationship to the Wheeler family remains unclear, as does the reason for the lack of any documented houses in the area that might explain the presence of the cemetery. The Wilcox barn and house complex described above, however, may date to the early nineteenth century, and the occupants of this farm may have been responsible for the internments.

Unidentified Sugarhouse

The remains of a small fieldstone sugarhouse were located at the extreme northern end of the old farm road running past the Noyes Wheeler Farm. The dilapidated structure consists of the remnants of the firebox and a low mound of toppled fieldstone that was originally part of the chimney (Figure 6-10). The sugarhouse cannot be confidently associated with any particular person or property, although it is likely that it was used during the Noyes Wheeler occupation of the area.

Furlon House

The Furlon House, a two-story standing structure at the corner of Monroe Hill Road, currently is used by Yankee Rowe as a delivery station. The house appears to be in good condition, although several alterations have been made to the exterior, including the installation of vinyl siding (Figure 6-11). Based on map data, the house was built sometime between 1894 and 1947. The surrounding landscape appears to have been artificially cut and graded to accommodate the realignment of Monroe Hill Road between 1894 and 1947. Lord Brook flows directly south of the house into the Deerfield River.

Sartori/Lord Place

A small complex comprising fieldstone walls, brick, a shattered chimney stack and ceramic flue liner, and an intact concrete platform was identified during the survey. Described as sited opposite the Baldrachi (Sherman) place, the structure also was known as the Lord place, and was burned by Yankee Atomic in advance of the construction of the nuclear plant (RHS 1971:10). The building appears only one map of the property, and the ownership attribution is tentative given the unclear nature of the descriptions provided in the historical society bulletin.

The site is a hodgepodge of nineteenth-century features in the form of stone walls and the brick chimney stack as well as twentieth-century material in the form of the 4.5-x-2-m cement platform built into the



Figure 6-9. Detail photograph of Renewed Wilcox's headstone, Wilcox/Wheeler Cemetery, Yankee Rowe project area, Rowe, Massachusetts.

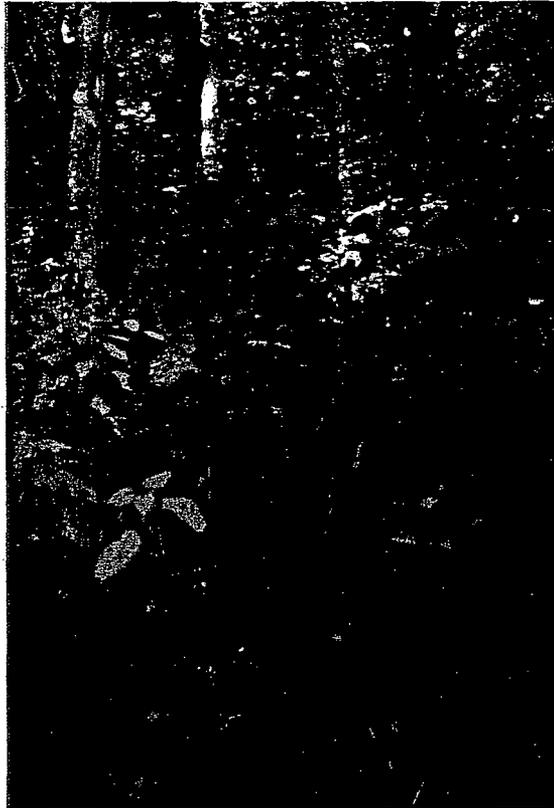


Figure 6-10. Photograph of the unidentified sugar house, view northwest, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-11. Photograph of the Furlon House, view northwest, Yankee Rowe project area, Rowe, Massachusetts.

adjacent hillside, possibly the remains of a garage (Figure 6-12). There is no clear indication of a house foundation, although the cluster of chimney remnants in association with a pile of fieldstone rubble suggests the possibility of a former domestic structure (Figure 6-13). The site area is lightly wooded with beech and maple and drops dramatically to the west toward the Deerfield River.

J. Sherman House

The remains of the J. Sherman House were identified near the base of Monroe Hill Road. While the local history provided about this home is somewhat unclear, it appears that it was occupied by the Baldrachi family during the twentieth century, and was gifted to the Rowe Community Church by Yankee Atomic for use as their parish house on Zoar Road (RHS 1971:9).

The foundation remains consist of two partial fieldstone walls measuring 3-x-9 m and built into a steep hillside trending up from the edge of Monroe Hill Road. The stone ranges from pumpkin-size cobbles to massive granite slabs, none of which appear to have been mortared (Figure 6-14). A grassy berm stretches 4 m south off of the southern end of the long wall of the structure, and several large stones, likely structural elements, have toppled off the foundation to the east. The topography east of the foundation appears to have been aggressively mined out, and large displaced boulders are visible along the cut line. Mature beech and maple trees surround the structure and a large grassy field defines the southern portion of the former house lot.

It is important to note that local historian Nancy Williams has pointed out that the locations of the J. Sherman and Sartori Lord houses, as discussed above, are in reverse. Although the historic map data would appear to contradict this claim, it is entirely possible that the cartographers were in error as to the house designations.

Unidentified Cellar Hole

A 3-x-4-m cellar hole was identified close to the banks of the Deerfield River southwest of the Sherman and Sartori sites. This structure does not appear on any available historical maps, so it is not possible to attribute it to any individual or family. The Rowe Historical Society Bulletin does mention a house "farther down Skeeter Hill," that was burned after Yankee Atomic's acquisition of the property (RHS 1971:10), as well as 2-3 cellar holes located at the top of the hill, but it is unclear whether this structure is included in that inventory.

The site consists of a shallow depression, bermed on three sides with a low fieldstone wall marking the eastern wall. An ell-shaped berm winds through the center of the cellar hole and likely marks the former location of the chimney stack (Figure 6-15). No cultural material was noted anywhere in or near the foundation. The site lies on a small terrace wooded with beech, hemlock, and minimal understory of fern and tree saplings. An unnamed stream winds past the site to the south, emptying into the Deerfield River, and is passable over a modern log bridge located southeast of the cellar hole (Figure 6-16). No evidence of an earlier bridge crossing could be identified in proximity to the current bridge crossing, although it is possible that one existed during the nineteenth century. While the site now appears somewhat isolated, it would have been situated much closer to Monroe Hill Road before that road was realigned between 1894 and 1947.



Figure 6-12. Photograph of the cement garage foundation, view southeast, Sartori/Lord Place Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-13. Photograph of collapsed brick chimney stack, Sartori/Lord Place, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-14. Photograph of the J. Sherman House, view southwest, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-15. Photograph of the east foundation wall, unidentified cellar hole, view east, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-16. Photograph of the modern log bridge, view southwest, unidentified cellar hole, Yankee Rowe project area, Rowe, Massachusetts.

D. Hicks/M.R. Hunt Farm Complex

The Hicks/Hunt Farm lies along the abandoned Shippee Road. The complex consists of several different features including a large barn foundation, two wells, a house and outbuilding cellar hole, two farm/ access roads, and stone walls. At the time of Yankee Atomic's purchase of all of the buildings within the project area in the mid-late 1950s, the house was occupied by Mr. and Mrs. Eugene Gates (RHS 1971:9). Earlier maps, however, show the house occupied by D.H. Hicks as of 1858, followed by M.R. Hunt in 1871. The house appears on the 1894 map of the project area, but is not attributed to any specific owner, and again appears on a 1947 map, presumably occupied by the Gates family.

The fieldstone house foundation comprises an ell-shaped cellar hole measuring approximately 12-x-7 m. Portions of the 1.2-m deep foundation have been repointed with cement (Figure 6-17). A line of fieldstone on the northern face of the foundation suggests the remains of a less substantially constructed addition or porch. A large pile of brick marks the former location of the chimney stack inside the ell-portion of the dug cellar hole. A rectangular, hollow concrete form has been built into the northwest corner of the cellar hole; the function of this feature is currently unknown, but it may have been used to protect some sort of electrical or mechanical equipment vulnerable to basement moisture. The house is surrounded by mature maples and scattered with late nineteenth and twentieth-century debris including pieces of a cast iron woodstove, barbed wire, bed frame fragments, and ironstone/whiteware ceramic sherds.

A substantial cellar hole, interpreted as the remains of a secondary barn or outbuilding, was identified southeast of the Hicks/Hunt house foundation. The 14-x-9-m cellar hole is constructed of dry-laid fieldstone (Figure 6-18). While large enough to serve as a domestic residence, the lack of any type of chimney feature suggests it was more likely utilitarian in nature.



Figure 6-17. Photograph of the D. Hicks/M.R. Hunt House foundation, view southeast, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-18. Photograph of the D. Hicks/M.R. Hunt outbuilding foundation, view northeast, Yankee Rowe project area, Rowe, Massachusetts.

The barn foundation, located roughly 48 m southwest of the main house, is a massive dry-laid fieldstone structure measuring 24-x-22 m and subdivided into several bays and yards. A set of collapsed fieldstone stairs leads from the central portion of the western wall into the approximately 2-m deep cellar hole, which in turn leads into the northern portion of the cellar hole or out into a bermed farmyard supported by two fieldstone retaining walls (Figures 6-19). A narrow window well opening is visible along the north wall (Figure 6-20). The primary entrance to the building appears to be through the open farmyard from the north, with a smaller entrance visible along the south wall.

J. Wheeler/E. Wheeler House

The J. Wheeler/E. Wheeler house also lies along the abandoned Shippee Road alignment. Local town history states that "There was . . . the Gideon Langdon place which, in a very early day, was the next house north of where Rowe's first minister, the Rev. Preserved Smith, lived." The Wheeler house foundation is the only identifiable house foundation located immediately south of the Langdon place, suggesting that it could have been the minister's residence and, as such, may date as early as 1787-1832 (Holland 1855:430). Williams suggests that this property is in fact the Edgar Pike place.

The foundation comprises a 5-x-7-m dry-laid fieldstone cellar hole built directly into a steep southwest-facing hillside. The southern wall of the structure is completely absent, but the remaining walls rise to an average height of 2 m. The northern section is a particularly well-constructed retaining wall and forms a gradually sloping ell to the west to provide additional support along the hillside (Figure 6-21). A large piece of ledge has been utilized for a significant portion of western wall. No ceramic or glass was identified inside the cellar hole, but a late nineteenth-century iron bed frame was found leaning against the interior west wall (Figure 6-22).

G. Langdon/J. Wheeler Farm Complex

The G. Langdon/J. Wheeler farm complex lies just north of the J. Wheeler/E. Wheeler house. In a discussion of the old houses along Shippee Road, the Rowe Historical Society states that "All that was left of the Langdon place, not so many years ago, was a cellar hole with the remains of a chimney" (RHS 1971:9). Additional map research indicates that another member of the prolific Wheeler family owned the house subsequent to Langdon's occupation (see Figure 5-2). The house appears to have been abandoned well before Yankee Atomic acquired the property as it does not appear on the 1894 USGS map of the area (see Figure 6-3).

The site currently consists of both a house and barn foundation as well as a series of stone walls that bound the house lot to the east. Both foundations are constructed of dry-laid fieldstone and are in relatively poor condition. The base of the chimney stack is still visible in the northwest corner of the roughly 3-x-4-m house foundation, but most of the walls have collapsed or been buried over time, leaving only low berms to mark their former locations (Figure 6-23). The 4.5-x-3.5-m barn foundation is built into a low east-facing hillside and retains some structural integrity along its eastern and southern face (Figure 6-24). The land adjacent to both buildings slopes rather steeply to the east toward a small stream. During the historic period, it is likely that the property was largely clear-cut and that the stream would have been clearly visible from the house. Mature maples surround both structures.



Figure 6-19. Photograph of the D. Hicks/M.R. Hunt barn foundation, view northeast, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-20. Photograph of the D. Hicks/M.R. Hunt barn foundation, north wall detail, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-21. Photograph of the J. Wheeler/E. Wheeler House, view west, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-22. Photograph of the J. Wheeler/E. Wheeler House, detail of west wall with ledge outcrop and iron bedstead, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-23. Photograph of the Langdon/J. Wheeler house foundation with collapsed fieldstone chimney stack, view northwest, Yankee Rowe project area, Rowe, Massachusetts.

J. Wheeler House

The J. Wheeler House was identified along the abandoned Shippee Road alignment close to the Vermont Border. The first appearance of this structure occurs on an 1858 map, but its architectural configuration, namely a substantial center chimney with three fireboxes, suggests an earlier construction date, possibly the late eighteenth century. The Rowe Historical Society Bulletin does make reference to the “old Edgar Pike place” on Shippee Road, but specifies neither its location nor exact time period (RHS 1971:9). By 1858 the house was occupied by J. Wheeler, but appears to have been abandoned shortly thereafter. The house does reappear, however, on an 1874 map of the property, suggesting that it was reoccupied, at least for a time, before it was permanently abandoned before 1920 (Figure 6-24).

Williams identifies this foundation as the Wheeler/Wilcox House. Given the early nineteenth-century dates recorded on the Wilcox and Wheeler gravestones (see above), and the archaic architectural configuration of the identified foundation, it is very plausible that Williams’ claim is accurate. While the distance between the residence and associated cemetery and barn foundation seems somewhat excessive, the identification of a westward trending “logging” road adjacent to the house in fact may be a relict farm road providing access to those features.

The remaining cellar hole consists of bermed foundation walls measuring 8-x-12 m and approximately 90-cm deep. The chimney stack, located in the center of the foundation and rising approximately 2.75 m from the cellar hole floor, is built with dry-laid fieldstone and remains in good condition. The broad base measures 3.5-x-5.5 m with what may be a small, cellar-level storage compartment built into its western face (Figures 6-25, 6-26). The fireboxes occupy the north, east, and west faces of the feature; the western hearth is the largest of the three, suggesting the kitchen location, followed in size by the



Figure 6-24. Photograph of the Langdon/J. Wheeler barn foundation, view west, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-25. Photograph of the J. Wheeler House chimney stack, west firebox, Yankee Rowe project area, Rowe, Massachusetts.

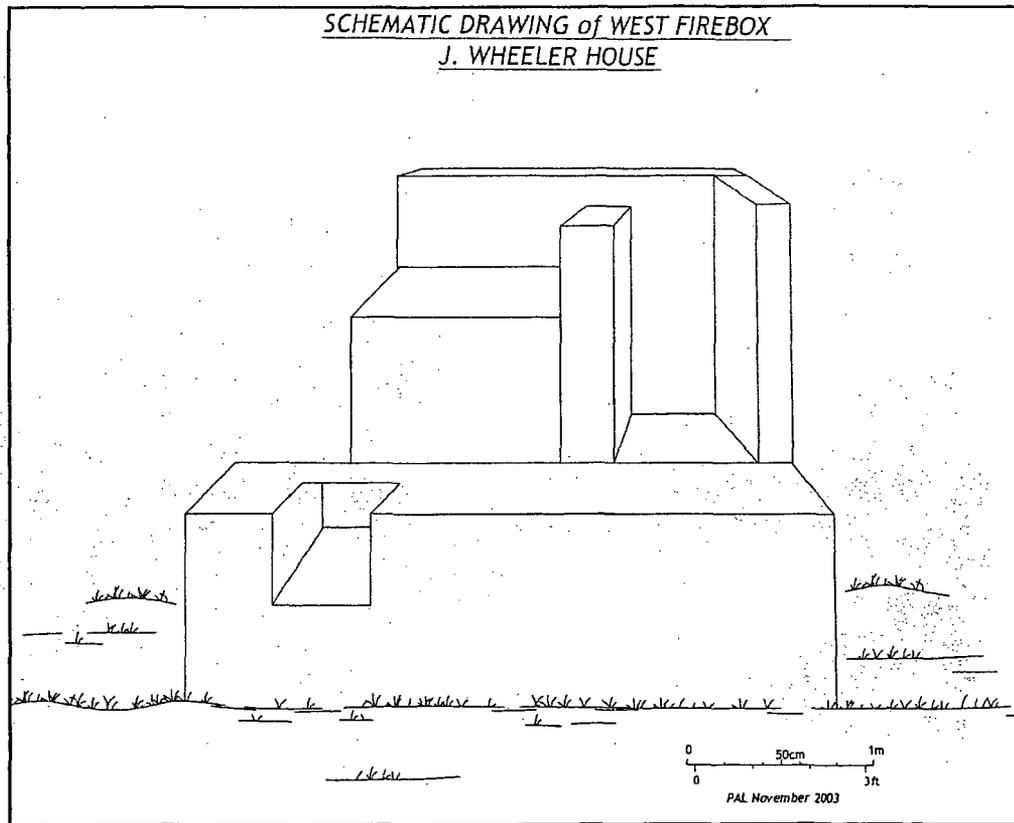


Figure 6-26. Schematic drawing of the west firebox of the J. Wheeler House chimney stack, Yankee Rowe project area, Rowe, Massachusetts.

eastern and northern hearths. The drill holes for a chimney crane are still visible in the east and west fireboxes (Figure 6-27). A single piece of pearlware was identified near the western firebox, but no other architectural or domestic debris was noted at the site.

Hoot, Toot & Whistle Railroad

The Hoot, Toot & Whistle railroad alignment is still visible along the Deerfield River shoreline south of Sherman Dam. As discussed in Chapter 5, this railroad had a major social and economic impact in the region, and operated continuously for more than 85 years. While the tracks and ties have been removed from the grade, remnant retaining walls are still visible along portions of the alignment, particularly along that section opposite the former Deerfield Specialty Papers factory building (Figure 6-28).

Non-Field Verified Historic Resources

The Philo Sibley place was a smaller farm located along the eastern shore of the Deerfield River (Figure 6-29). The structure, a two-story farmhouse with several additions and a large detached barn, was occupied by Sibley and his wife until his death in 1918, when it was purchased by the New England Power Company (NEP) in advance of the construction of Sherman Dam. Local history suggests that Philo built the house himself; a map dating to 1858, however, shows a building in the same location as the Sibley place, but occupied by someone by the name of A. Mason (RHS 1971:8). Whatever the

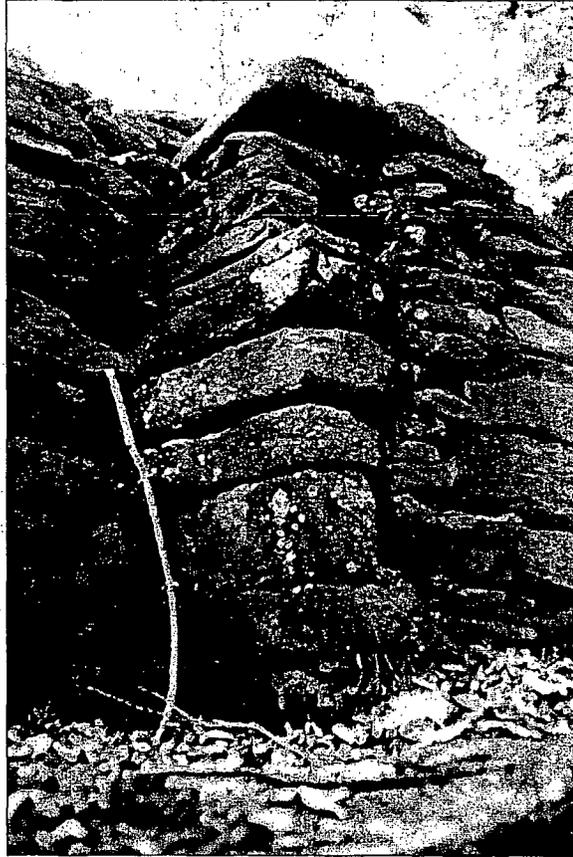


Figure 6-27. Photograph of the J. Wheeler chimney stack, detail of east firebox with drill hole for chimney crane, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-28. Photograph of remnant timber retaining wall along abandoned Hoot, Toot & Whistle Railroad alignment, Yankee Rowe project area, Rowe, Massachusetts.



Figure 6-29. Archival photograph of the Philo Sibley place, ca. 1920s, Yankee Rowe project area, Rowe, Massachusetts (source: RHS 2003)

construction and ownership history of the house, NEP used the building as employee housing until 1947, at which date it disappears from the map. It is possible that it burned, as suggested by local history (RHS 1971:8).

The Marlin Wheeler House, immediately upstream of the Sibley house, also was used as employee housing by NEP and remained standing until the acquisition of the property by YAEC (Figure 6-30). Like the Sibley place, however, the Wheeler house shares similarly conflicting map documentation. On two mid-nineteenth-century maps, the location of the Marlin Wheeler House is depicted as being owned by J. Wheeler. This discrepancy may stem from the possibility that Marlin's father, Jesse, may have held title to the property while his son actually resided in it.

The M. Kingsley and J. Sherman houses are depicted on the nineteenth-century maps of the Monroe portion of the project area. The M. Kingsley building disappears from Kingsley Hill Road by 1871, the same date that the J. Sherman House makes its first appearance. It appears the J. Sherman House is still occupied by 1894, but the structure is gone by 1947. No evidence of either building could be identified during the walkover inspection of area.

A foundation is depicted north of the Furlon House on a twentieth-century map of Rowe. It is unclear whether this building represents a house, barn, or outbuilding, but inspection of the location identified no remaining structural elements. The area appears to have been heavily disturbed, perhaps during the construction, digging and grading associated with the adjacent parking lot and Yankee Rowe property sign. The topography is steep, wet, and boulder-strewn.

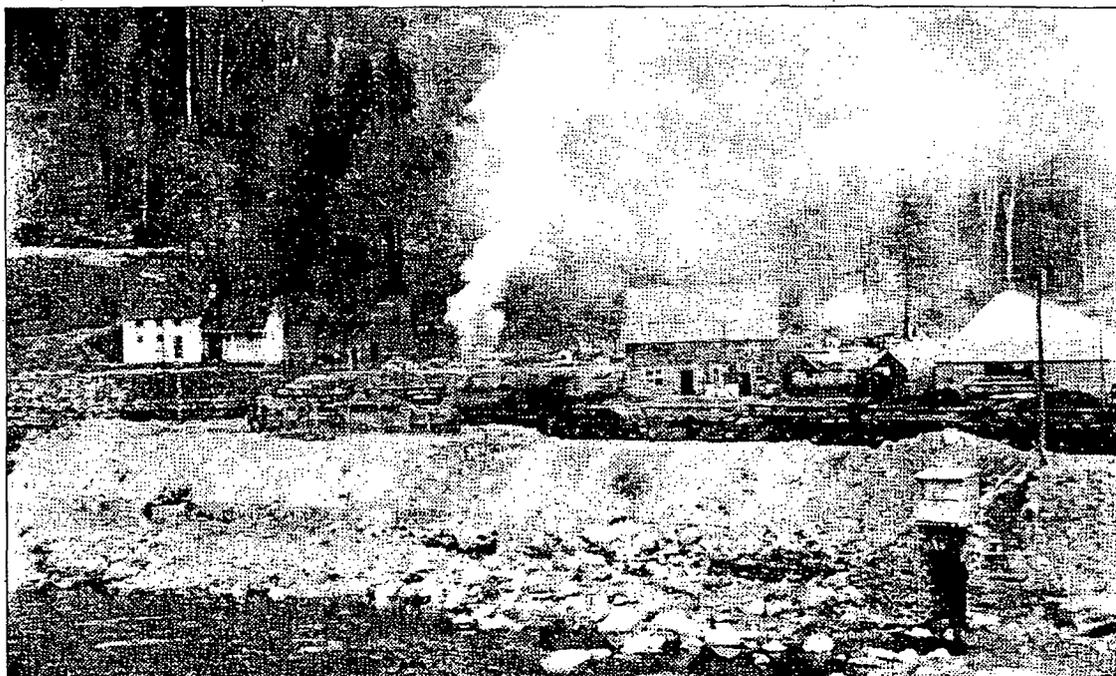


Figure 6-30. Archival photograph of the Marlin Wheeler place, ca. 1920s, Yankee Rowe project area, Rowe, Massachusetts (source: RHS 1971:7).

The B. Sears/L. Granger House appears on an 1858 and 1871 map, respectively. It is unclear whether it is the same house on both maps as the structure is depicted on opposite sides of the road from 1858 to 1871; this discrepancy may represent a cartographic error. The road no longer exists, nor was the house foundation located during the walkover survey of the property. This site may be one of the several unnamed cellar holes mentioned in the Rowe Historical Society history of the project area (RHS 1971), as it was likely long abandoned by the time Yankee Atomic acquired the property.

Historic Archaeological Sensitivity

The historic archaeological sensitivity of the Yankee Rowe project area is limited largely to those portions of the property in proximity to historic road alignments and along the shores of the Deerfield River. Because the vast majority of the landscape is steeply sloped, rocky, and inhospitable to farming, homes were settled in those areas with comparatively flat stretches of land straddling either side of prominent ridgelines. Roadways often developed soon thereafter to connect one isolated farmstead to the next and, in the process, encouraged additional settlement. The former alignment of Shippee Road provides a good example of this strategy. The old road to Readsboro, before it was inundated with the construction of Sherman Dam, also provided an arable, comparatively easily settled location.

Unlike many other river systems in Massachusetts, however, the Deerfield River in Rowe and Monroe did not provide a viable transportation route. Steep banks and dangerous rapids discouraged boat or ferry transport, so much so that within one year of crossing the river, the residents of western Rowe found it so difficult to cross back that they petitioned to be set off as a separate town (see Chapter 5).

Even early industrial development was stymied by the intractable character of the river so that most water-powered mills were sited on smaller brooks and streams such as Wheeler Brook.

Despite these topographical limitations to development, several historic period sites have been identified along the former Readsboro Road alignment adjacent to the Yankee Rowe property. These sites lie within the Sherman Development of the Deerfield River Hydroelectric Project and comprise all that is left of the historic village of Sherman, also referred to as "Lime Hollow" in recognition of the booming lime industry in that area during the nineteenth century. Abandoned in the first decades of the twentieth century with the impoundment of the Sherman and Harriman Reservoirs, the village remains in an excellent state of preservation with the exception of a modern gravel pit, used for the construction of the Bear Swamp Hydroelectric Project (Cherau et al. 2001).

The project area has been assigned moderate-high historic archaeological sensitivity. In those areas traversed by historic road alignments and in locations with field-verified historic-period resource. Known and expected historic resources include houses, barns, outbuildings, sugarhouses, stone walls, cemeteries, saw and/or gristmills, and orchards. Other of these types of resources may include stone walls, rudimentary outbuildings/livestock shelters, and sugar houses. The remainder of the project area has been assigned low historic archaeological sensitivity. The nineteenth-century homes that once lined the eastern shore of the river north of dam were destroyed either during the construction of the reservoir in the 1920s or the later addition of the nuclear plant. The predominant, combined landscape characteristics of excessively steep slope, lack of easily accessible water, and poorly drained soils would have proved a major deterrent to settlement and utilization of the project area during the historic period.

Prehistoric Period Resources

No prehistoric period resources were identified during the walkover survey of the project area.

Prehistoric Archaeological Sensitivity

The identification of numerous prehistoric sites within the comparatively understudied Deerfield River valley has enabled the development of a two-pronged, regionally specific site locational model for the area (see Chapter 4). Both models rely on general environmental parameters to predict the probability of a given area or landform to contain prehistoric resources (e.g., reasonably level, well-drained areas with access to freshwater, strategic travelways, unique landmarks, and/or rich natural resources). The unique environmental context of the upper Deerfield River valley, however, has resulted in what is paradoxically a more targeted and expansive application of those criteria.

The first predictive model, developed by William Fitzhugh during his survey of the Bear Swamp Development, cites five unifying characteristics that can be used to identify areas of high prehistoric archaeological sensitivity along the Deerfield River (Fitzhugh 1970, 1972). These characteristics were derived from data recovered from five Late Archaic occupations known collectively as the Fife Brook Site Cluster and include: location on small Pleistocene or post-Pleistocene river terraces; location near small tributaries entering the main branch of the Deerfield; association with rapids on the main river; and, severe erosion.

The second model, elaborated by Vermont archaeologist David Lacy during his survey work in the Green Mountains, is perhaps more appropriate to the identification of areas with moderate prehistoric archaeological sensitivity. Lacy's approach focuses on the specific topography and elevation of the Deerfield River valley and emphasizes the critical re-evaluation of conventional settlement variables within that specific context. Settlement variables in this model include 1) the elimination of elevation as a predictive factor in site location (i.e., mountains are high places); 2) the reduction of the size/scale of areas being considered to contain sites (e.g., half acre spots are just as likely to contain interesting sites as extensive plains); 3) the diminution of soil types as an important indicator of site distributions; and 4) the selection of "hot spots" based on intuitive factors such as view-sheds and personal comfort (Lacy 1993, 1999).

Based on the application of Fitzhugh's predictive model, the Yankee Rowe property contains no areas of high prehistoric archaeological sensitivity. This condition is the result of the landscape history of the project area in which those areas most likely to contain prehistoric archaeological deposits have been destroyed and/or seriously stratigraphically compromised.

Much of the original river shoreline and associated Pleistocene and post-Pleistocene terraces both north and south of the dam have been heavily disturbed by the construction and relocation of the HT&W Railroad and by the construction of Sherman Dam during the 1920s. Furthermore, any surviving terraces north of the dam that would have been prime settlement locations during the prehistoric period were submerged during the inundation of the reservoir and/or completely mined out during the construction of the Yankee Atomic plant. Maps dating from 1894 to the present illustrate the dramatic reconfiguration of the river valley precipitated first by mining and grading activities for the railroad, followed by the mining, grading, and submersion of the valley by the installation of Sherman Dam.

Moderate prehistoric archaeological sensitivity, however, exists in pockets throughout the project area and has been assessed in many instances using Lacy's more subjective criteria for site settlement preferences. Small, temporary hunting camps and temporary processing extractive camps are the most likely site types to be found in these locations. Low prehistoric archaeological sensitivity has been assigned to the balance of the Yankee Rowe project area for the same reasons cited for the historic archaeological sensitivity assessment.

CHAPTER SEVEN

ARCHAEOLOGICAL RESOURCES MANAGEMENT PLAN

The goal of the Yankee Rowe ARMP is to anticipate future actions, projects, and undertakings that may affect cultural resources within the project area, and prepare an action plan that integrates the long-term management plans for the property with the protection of archaeological resources. A historic property is defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior (36 CFR 800.16(l)(1)).

As the future ownership of the Yankee Rowe property currently is unknown, the action plan outlines procedures for conducting archaeological survey and evaluation in advance of broad categories of proposed actions that have the potential to impact historic properties. It also outlines processes for dealing with unanticipated discoveries, including human remains and previously unidentified sites, and provides suggestions for public education programs concerning the historic and archaeological importance of the property.

The integration of the ARMP into future planning processes is imperative for the protection of historic properties. These plans should include consideration for archaeological resources, archaeological survey and evaluation, and historic property protection measures. Early consideration of historic properties in the planning stage of proposed activities will ensure that they are not inadvertently destroyed as a result of future property development, operation, and maintenance activities. Staff involved in overseeing activities that may effect historic properties within the Yankee Rowe property should be adequately trained in compliance requirements and the implementation of the ARMP. Attendance at an ACHP Section 106 training course is an option to consider in this regard.

To maintain the effectiveness of this ARMP, the property owner should update it periodically to include any activities not defined specifically in this plan and list all newly identified resources. The timing for formalizing the updates will be decided upon by the property owner in consultation with the MHC.

Action Plan

The following suggested action plan outlines procedures for the management of previously identified and potential cultural resources within the Yankee Rowe project area. Specifically, the action plan addresses the following:

- identification and survey of historic properties;
- types of activities that may impact historic properties;

- protection of historic properties and mitigation of adverse effects;
- monitoring (short and long-term) of archaeological sites, archaeologically sensitive areas, and historic structures;
- unanticipated discovery of previously unidentified historic properties and human remains;
- development of conservation and curation plan; and,
- a public education program about the historical and archaeological importance of the property and its cultural resources;

Identification and Survey of Historic Properties

A major component of the ARMP is the identification of historic properties within the Yankee Rowe project area. Chapters 4 and 5 of this report detail the results of the reconnaissance archaeological survey and sensitivity assessment for the Yankee Rowe property. Fourteen historic period archaeological resources have been recorded within the project area to date. If historic properties are identified during any future survey they will be treated as being potentially eligible for the National Register until such time as an evaluation of their significance can be made (see below). The evaluation will take place with consultation from the MHC.

Surveys should be undertaken as future development of the property is proposed in areas of moderate and high archaeological sensitivity (see Chapter 6). Where this is the case, the property owner should consult with the MHC to determine the scope of archaeological survey and evaluation to determine whether any potentially significant archaeological resources may be impacted by proposed actions.

Earthmoving and/or construction activities in areas that have been defined as having low archaeological sensitivity should not affect archaeological resources. These areas include borrow pits, former ponds, or other areas that have been previously excavated or dredged. Low sensitivity areas are severely disturbed or possess unfavorable environmental characteristics such as steep slope and poorly drained soils. These areas are not considered likely to contain potentially important prehistoric or historic archaeological resources. Activities in low sensitivity areas could proceed after review by a property staff member adequately trained in compliance requirements and the implementation of the ARMP.

In the event that the proposed actions have the potential to impact known or potential archaeological resources, additional documentary research and subsurface testing will be required to assist in the evaluation of the resources in terms of National Register eligibility. Areas of moderate and high archaeological sensitivity will be subjected to subsurface testing strategies. Surveys also will be used to further refine the sensitivity assessments provided as part of the reconnaissance survey. Depending on the results of any survey testing, the sensitivity criteria for upland and lowland areas of the project developments will be continually refined to predict the most likely locations of prehistoric and historic archaeological resources.

The survey work will be conducted by qualified archaeologists who meet the requirements set forth in the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (NPS 1983). Furthermore, all archaeological investigations will be conducted in a manner consistent with the Secretary of the Interior's *Standards and Guidelines for Identification and Archaeological Documentation* (NPS 1983); the MHC's *Public Planning and Environmental Review: Archaeology and Historic Preservation* (MHC 1985), the Massachusetts State Archaeologist's permit regulations (950 CMR 70), and the ACHP's publication, *Treatment of Archaeological Properties* (ACHP 1980).

All archaeological survey procedures will ensure that Native Americans are consulted regarding access to sacred sites and when adverse effects to the integrity of sites of religious or cultural significance may occur. The initial point of contact for Native American consultation in Massachusetts is the Commission on Indian Affairs. This contact should be in the form of written correspondence stating the nature of the investigation.

Types of Activities That May Impact Archaeological Resources

Construction (including recreational and wildlife enhancements), recreational use, and logging activities have the potential to impact prehistoric and historic archaeological resources that may be present within the Yankee Rowe project area. In general, activities proposed in areas of moderate and high archaeological sensitivity have the potential to impact historic properties. The property owner should review these sensitivity areas when evaluating proposed activities. The examples of proposed activities provided below are not meant to be an exhaustive list, but do provide a representative sample of those activities most commonly subject to review.

Development and Use of Recreational Facilities

The construction of recreational facilities has the potential to impact archaeological resources as a result of clearing vegetation, excavating, and grading. Included in these recreational enhancements are the construction and expansion of access roads and parking areas that involve grading, leveling, and excavation that could damage the upper cultural strata, or the entirety, of archaeological sites.

The integrity of archaeological resources also can be compromised through recreational activities, such as hunting, swimming, or fishing that do not require the construction of special on-site facilities. Pedestrian traffic and unauthorized motor vehicle use on existing and proposed trails have the potential to directly impact archaeological resources at the time of use or cause a cumulative impact over time. Increased access to the resources because of an expanding network of trails would be an issue especially for those resources, such as historic foundations, that are visible. All recreational pedestrian and unauthorized motor vehicle activities should be included in the category of activities that may impact archaeological resources.

The improvement to and placement of access roads; hiking, nature, or interpretive trails; and signage intended for recreational use will not affect archaeological resources as long as:

- construction involves mowing with or without the overlay of mulch or other materials except

gravel or bituminous pavement;

- construction does not involve grading, excavating, paving, leveling of contours, etc.;
- roads and trails are maintained in such a way as to prevent erosion; and
- no stairs, footbridges, overlook stations, rest stations, or other structures that would involve ground disturbance are installed. This includes improvements to existing structures unless these improvements are contained within previously disturbed areas.

Trail and road construction projects that do not meet the above criteria should be considered undertakings and the potential effects of the projects on archaeological resources should be assessed in consultation with the MHC. This includes potential impacts on archaeological resources from vandalism and looting that could result from increased public access along trails.

Timber Harvesting/Logging

Forest management practices within the Yankee Rowe property may adversely impact historic properties. Logging activities vary according to the nature and size of forest stands targeted for timber cutting/thinning to maintain optimal quality of timberlands. Timber harvesting during unfrozen ground conditions can be detrimental to archaeological resources because of potential soil disturbances associated with this activity. Clear cutting can result in erosion of the ground surface if the cut has been planned or performed improperly. Trails and ruts can result from the removal of trees by skidders, especially under wet conditions.

Mining for Sand and Gravel

The mining of undisturbed areas for sand and gravel by the property owner or other entities can destroy archaeological resources contained within the Yankee Rowe project area. These activities result in the removal of substantial amounts of topsoil and subsoil that could contain archaeological resources. Likewise, dredging in previously undisturbed portions of ponds and the impoundments also could result in the destruction of archaeological resources.

Protection of Historic Properties and Mitigation of Adverse Effects

Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations (36 CFR 800) directs federal agencies to identify National Register listed or eligible resources and assess the effects of the agencies' actions on them. If an undertaking results in adverse effects on historic properties, the federal agency consults with the State Historic Preservation Office (SHPO) to identify measures to avoid, minimize, or mitigate adverse effects to listed or eligible historic properties.

The procedures proscribed in Section 106 are referred to as the "Section 106 process" and are set forth in regulations issued by the ACHP, *Protection of Historic Properties* (36 CFR 800). The regulations emphasize consultation among the MHC and other interested parties. When activities take place within the Yankee Rowe project boundaries that result in the identification of historic properties, such as a

construction project or survey, the following steps, that closely mirror the consultation proscribed in the 106 regulations, are recommended.

The property owner should complete an evaluation of the significance and eligibility of the historic property to the National Register in consultation with the MHC. If the historic property is eligible for the National Register, a determination of the effect of the project activity on the historic property will be made in consultation with the MHC. The effect may be one of the following.

No Effect: An action will have no effect of any kind, either harmful or beneficial, on the National Register property.

No Adverse Effect: An action could have an effect, but the effect will not be harmful to those characteristics that qualify the property for inclusion in the National Register.

Adverse Effect: An action is considered to have an adverse effect when the effect on a property may diminish the characteristics that make it eligible for the National Register, including the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

In general, activities requiring new construction, total or partial demolition of structural elements, and ground disturbing activities within areas identified as having moderate and high archaeological sensitivity are considered to have potential adverse effect on historic properties.

Consultation

The property owner should consult with the MHC during the early planning stages of a proposed activity or property modification that has the potential to impact historical architectural or archaeological properties within the Yankee Rowe project area. The consultation will consist of a discussion of ways to avoid, minimize, or mitigate potential adverse effects.

As a documentary basis for this consultation, the property owner should prepare an alternatives analysis commensurate in detail with the nature and scope of the proposed activity. The alternatives analysis, which will be submitted to the MHC, will include:

- purpose and need for the project;
- description of the affected historic property, fabric, or feature;
- description of the proposed activity and its anticipated effect upon the historic property and upon the historic character of the Yankee Rowe project area as a whole; and
- evaluation of alternatives and identification of mitigation measures as described below.

If the MHC does not respond within 30 days, the property owner may proceed with the proposed action.

The alternatives analysis will consider at least two of the following:

- **no action**; or
- **avoidance** of the historic property;

or specific to buildings, structures, or objects:

- **repair** of deteriorated or damaged historic fabric or feature;
- **replacement** of deteriorated or damaged historic fabric or feature with new fabric or feature that **duplicates** the old in terms of materials, design, size, color, texture, and functional characteristics (in-kind replacement);
- **replacement** of deteriorated or damaged historic architectural fabric utilizing materials that **match** the old in terms of design, color, texture, and other visual qualities;
- **removal** of feature, with appropriate measures to ensure structural/materials stability in situ while **maintaining the feature in its essential form** as at present;
- **new installation or construction that avoids damage to or destruction** of historic fabric or features; or
- **new installation or construction with substantial alteration** or loss of original feature, accompanied by recordation and salvage and storage for future use.

Each alternative will be evaluated in terms of at least two of the following:

- safety of staff and/or the public;
- functional requirements;
- historic preservation objectives;
- short and/or long-term cost considerations; and
- requirements imposed by public agencies.

An alternative may be rejected if:

- it fails to meet functional requirements;
- it imposes unacceptable economic constraints;
- it would result in, or fail to resolve, severe functional and/or safety problems;
- it would result in an irresolvable conflict with the requirements of other public agencies; or

- all of the above as applicable to some degree.

Agreement

If agreement is reached between the property owner and the MHC that an activity will not adversely affect any historic properties, the property owner may proceed in accordance with agreed-upon treatment measures or conditions.

If agreement is reached between the property owner and the MHC that an activity will have an unavoidable adverse effect, an agreement to eliminate, minimize, or mitigate the adverse effects will be drawn up and signed by the parties. The property owner then may carry out the terms of the agreement.

If the property owner and the MHC determines that the activity will have an adverse effect and that the affected property is a National Historic Landmark, the property owner will submit the matter to the ACHP per 36 CFR 800.6 and 800.10. If after consulting to resolve the adverse effects, the parties cannot agree and the consultation is terminated, the procedures set forth in 36 CFR 800.7 will be initiated.

Mitigation Measures

Archaeological Sites

If the property owner, after consultation with the MHC, undertakes site evaluation that concludes a site is eligible for listing in the National Register and is, or will be, adversely affected by current or proposed property operations, the property owner should consult with the MHC in the preparation of a treatment plan for mitigation to avoid or minimize the adverse effect. If the property owner can alter the plans and avoid impact, a treatment plan will be prepared for in-place preservation that will include long-term monitoring. If avoidance and in-place preservation is not possible and archaeological data recovery is required, the property owner will consult with the MHC regarding the scope of the data recovery program as part of the treatment plan for mitigation.

Buildings, Structures, and Objects

Written and photographic documentation is the most common form of mitigation for projects that are determined to have an adverse effect on historic buildings, structures, or objects. The level of documentation should be determined in consultation with the SHPO. Typically, properties that possess national significance are documented according to the standards of the NPS's Historic American Building Survey/Historic American Engineering Record (HABS/HAER) programs. Properties significant at the state or local level are usually documented according to guidelines established by the SHPO. These so-called "state-level" documentation reports generally conform to standard HABS/HAER formats, but may differ in the type of photography and/or supporting documentation required.

Determinations regarding the national, state, and/or local-level significance of an affected property and the level of documentation appropriate to that property must be agreed upon in consultation with the SHPO. At minimum, this documentation should include:

- **Written Documentation (Narrative Reports):** These reports provide a concise overview of the history and significance of the affected property. They include a summary description of the project and its effects on the property, description of the property's setting and character-defining features, historical context statement, history and significance of the property, and list of references used to compile the information.
- **Graphic Documentation (Historic and Current Site Plans):** The documentation is supported by graphic materials, including 8" x 11" sketch site and, if applicable, floor plans, a USGS or other location map, 8" x 11" sketch, and historic maps or images that show the chronological development of the property.
- **Photographic Documentation (Archivally Processed Photographs):** All documentation reports include archivally processed, black-and-white photographs that provide views of the property before it is altered by the project. HABS/HAER projects require large format negative photography. Some states, including Massachusetts, accept standard 35mm black-and-white negatives for state level documentation reports. In all cases, an Index to Photographs (list and description of views) and a Key to Photographs (annotated map showing location of views) must accompany the photographs.

It is likely that written and photographic documentation will be an element of the mitigation for any project that has the potential to affect historic standing buildings or structures within the Yankee Rowe property. In advance of the construction of such a project, the proponent must consult with the SHPO to determine the level of documentation that will be required and any other forms of mitigation that might be proposed.

Monitoring of Archaeological Sites, Archaeologically Sensitive Areas, and Historic Structures

The 2003 archaeological reconnaissance survey identified a number of archaeological sites and archaeologically sensitive areas within the Yankee Rowe project area (see Chapter 6). As only a walkover survey and preliminary documentary research program has been conducted to date, these resources are to be treated as potentially significant historic properties until surveys and evaluations are conducted if and when needed. In its role as a steward for the Yankee Rowe project area, the property owner is advised to work with the MHC in the management of cultural resources on these lands. To this end, the following monitoring program is designed to ensure adequate and long-term site protection and preservation measures, as well as mitigation strategies if necessary.

The monitoring program would be implemented by a team composed of a qualified archaeologist and architectural historian assisted, when necessary, by a geologist, soil scientist, forester, and/or hydrologist, depending upon the condition of the sites and locales to be visited. This team will report directly to the property owner who will work to ensure that the monitoring program is coordinated with other project management plans.

The monitoring program would commence with an inspection of all archaeological sites, site areas, and historic structures identified during the 2003 reconnaissance survey of the Yankee Rowe property. The monitoring study will establish a baseline for the condition of these resources to determine the presence,

effects, and extent of any existing or ongoing impacts. A report of the findings will be prepared and filed with the MHC. This report will document the findings of the monitoring program, outline any remedial or mitigation plans of action for each site and sensitive area proposed for the following calendrical year, and make recommendations for future monitoring schedules. Plans of action for areas showing no signs of physical disturbances could simply consist of recommending long-term monitoring schedules. However, for sites and sensitive areas exhibiting signs of ongoing disturbance, plans of action could include measures such as:

- new or additional vegetative plantings in identified erosion areas;
- revegetation of areas of heavy public utilization for soil stabilization;

Unanticipated Discoveries Including Historic Properties and Human Remains

When a previously unidentified historic property, generally an archaeological site, is discovered during the implementation of a proposed action, during routine operation and maintenance, or during the monitoring program (as described above) the property owner will do the following.

- Halt all work in the vicinity of the discovered property. The property should be assumed to be eligible for listing in the National Register of Historic Places and protected until a determination of eligibility can be made.
- Notify the MHC.
- Take all reasonable steps to ensure that the discovery is protected and undisturbed until it can be evaluated by a qualified archaeologist.
- If the historic property is determined to be significant, the property owner will consult with the MHC to determine the effect of project activities on the property and the appropriate mitigation strategy.

If at any time during the course of project operations or the implementation of a proposed action, human remains are encountered within the property boundary, the appropriate county medical examiner and law enforcement agencies will be notified according to the Massachusetts Unmarked Burial Law. In addition, the treatment and disposition of any human remains must take into account each state's consultation process involving the MHC and the ACHP's *Policy Statement Regarding Treatment of Human Remains and Grave Goods* (ACHP 1988).

The property owner, and the MHC and other parties as determined by law, will consult according to the process outlined in the Massachusetts Unmarked Burial Law. The human remains will not be removed, and care will be taken to protect them in place from any local activity that might result in their vandalism. Appropriate special permits must be acquired in consultation with the MHC in order to collect, excavate, or transport human remains.

Development of a Conservation and Curation Plan

All cultural materials and associated documentation generated during archaeological or architectural survey work conducted on the Yankee Rowe property should be conserved and curated according to the standards outlined in 950 CMR 70.13 and the Secretary of the Interior's Standards and Guidelines for Curation (36 CFR 79). This plan would address long-term stewardship, preservation, and when necessary, display of cultural material recovered from the property and would be developed in consultation with the MHC. Examples of cultural materials include, but not limited to: prehistoric and historic period artifacts such as projectile points, chipping debris, ceramics, nails, and glass; soil samples; portable structural elements from prehistoric and/or historic features such as hearth stones, and; faunal and floral remains associated with past human activity at the site.

Public Education Program about the Historic and Archaeological Importance of the Property

In its role as a public steward, the future property owner should consider the promotion of the public education and interpretation of historic properties under their jurisdiction through such means as educational displays, signage, interpretive programs and brochures, or similar means. Specific literature and educational programs could be offered in partnership with local schools, businesses, funding organizations, and other interested parties. These educational programs may focus on the use of the project as a natural laboratory for research and studies about such varied topics as history, archaeology, biology, earth sciences, and recreation.

The public in general is uninformed about the significance of historic structures and archaeological sites and the non-tangible types of data that can provide valuable historic information. While the removal of artifacts from archaeological sites or vandalism of sites on federally owned or managed properties are prohibited by various laws and regulations, most people are unaware of these laws and the potential penalties that they carry. For these reasons, the placement of signs, the preparation and availability of pamphlets, brochures, etc. by the future property owner is recommended. As part of this recommended program, the public also should be made aware that historic properties, including archaeologically sensitive areas, would be monitored for unauthorized activities. The signs, pamphlets, and brochures should explain the significance of historic properties and the need for leaving these resources and their material remains undisturbed because of the nonrenewable types of data that they contain.

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