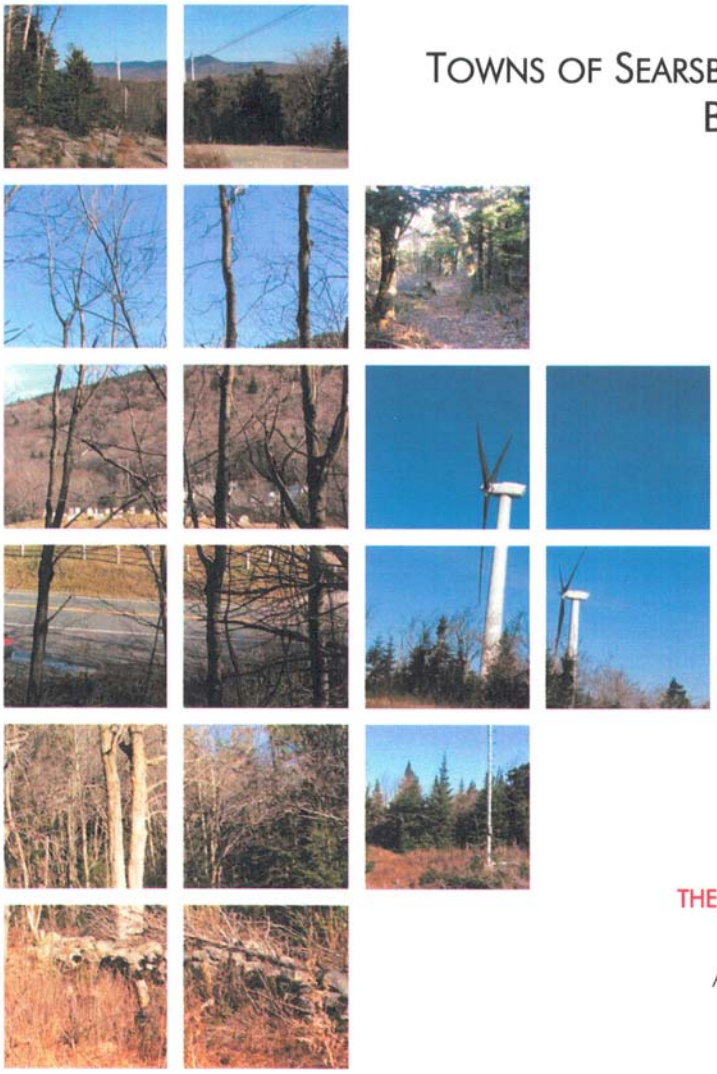
PHASE IA ARCHAEOLOGICAL SURVEY AND HISTORIC RESOURCE SCREENING STUDY

DEERFIELD WIND PROJECT



TOWNS OF SEARSBURG AND READSBORO
BENNINGTON COUNTY
VERMONT

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Abstract

The Louis Berger Group, Inc. (Berger), Albany, New York, has completed a Phase IA archaeological survey and historic resource screening study for the proposed Deerfield Wind Project on behalf of Deerfield Wind LLC, Waterbury Center, Vermont. The proposed project would involve construction of 20 to 30 wind turbines, up to 410 feet high, on National Forest System (NFS) lands in the Manchester Ranger District of the Green Mountain National Forest (GMNF) in the towns of Searsburg and Readsboro, Bennington County, Vermont. The proposed project would utilize approximately 80 acres of NFS lands generally lying on two separate ridgelines east and west of Vermont Route 8, referred to as the proposed eastern project area and the proposed western project area, respectively.

The objective of the Phase IA survey was to assess the potential of areas within the proposed limits of construction (project area) to contain prehistoric and historic archaeological resources. The goals of the Phase IA background research with regard to cultural resources were to: (1) determine local chronological sequences; (2) characterize the distribution and type of known sites; (3) summarize environmental characteristics; (4) outline the history of the project area; and, (5) delineate pertinent research issues with which yet-to-be-identified cultural resources may be associated. The objective of Berger's historic resource screening study was to identify all historic resources (e.g., buildings, structures, and districts) that are currently listed in, or have been previously identified and determined eligible for listing in, the National Register of Historic Places or the State Register of Historic Places located in the viewshed within 10 miles of the project, as an initial gauge of the types of above-ground resources that could potentially be affected by the project.

This study has found that the project area possesses variable potential for both prehistoric and historic archaeological resources. The records search found three National Register-listed historic districts, 74 individual National/State Register-listed properties, and two potentially eligible properties (not listed in National or State Registers), the King-Atwood House in Wilmington and the Deerfield Hydroelectric Project, within a 10-mile radius of the proposed project. Neither Searsburg nor Readsboro has been comprehensively surveyed for architectural resources; other significant architectural resources may exist within the area.

Based on the Phase IA archaeological survey findings, Berger recommends that a Phase IB archaeological survey of the area associated with ground disturbance be conducted to identify additional archaeological resources that could be affected by project construction. This work should be conducted in consultation with the Vermont Division for Historic Preservation. Such a survey would determine whether the project could impact archaeological sites in addition to those already identified, and would provide the basis for determining the need for further work or mitigation (e.g., Phase II/site evaluation investigation, Phase III/data recovery excavation).

The historic resource screening study found that the project viewshed contains a variety of National/State Register-listed and eligible properties. These listings, however, are not comprehensive, as none of the towns represented within the viewshed have conducted comprehensive surveys to identify all National/State Register-eligible resources within their boundaries. It may therefore be necessary to record and evaluate the National/State Register eligibility of heretofore unsurveyed buildings and structures over 50 years of age in order to fully assess the potential effects of the project on historic properties. It is important to note that no buildings or structures will be acquired or physically altered or removed by the project and that impacts, if any, would therefore be limited to those resulting from the visibility of the proposed project from historic structures.

The historic resource screening study concludes that the presence of the project within the foreground (within ½ mile) and nearer portion of the middle ground (up to approximately 3 miles) of a historic property could potentially alter characteristics of setting that qualify that property for inclusion in the National/State Register, if in fact the property's setting is integral to its significance. However, locations in which the project would be visually perceived as simply another element in a large and varied landscape (generally around and beyond 3 miles) would not fall within the area in which the project would have demonstrable potential to affect historic properties. It would therefore appear appropriate to use the viewshed within 3 miles of the project as the area of potential effect for the project.

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A. General Project Information

The Louis Berger Group, Inc. (Berger), Albany, New York, has completed a Phase IA archaeological survey and historic resource screening study for the proposed Deerfield Wind Project on behalf of Deerfield Wind LLC, Waterbury Center, Vermont. The proposed project would involve construction of 20 to 30 wind turbines, up to 410 feet high, on National Forest System (NFS) lands in the Manchester Ranger District of the Green Mountain National Forest (GMNF) in the towns of Searsburg and Readsboro, Bennington County, Vermont (Figures 1 and 2). The proposed project would utilize approximately 80 acres of NFS lands generally lying on two separate ridgelines east and west of Vermont Route 8, referred to as the proposed eastern project area and the proposed western project area, respectively. Approximately half of the turbines would be placed on the east side of Route 8 on the same ridgeline as the existing Green Mountain Power Corporation (GMP) Searsburg Wind energy facility, which includes 11 turbines on 35 acres of private lands adjacent to GMNF lands. The remaining turbines would be placed along the ridgeline to the west of Route 8 in a northwesterly orientation. At present, northern access to the proposed western project area is under consideration and would provide access from Route 8 along an existing town road (Putnam Road) to an existing NFS right-of-way.

B. Scope of Services

The overall goal of the Phase IA survey was to assess the potential of the project area to contain prehistoric and historic archaeological resources. The goals of the Phase IA background research with regard to cultural resources were to: (1) determine local chronological sequences; (2) characterize the distribution and type of known sites; (3) summarize environmental characteristics; (4) outline the history of the project area; and, (5) delineate pertinent research issues with which yet-to-be-identified cultural resources may be associated.

The objective of Berger's historic resource screening study was to identify all historic resources (e.g., buildings, structures, and districts) that are listed in or previously determined eligible for listing in the National Register of Historic Places or the State Register of Historic Places in the viewshed within a 10-mile radius of the project. The 10-mile radius was used for initial data gathering only and does not constitute the project's area of potential effect (APE). Berger also conducted a preliminary vehicular reconnaissance of the area to characterize the overall built environment and landscape with regard to potential for visual effects. This study also considered preliminary results of the separately prepared project viewshed analysis.

All cultural resource services were performed using the professional guidelines and standards such as those set forth in the Procedures for the Protection of Historic and Cultural Properties (36 CFR 800) and the Procedures for Determining Site Eligibility for the National Register of Historic Places (36 CFR 60 and 63). This investigation also conformed to the Secretary of the Interior's Standards for Archaeology and Historic Preservation (48 *Federal Register* 44716) and *Guidelines for Conducting Archaeology in Vermont* (Working Draft, July 2002) established by VT DHP. The cultural resource specialists who performed this work satisfy the Secretary of the Interior's Professional Qualifications standards as specified in 36 CFR 66.3(6)(2).

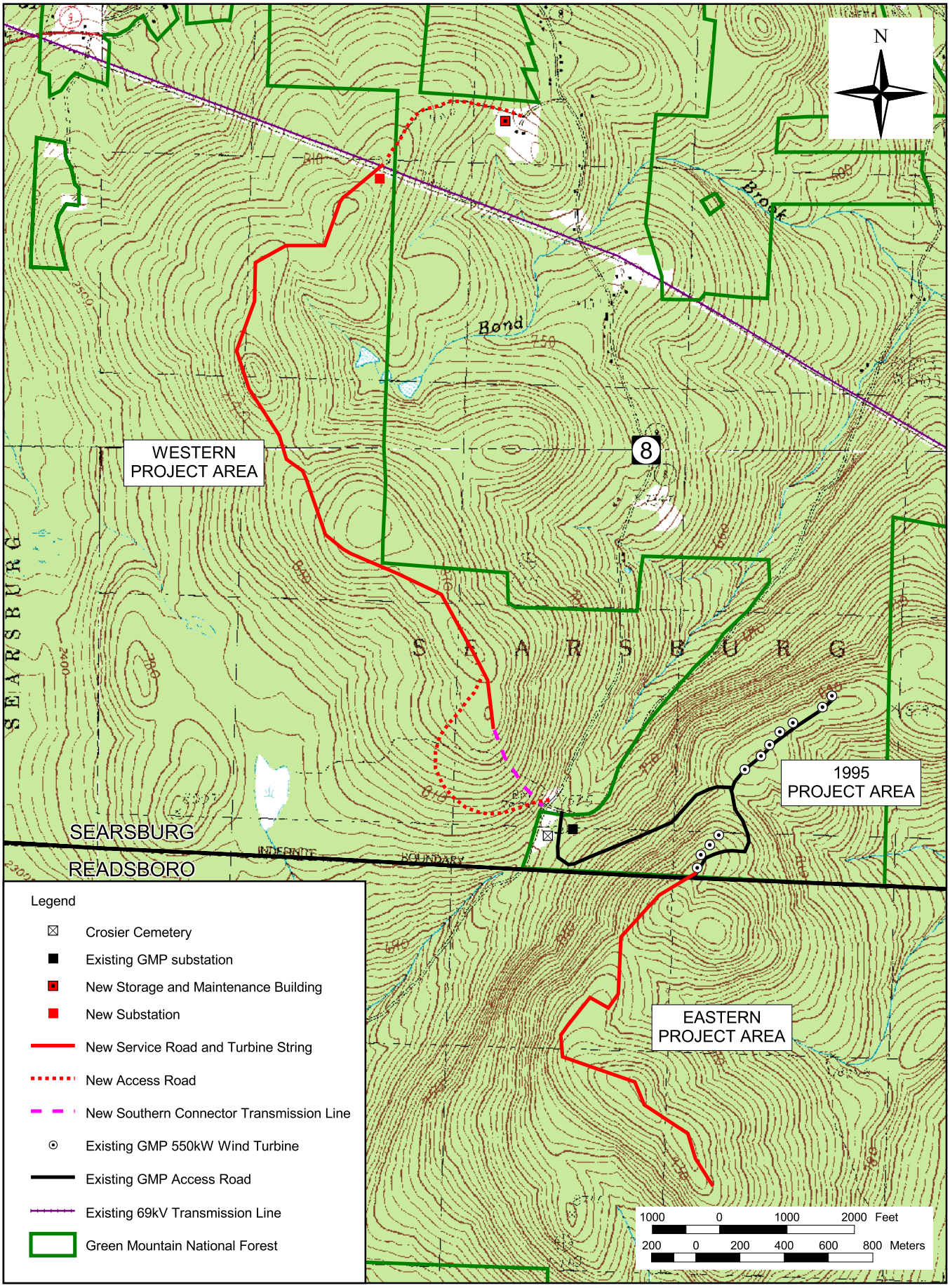


FIGURE 1: Location of Project Area

BASE MAP: USGS 7.5-Minute Quadrangles, Mount Snow, VT 1986 and Readsboro, VT 1987

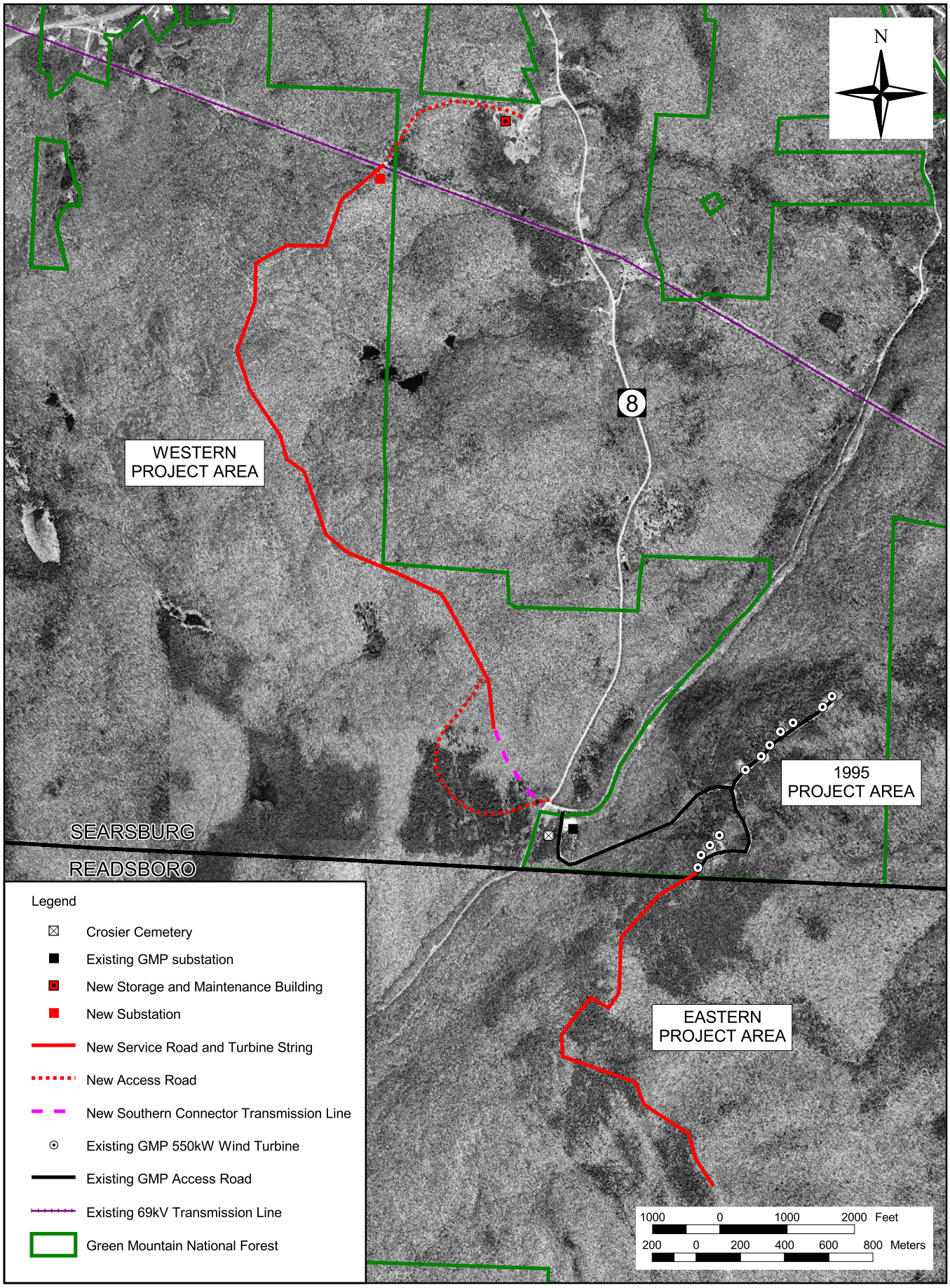


FIGURE 2: Aerial View of Project Area

BASE MAP: Vermont Environmental Research Associates, Inc. 2006

This report has been organized into five chapters. Chapter II summarizes the archival, cartographic, and background research results. Chapter III presents the historic resource screening study. Chapter IV provides a summary and recommendations. Chapter V contains a list of the references cited.

The cultural resource survey was conducted under the direction of Berger Senior Archaeologist Dr. Hope E. Luhman. Architectural Historian Amy Dixon completed the historical resource screening study under the direction of Martha H. Bowers, Principal Architectural Historian. Dr. Luhman completed the initial field inspection of the project area in November 2005, and a subsequent visit was made by Berger Field Archaeologist William Weir in December 2005. This report was primarily authored by Ms. Amy Dixon and Dr. Luhman with contributions from Ms. Bowers and Berger Field Supervisor Rick Vernay, who assisted Dr. Luhman with Berger's 1995 work in the project area vicinity. Senior Editor Anne Moiseev supervised the editing and production of this report, including the graphics, which were prepared by Senior Draftsperson Jacqueline L. Horsford.

II. General Background, Archival, Cartographic, and Field Research

The Phase IA background research involved examination of archaeological site files, maps, and cultural resource management reports held by the Vermont Division for Historic Preservation (VT DHP), including Berger's (1995a,b) surveys of the existing Searsburg facility and related materials available at the VT DHP, and examination of appropriate Soil Conservation Service (SCS) maps and surface geology maps. Berger also consulted with David Lacy, Archaeologist with the Green Mountain and Finger Lakes National Forest, who provided GIS mapping of archaeological sites and potential sites on NFS lands.

Background research proceeded along two fronts: previous archaeological work conducted in the area and paleogeography. To provide a preliminary assessment of the potential for prehistoric archaeological resources, the basic predictive modeling used included completion of VT DHP's *Environmental Predictive Model for Locating Archaeological Sites*. This form provides a differential ranking of topographical features and soil associations. Berger also conducted a field inspection of the APE associated with potential ground disturbance to assess the conditions, noting areas of potential concern.

Berger compiled a list of known archaeological sites within a 5-mile radius of the project, and a list of above-ground resources that are currently listed in or are considered eligible for listing in the National and State Registers within a 10-mile radius of the project. David Lacy was also consulted; he did not identify any NFS historic structures within this radius. A vehicular reconnaissance consisted of travel along primary roads (e.g., Routes 8 and 9), and some secondary roads (e.g., Putnam Road) within a limited portion of the 10-mile radius.

A. Environmental Setting

The project area is located in the towns of Searsburg and Readsboro on the eastern slopes of the Green Mountains (Figure 3). The Green Mountain physiographic province is situated between the Vermont Piedmont and the Vermont Valley. The project area is located in an area with a rich resource base, is in proximity to areas of known archaeological sensitivity, has good soil preservation, and is positioned advantageously to major transportation routes (Lacy 1994:95).

The Green Mountains are 21 miles wide at the Canadian border and 36 miles wide at the Massachusetts border, running generally north to south. The mountains rise from lowlands in the west to an average elevation of 610 meters (2,000 feet) above mean sea level (amsl) with five peaks over 1,219 meters (4,000 feet) amsl. Several passes exist in the mountains, running generally east to west. The topography of the Green Mountain province is characterized by steep slopes with narrow valleys dissected by fast-flowing streams. Topography in the immediate project area ranges from roughly 730 meters (2,400 feet) to 950 meters (3,120 feet) amsl.

The ridges, on which the eastern and western project areas are located, form a divide between two minor branches of the Deerfield River. The project area is located in the northwest portion of the Deerfield River drainage, close to the Hoosic River drainage. The Deerfield River flows into the Connecticut River, and the Hoosic River connects with the Hudson River.

The two areas of the proposed project are west and east of Vermont Route 8. The western project area begins at the intersection of Route 8 with Sleepy Hollow Road. A new access road will climb from there to the top of the ridge in a traverse that loops around to the west and then back north to avoid the steepest

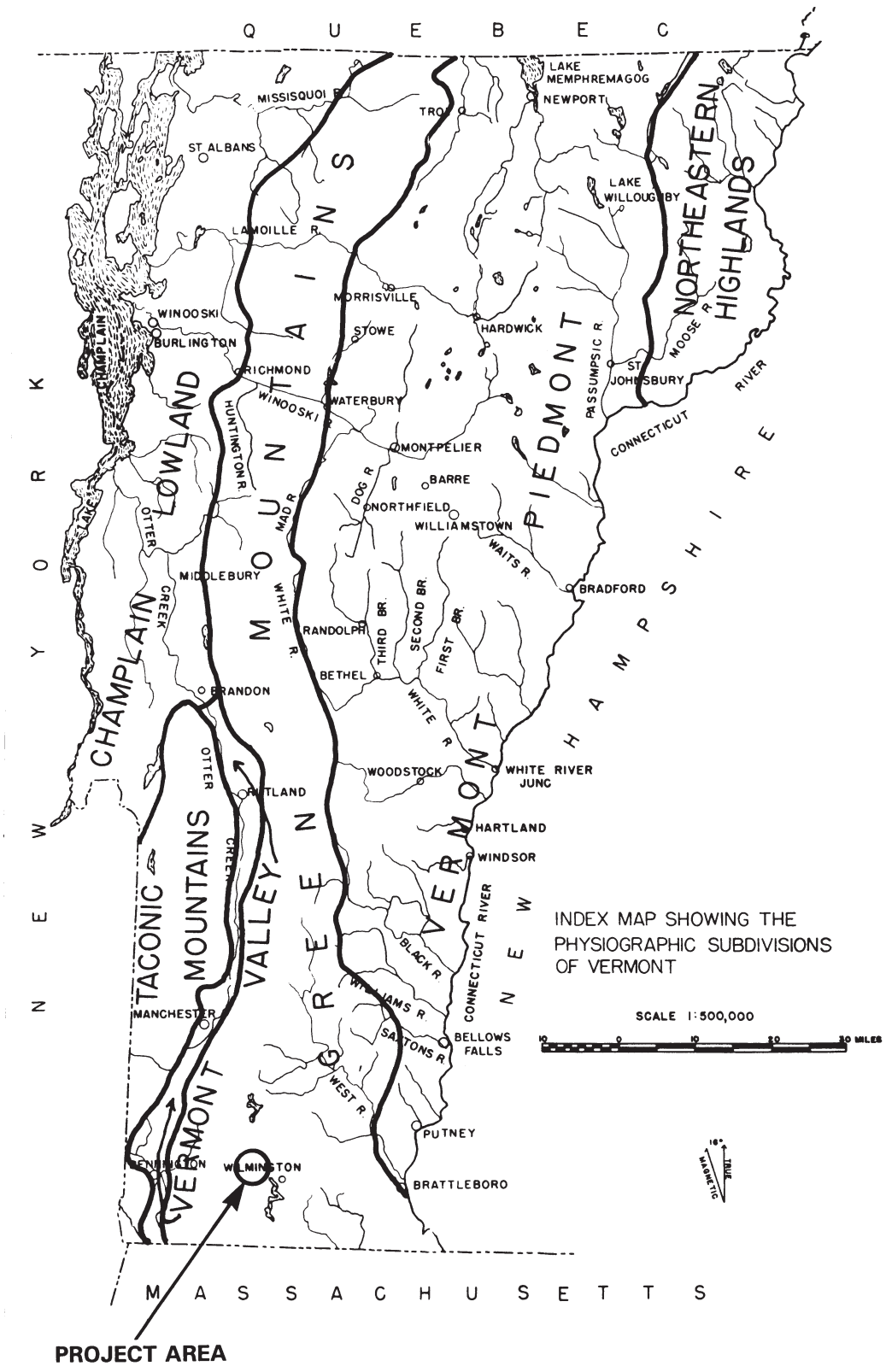


FIGURE 3: Physiographic Setting of Project Area

SOURCE: Stewart and MacClintock 1969

parts of the slope. A new Southern Connector Transmission Line will take a more direct approach to the ridge top. The service road and the string of turbines will be placed along the ridge in a line 2,070 meters (6,800 feet) to the northwest, which then turns northeast for another 1,430 meters (4,700 feet) and then proceeds down the northeast toe of the ridge 730 meters (2,400 feet) to the location of a proposed storage and maintenance building on Putnam Road.

The eastern project area is a southern extension of the line of existing GMP 550kW turbines. It proceeds southwest from the south end of the existing turbine string for about 1,040 meters (3,400 feet), then turns to the southeast for an additional 915 meters (3,000 feet). Both project areas follow the ridgelines opportunistically to take advantage of the more level portions for service road and turbine locations.

Soils that characterize the proposed western project area are mostly of the Houghtonville-Rawsonville association, hilly and rocky, and to a lesser extent Mundal-Wilmington association, rolling and very stony. Houghtonville-Rawsonville soils, with shallow to very deep bedrock and very deep to dense basal till, are well drained, moderately steep to very steep soils on mountains and foothills. Mundal soils are minor soils within these associations existing on backslopes and footslopes (Web Soil Survey 2005).

Soils that characterize the proposed eastern project area are of the Glebe-Stratton association, very hilly and very rocky. Stratton soils, with very shallow to moderately deep to bedrock, are well drained, moderately steep to very steep soils on mountains. Glebe soils exist on shoulders and backslopes within this association (Web Soil Survey 2005).

B. Prehistoric Context

Vermont's prehistory is typically divided into three major periods: Paleoindian (circa 9500 to 8000 BC, or possibly later); Archaic (circa 8000 to 1000 BC); and Woodland (circa 1000 BC to AD 1600), with the latter two periods further divided into early, middle, and late subperiods. In regard to the history of Native Americans in Vermont, many researchers also delineate the time from around AD 1600 to 1760 as the Contact period (Thomas 1994; Vermont Division for Historic Preservation [VT DHP] 1990, 1991a).

1. Paleoindian Period (circa 9500 to 8000 BC)

The earliest documented prehistoric occupations of Vermont are sites of the Paleoindian period. Sites of this time period represent hunter-gatherers that colonized recently deglaciated sections of the state. The diagnostic artifact of this culture is the fluted stone spearpoint.

Radiocarbon dates on fluted points located at sites in New Hampshire, Maine, Connecticut, and the Canadian Maritimes range from approximately 9200 to 8100 BC (Curran 1984; Gramly 1982; MacDonald 1968; Moeller 1980). If viewed in a critical light, however, some of these dates become suspect (Haynes et al. 1984), and a more realistic date range for these sites using the most reliable determinations is probably 9000 to 8200 BC. This range approximates the time span of 9000 to 8300 BC for fluted point sites in the eastern Great Lakes, inferred on the basis of geochronologic associations. In addition, in Vermont and adjoining areas of northern New England there is limited evidence of a "late Paleoindian" projectile-point manufacturing tradition that produced nonfluted Plano-like lanceolate projectiles. This style of point manufacture is thought to date to between 8000 and 7000 BC, and it is on the basis of this age estimate that some researchers are prepared to extend the Paleoindian period in Vermont to as late as 7000 BC (VT DHP 1991a:3-4–3-5).

Data on the specific nature of Paleoindian adaptations in Vermont remain limited. Although sites of this time period are known to have been found in the state (Loring 1980; Ritchie 1953), none have been subject to excavation until very recently. Nevertheless, some aspects of Paleoindian adaptations can be

inferred from investigated Paleoindian sites in neighboring areas of New York, New England, and the Canadian Maritimes (Ellis and Lothrop 1989; Lothrop 1989; Meltzer 1984). These assemblages indicate three consistent attributes of Paleoindian culture that are probably also true for groups in Vermont.

First, in addition to fluted points, the stone technologies of these groups consisted of a flake-based toolkit with the same general categories of wide- and narrow-bit unifacial tools, unifacial gravers, utilized flakes, bipolar artifacts, and large bifaces. Second, it is apparent that, with only rare exceptions, northeastern Paleoindians exploited isolated bedrock lithic sources as opposed to secondary cobble deposits; such a lithic procurement strategy may have been driven, in part, by the design requirements of their transported stone toolkits. Finally, locations of raw material sources for Paleoindian stone toolkits are often many kilometers distant from the sites where these tools are recovered, indicating that these groups traveled great distances in the course of an annual cycle of movement.

Such extensive residential mobility, unmatched during later periods of prehistory in the Northeast, presumably reflects Paleoindian strategies of resource procurement, particularly those involving subsistence pursuits. Seasonality was pronounced at that time in the Northeast, possibly rendering certain food resources highly variable in terms of their seasonal and geographic availability. In addition, exploitation of typically migratory ungulates, such as caribou, a documented resource of Paleoindians, could have been a factor in the extent of annual movements of Paleoindians.

In northwestern Vermont Loring (1980) documents the recovery of fluted points on and below Champlain Sea beach deposits, from adjacent interior lowlands, and from higher elevation settings in the western foothills of the Green Mountains. The approximate date range of 9000 to 8200 BC for New England fluted point sites indicates that Paleoindian occupation of Vermont postdated the maximum extent of the Champlain Sea. Although Paleoindians were exploiting a range of environments in the Champlain Basin at that time, it seems unlikely that marine resources were a major focus of these groups. It is more plausible that Paleoindians of the Champlain Basin focused on terrestrial fauna and flora of the region for their subsistence needs while also exploiting available lithic raw material sources to maintain their stone technologies.

2. Archaic Period (circa 8000 to 1000 BC)

The transition from fluted point cultures to cultures with Archaic adaptations in Vermont remains poorly documented. Debate continues about the nature and character of Early Archaic (8000/7000 to 5500 BC) adaptations in Vermont (VT DHP 1991a:4-2). Dincauze and Mulholland (1977) suggest that environmental characteristics in New England resulting from the pattern of forest succession that occurred during this period of climatic warming greatly restricted use of interior sections of New England north of Massachusetts. Whether human exploitation of territories in Vermont during the Early Archaic was less intensive than during the preceding Paleoindian period remains unclear. Additional documentation of the presence of Early Archaic projectile points, such as bifurcate-base varieties, throughout western Vermont suggests definite seasonal if not year-round occupations of the region at that time (Thomas 1980a:9).

Research conducted on Early Archaic sites outside Vermont indicates that in addition to changes in projectile point technology from fluted to notched and bifurcated point forms, Early Archaic hunter-gatherers had added groundstone and chipped-stone implements to their toolkits. It is believed that these new tools were employed for woodworking and plant processing, and perhaps for other purposes (Funk and Wellman 1984). At least initially, much of the remaining Early Archaic stone technology included unifacial tool types and expedient tools manufactured on flakes that are similar to if somewhat less standardized than implements of Paleoindian stone toolkits. These changes in projectile point technology, and the additions of certain groundstone and chipped-stone tool forms in the Early Archaic, indicate shifts in subsistence and other resource exploitation patterns coincident with environmental changes.

In southern Vermont the transition to the Early Archaic is contemporary with the continued warming trend and the replacement of spruce and fir by pine as the dominant tree species in forests (Carr et al. 1977). The combination of environmental and technological changes during the transition from the Paleoindian period to the Early Archaic indicates an increase in the importance of plant foods and shifts in the exploitation of certain terrestrial fauna (such as the hunting of deer rather than caribou) for the latter period.

The Middle Archaic spans the period between 5500 and 4000 BC (VT DHP 1991a: 4-2). For that time span questions remain concerning the degree of occupational intensity by human groups in northern interior sectors of New England, including Vermont, and how it relates to the gradual northward spread of deciduous forests. The increase of Middle Archaic diagnostics, such as Neville points, found in Vermont artifact collections indicates a greater intensity of human use of such northern regions at that time than was previously believed (Thomas 1980a:8-9).

Another diagnostic artifact that is characteristic of the end of the Middle Archaic and the beginning of the Late Archaic is the Otter Creek projectile point, which has been well documented in the Champlain Basin. In some instances this point has been found in association with groundstone artifacts, including gouges, plummets, ulus, and knives of the Vergennes culture. Such groundstone artifacts are identical to those of Maritime Archaic assemblages of the lower St. Lawrence drainage, suggesting either contact between Vermont groups and these peoples, or the movement of some Maritime Archaic groups into northern portions of the Champlain Basin (Haviland and Power 1982).

As elsewhere in the Northeast, Late Archaic sites in Vermont (circa 4000 to 1000 BC) (VT DHP 1991a:4-2) are distinguished, in part, by their greater numbers as compared to sites of the previous Early and Middle Archaic. Diagnostic artifacts of the time period consisted initially of notched projectile points of the Brewerton and Vosburg types, followed in turn by small-stemmed varieties such as the Lamoka. Milling equipment and stone axes and adzes are elements of the toolkit, indicating the increasing importance of nonhunted resources.

The latter part of the Late Archaic, once referred to as the "Transitional" period (Witthoft 1953), is marked by the appearance of broad-bladed Susquehanna projectile point forms, followed by Orient "fishtail" stemmed projectile points, associated in some instances with steatite bowls (Sargent 1969:28-31). Although Late Archaic hunter-gatherers are believed to have exploited a range of resources, the adoption of stone container technology at the end of the period suggests instances of reduced mobility during a part of the annual cycle.

3. Woodland Period (circa 1000 BC to AD 1600)

The Woodland period is distinguished from the Archaic by the consistent use of ceramics. The Early Woodland period is bracketed between circa 900 and 100 BC (VT DHP 1991a:9-1-9-3). The introduction of ceramics made it possible to produce highly durable containers that could withstand the rigors of cooking with direct heat. The cooking of foods may have affected the nutrition and population dynamics of Woodland groups. Ceramics also enhanced the capability to store food. Storage itself has implications for population dynamics in that it enables the support of more sedentary, long-term settlements and partially offsets the seasonal fluctuation of resources.

Despite this major technological change, there is also evidence of continuity between Late Archaic and Early Woodland adaptations. Basic aspects of settlement and subsistence do not seem to have differed substantially, and the elaborate ceremonialism represented by rich grave-good assemblages, at sites such as Swanton, Boucher, East Creek, and Bennett, presumably developed out of Late Archaic mortuary practices (Loring 1985; Thomas 1980a:10).

The earliest ceramic types found in Vermont include sand-tempered Vinette wares. Cordmarked ceramics became common during the Middle Woodland period. Collared vessels, commonly with incised decoration, are diagnostic of the Late Woodland culture (Haviland and Power 1982).

Woodland points, in addition to the temporally distinct ceramic wares introduced and employed during the period, continue to be useful as chronological indicators. Side-notched Meadowood points and lobate-stemmed Adena points are diagnostic of the Early Woodland period in Vermont. Jack's Reef and Fox Creek points date to the Middle Woodland period. Large triangular Levanna points are typical of the Late Woodland (Haviland and Power 1982).

While specific data on Early Woodland habitation sites are generally lacking in Vermont, recent investigations of several Middle Woodland period sites (100 BC to AD 1050) (VT DHP 1991a:10-1-10-6), including Winooski (Power et al. 1980) and McNeil Generating Station (Thomas 1980b), document the heavy utilization at that time of locations along the lower reaches of rivers emptying into Lake Champlain. The large quantities and densities of archaeological materials at sites such as these suggest that Middle Woodland peoples regularly coalesced into very large groups at locations where the exploitation of local food resources was an important activity. Contents from features at these sites indicate that fishing, nut harvesting, and hunting were important subsistence activities.

Comparison of stratified levels at both the Winooski and McNeil sites documents a shift in lithic raw material use from the Middle to Late Woodland (Levanna) periods. In the Middle Woodland components, use of nonlocal cherts predominates, and local cherts are favored for stone tool manufacture in the succeeding Late Woodland occupations (AD 1050 to 1600) (VT DHP 1991a:11-1). These data suggest a curtailing of the long-distance trade and political relationships that had existed during the Middle and perhaps Early Woodland periods (Haviland and Power 1982:132-133; Thomas 1980a:11-12). Stylistic shifts over time in Middle Woodland ceramic assemblages from the Winooski Site may be a reflection of the same phenomenon. Petersen and Power (1985:142) note that the earliest ceramic assemblage from the site appears to be "related to ceramics from the Lake Forest Middle Woodland 'cultural complex' of the Great Lakes-St. Lawrence drainage" and environs. By contrast, they observe that the later ceramic assemblages "seem more clearly related to other local assemblages within the Lake Champlain drainage basin" (Petersen and Power 1985:143). Such a pattern is consistent with an interpretation of a progressive reduction of interaction networks between groups in Vermont over the course of the Middle Woodland period.

In terms of settlement and subsistence patterns, present evidence from Vermont indicates that Late Woodland groups practiced strategies similar to those of the Middle Woodland, alternating between the exploitation of a range of environmental settings in small group contexts, and periodically aggregating to sites on the lower reaches of rivers draining into Lake Champlain. Adoption of maize horticulture appears to have occurred later than in surrounding areas, such as New York (Haviland and Power 1982:136-137). Maize appears to have initially constituted a minor component of the diet of these groups (Bumstead 1980).

4. Contact Period (circa AD 1600 to 1750)

At the time of European contact in the seventeenth century, the descendants of Late Woodland groups inhabiting the Connecticut Valley of Vermont included the Western Abenaki. By that time sedentary village life was a major aspect of their adaptation. The Western Abenaki were organized into several major bands or organizations, each occupying its own village site. Subsistence strategies alternated between the village setting, where crops were grown and surplus foodstuffs stored, and periodic dispersion into smaller groups that traveled to other locations, primarily to hunt (Day 1978; Haviland and Power 1982).

C. General Historic Context

Trappers and hunters were the first Euro-Americans to venture into the remote region that would become Vermont in the eighteenth century. Reaching the area from the west was impeded by the natural barrier of the Green Mountains, and colonization was slow owing to the unsettled political picture. Recurring hostilities between the British and French authorities inhibited settlers from making Vermont their home.

Even before the final surrender of the French at Quebec in 1760, however, applications for land grants were being made by many parties. The first land grants within what is now Vermont were made by the colony of Connecticut. These lands, referred to as "equivalent lands," were transferred to Connecticut by Massachusetts, which had erroneously granted its citizens 107,793 acres within the borders of Connecticut. Connecticut immediately sold these lands to men from both Connecticut and Massachusetts, who in turn sold the land to prospective settlers at a profit. With the final resolution of the Massachusetts-New Hampshire territorial disputes in 1740, these lands became New Hampshire territory. Not until the royal decree of 1764 established the Connecticut River as the eastern border of New York did this practice desist, securing the formal jurisdiction of New York over the area.

Governance of this territory previously known as the New Hampshire Grants began with the establishment of county frameworks on both sides of the Green Mountains. With the Green Mountains as the dividing line, "Bennington" was the western county and "Cumberland" the eastern county. Allegiance to the new provincial authorities by the settlers was weakened, however, by the attempt to annul all land charters issued by the New Hampshire governor and to collect compensation for the granting of new charters. This was the situation, roughly paralleling the grievances of the 13 colonies against the British Crown, that precipitated the struggle of Ethan Allen's Green Mountain Boys against the New York authorities, and which resulted in the 1777 declaration of Vermont's sovereignty and independence. By 1781 Bennington County had attained its present-day boundaries.

For early settlers prior to 1830, subsistence farming was the predominant form of household economic activity. By 1830 the economy had shifted to agriculture, concentrating on the cultivation of potatoes and grains. It was at that time that the Spanish Merino sheep, an outstanding wool producer easily adapted to the rugged terrain and climate, was introduced to Vermont. The self-sufficiency of the Vermont farmers diminished considerably as many turned to sheep ranching as an alternative source of income, almost to the complete exclusion of other agricultural products.

The increased supply of locally produced wool resulted in the establishment of fulling and cleansing mills, which were followed by carding mills. In the early nineteenth century the number of fulling and carding mills increased by 200 percent (to 273 from 136) and 275 percent (to 234 from 87), respectively. The location of these mills was dictated by population sufficient to support their services. These mills eventually became suppliers for developing woolen factories, which were themselves located near a water source and a market for their product. By the early nineteenth century Vermont had 33 woolen factories. The average woolen shop employed nine people or less, no larger than some of the carding and fulling mills. In many cases the woolen shops were an outgrowth of earlier textile mills. Home manufacture, which was common before 1830, ended with the proliferation of the textile factories (Meeks 1986; Steponaitis 1975:43-50).

The breeding of wool sheep reached its peak in Vermont in the early 1840s. The industry entered the doldrums in the late 1840s and remained there through the 1850s. This decline was in part the result of lower protective tariffs on imported wool and in part the result of competition from the west with its wider pastures, less costly grain, and, following the opening of the Ohio and Pennsylvania canal systems, better transportation (VT DHP 1989:1). The failure of several younger enterprises owing to poor location caused the number of woolen factories to decrease from 97 in the mid-1840s to 89 a decade later. In

addition, the number of textile concerns in Vermont began to drop as the industry consolidated into fewer, larger firms utilizing more efficient machinery. By the 1850s large factories tended to be located primarily near a water source and transportation route, with market factors being only a minor consideration. Household production and its related fulling and carding mills all but completely disappeared in the 1850s, as the number of mills fell from a peak of over 400 in the 1820s to only 75 in the early 1850s. The sheep industry briefly revived in the 1860s as the Civil War prompted a greater demand for wool products, as the unnatural wartime demands created a general increase in prices, with army clothes in great demand; cotton became less available; and higher tariffs were imposed during and after the war (Steponaitis 1975:60-67).

The late nineteenth-century woolen industry in Vermont was marked by the emergence of large town-based firms (employing more than 100 persons) in places such as Bennington, Winooski, Rutland, Johnson, and Fair Haven. Vermont enjoyed prominence in the manufacture of woolen and knit goods during the 1880s. The state's industry declined steadily through the first half of the twentieth century despite a brief rise during the World War II years (Steponaitis 1975:118; VT DHP 1991b:10-11).

With the initial decline of the sheep and woolen industry in the late 1840s, many farmers returned to breeding cattle, although not before mutton sheep slowly infiltrated many farms formerly devoted to wool-bearing sheep (VT DHP 1989:2). The introduction of dairy breeds and replacement of beef cattle was a slow and intermittent process. Up until the 1850s only private dairying took place, but as the industry became more general, cheese factories and later creameries were built to service entire dairying communities (Bremer 1929:587). Butter and cheese were soon steadily manufactured in centrally located factories, usually privately owned. By the close of the nineteenth century, the Vermont dairy farmer was confronted with direct competition from the dairy industries of Ohio and Wisconsin, for whom the transport of perishable goods did not pose as great an obstacle as rail systems connected these states with the East.

Mining and the processing of stone and mineral deposits were also significant Vermont industries dating to the times of early settlement. The first recorded lime kiln in Vermont was at Isla la Motte, where the French burned lime to make mortar circa 1665. Lime kilns started appearing in large numbers with the opening of farms and the discovery of good quality limestone deposits. Eventually lime kilns were present in the vicinity of nearly all outcrops of limestone. The earliest type of kiln in Vermont, the farm kiln, was constructed to fulfill local demands for agricultural lime and building mortar, although surplus was sold to tanneries, paper mills, and chemical factories. These types were operated up to the 1840s. Larger and more complex kilns were constructed in association with multiple quarry operations and later near railroad lines for easier transportation to external markets (Rolando 1992:216-217).

D. Searsburg and Readsboro

Located in the eastern part of Bennington County, Searsburg and Readsboro are classic mountain towns with established settlement patterns that are decidedly rural and dispersed throughout the landscape. Although the topography is similar, the stories of the towns diverge. Readsboro, to the south, was settled earlier than Searsburg and of the two towns had more industrial development that persisted into the twentieth century. But in the early years the towns' histories were closely knit because of a boundary discrepancy that went on for many years.

Thomas Chittenden, governor of Vermont, chartered Searsburg in 1781, and it was granted to William Williams and 27 other individuals on February 23, 1781. The town was not surveyed or allotted until 1800. For years following the 1800 Marks survey, the town remained wilderness. Confusion regarding Searsburg's southern boundary line with Readsboro resulted in the area's omission from the original town plat. Chester Packard adjusted this oversight by platting another row of lots along the southern boundary.

The new lots were assigned the same sequence of numbers as the adjoining lots. To prevent confusion in early land records, the southernmost row of lots was designated "Packard's Survey" (Aldrich 1889:489). Unlike Searsburg, Readsboro, located along the Massachusetts border, was not settled under any township charter rights. Although grants were bestowed to several people, the town's boundary was not officially established until the early twentieth century (Aldrich 1889:61; Ross 1936:7-8). During the first quarter of the nineteenth century, little is recorded beyond noting that the harshness of the area's environs forced early settlers to depart shortly after their arrival (Aldrich 1889:490). A mid-nineteenth-century characterization of Searsburg notes that the majority of the town is "unsuitable for settlement" (Hemenway 1868:231). Similar observations were made about Readsboro, noting that its rocky, hilly, uneven terrain made the area rugged but fertile and productive land for farming.

Readsboro takes its name from John Read, a patent owner from New York, who received his grant in 1770. It was shortly thereafter that the first settlements were made near what is Heartwellville today, and by 1785 several more settlers had arrived to establish homesteads and farms. The first grist- and sawmill was erected in 1787, and by the turn of the nineteenth century, the small town consisted of 51 tax-paying households, which by 1810 had increased to 67 (Aldrich 1889:483, Hemenway 1868:220).

Joseph Crosier is recognized as Searsburg's first permanent settler, who settled in the southeastern portion of the town on one of the Packard Survey lots (Figure 4) with his two sons, Joseph, Jr. and David, around 1824 (Aldrich 1889; Hemenway 1868). His family had originally settled in Colrain, Massachusetts, a village near the Vermont border. The village of Colrain is located on a road (present-day Route 112) that follows the North River into Vermont. Several members of the Crosier family journeyed up this road into the Town of Halifax in Windham County, Vermont. Joseph Crosier was a resident of Halifax in September 1823, when he bought 320 acres of land in the unsettled territory of Searsburg (Searsburg Deed Book 1:203). Berger's previous Phase IB archaeological investigation (1995b) identified the location of the Crosier homestead on the west side of Route 8 (Plate 1), across from the present cemetery, which is the only visible remnant of the Crosier complex. The family burial ground, once located on the farm, had a wall to keep out roaming livestock. All descendants of Joseph Crosier and John LeRay were permitted to use the cemetery (Searsburg Deed Book 4:444; 5:72). The homestead, established in 1824 and occupied until at least 1880, was depicted on the Rice and Harwood 1856 map (Figure 5) and the Beers 1869 map (Figure 6), lying on the western side of Route 8 at the intersection of Sleepy Hollow Road (Beers 1869; Rice and Harwood 1856).

Settlement continued to increase after the Crosiers' arrival, but to the north of their homestead. By 1830 the Crosiers had been joined by four other settlers (U.S. Bureau of the Census, Population Schedule 1830:87, 1840:253). The Crosier wagon road (present-day Route 8) was laid out along a tributary stream of the West Branch of the Deerfield River. The Windham Turnpike, present-day Route 100, followed the West Branch of the Deerfield River, looping northward through the Town of Readsboro. The village of Heartwellville, located at the junction of Routes 8 and 100, was on the same route that had taken the Crosiers from Colrain to Halifax. There was a gap of 2 miles between the Windham Turnpike and the Searsburg line, where Route 8 crossed onto Crosier property. From Heartwellville the Windham Turnpike continued along the North Branch of the Hoosic River, across the border to North Adams, Massachusetts.

At the same time that Joseph Crosier was establishing his new homestead (ca. 1823), residents of Windham and Bennington counties filed a petition with the state legislature to build a road to Bennington, which would benefit the inhabitants of the towns of Searsburg, Woodford, Glastenbury, and Somerset, and encourage further settlement. These towns were strategically situated between the populous towns of Wilmington and Bennington, but they did not have enough inhabitants to construct and maintain a road through their territory. Instead, the Searsburg Turnpike Company was established to construct the road (present-day Route 9), which was completed in 1832 (Vermont State Papers 59:59). Money to build the road and bridges was to be raised through a levy of four cents per acre on all lands in the aforementioned towns (Vermont State Papers 57:17).

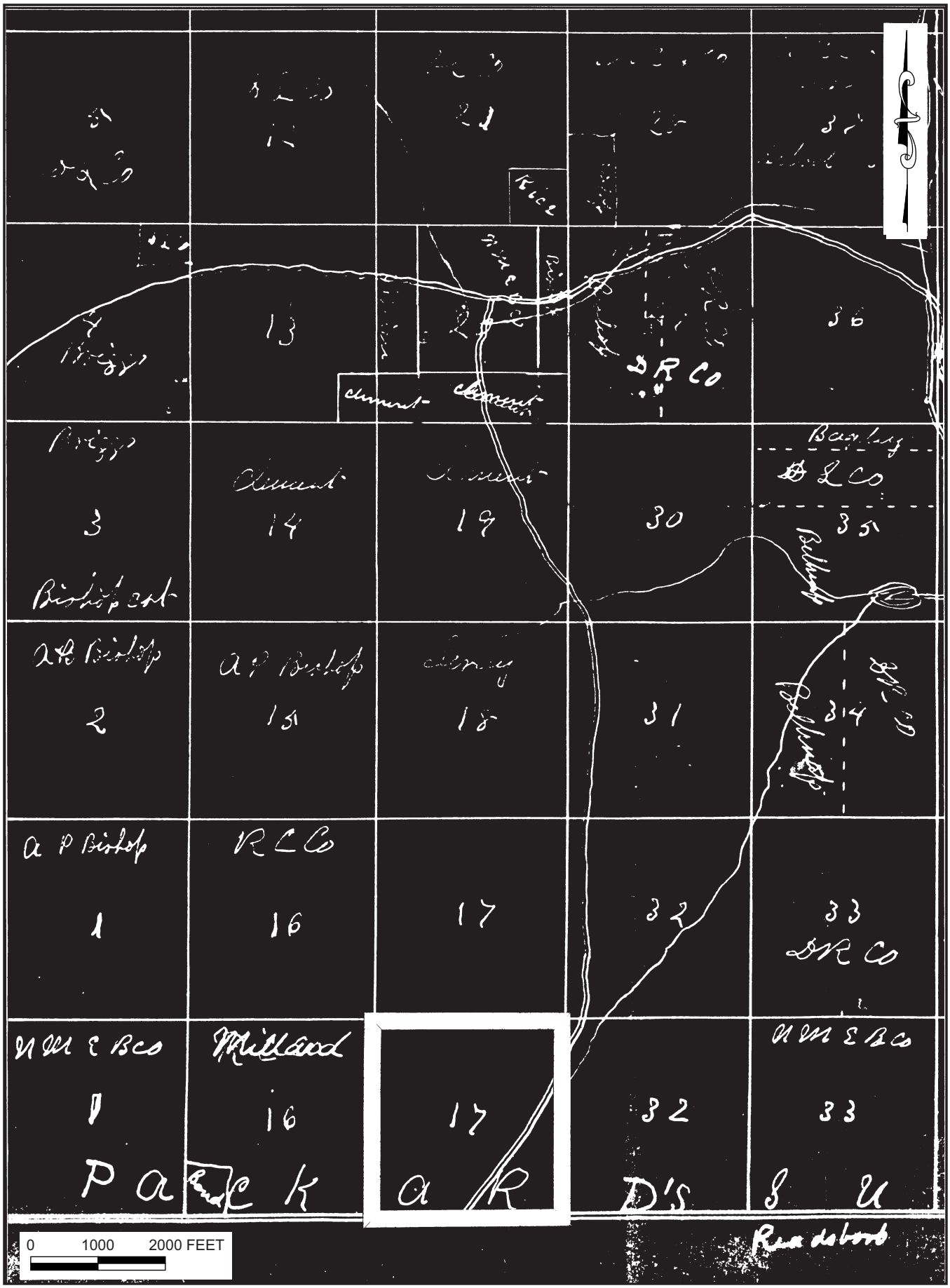


FIGURE 4: Lot 17 in Packard's Survey, Homestead of Joseph Crosier

SOURCE: Lotting Map of Searsburg, Vermont, State Archives

PLATE 1: Crosier Farmstead Ruins Along Route 8 Across from Site VT-BE-228. View to West (photograph taken during 1995 survey)

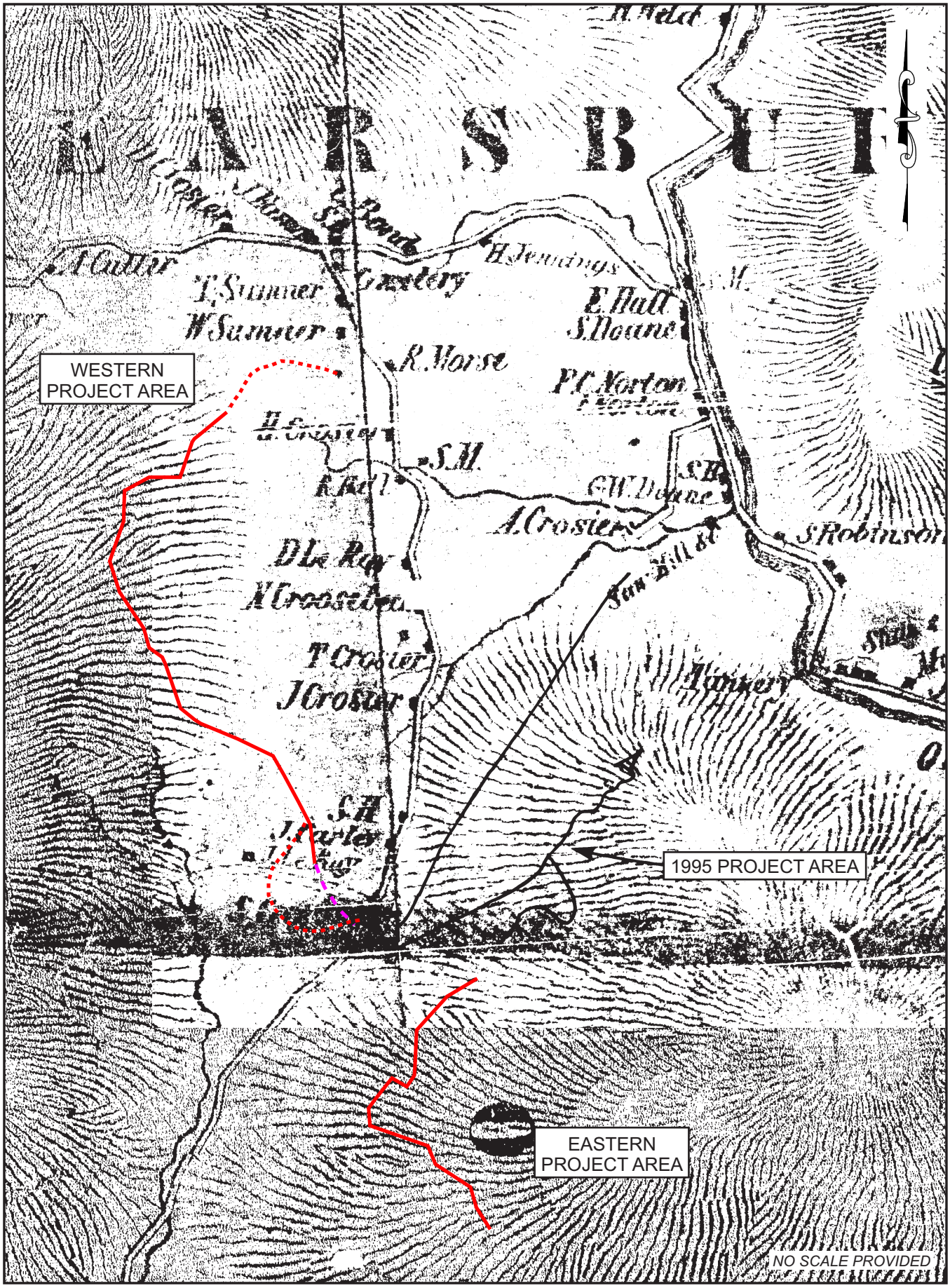


FIGURE 5: Project Area in 1856

SOURCE: Rice and Harwood 1856

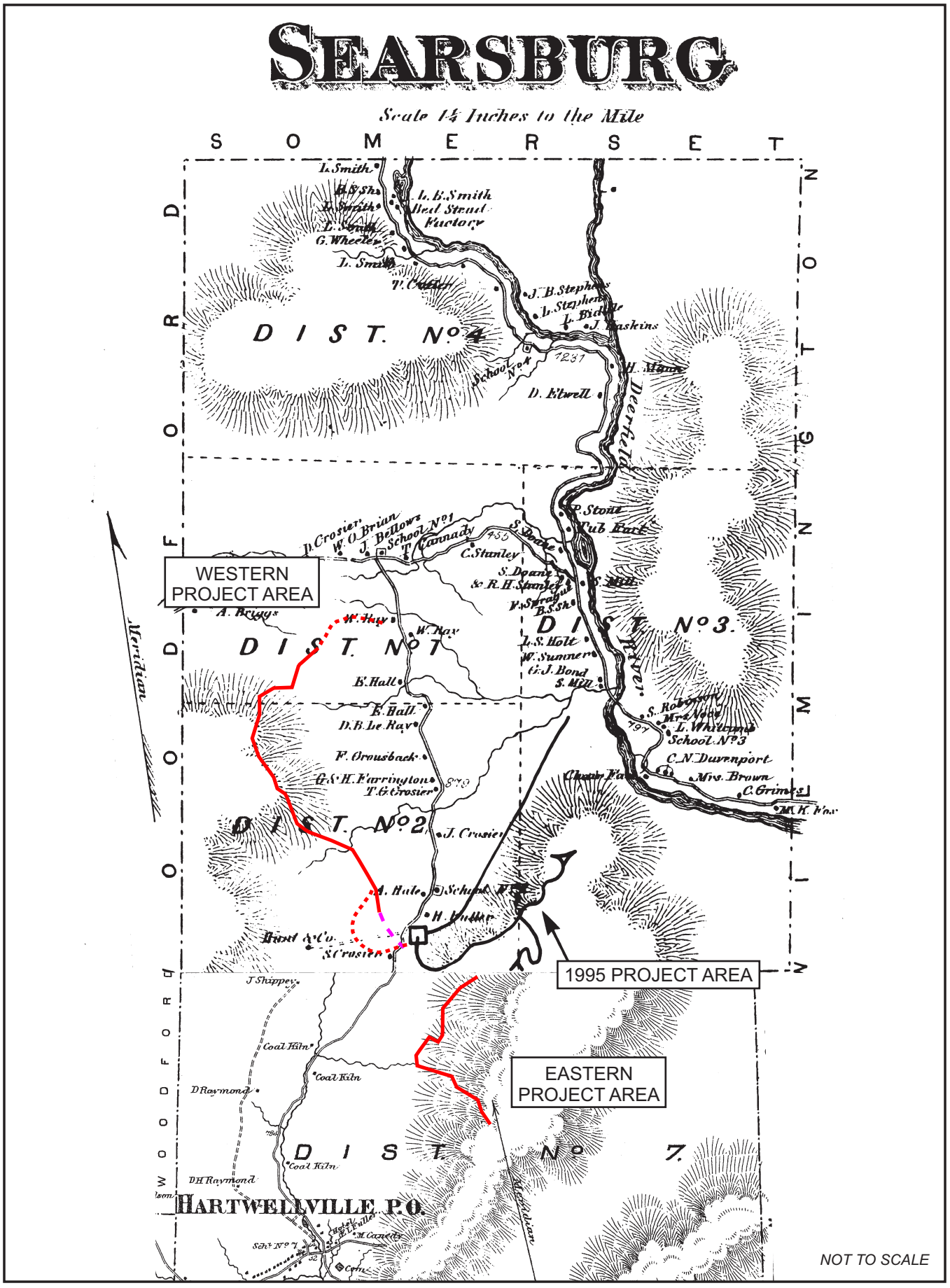


FIGURE 6: Project Area in 1869

SOURCE: Beers 1869

Some of the earliest manufacturing in Readsboro took place in the villages laid out along the Windham Turnpike, including the villages of Readsboro and Heartwellville. Prior to 1832 little manufacturing took place in the area, but the growing population and increasing need for local facilities brought about the construction of a textile factory on the banks of the Deerfield River, which later burned and was redeveloped in the 1850s as a tannery.

In March 1833 the town of Searsburg was organized and town officers were elected. By the mid-1830s the Vermont Legislature had given Searsburg the authority to collect a real estate tax to pay for building and improving roads and bridges in the town. The resulting revenues were administered by local landowners Joseph Eames, John Knapp, and Joseph Crosier (Vermont Laws 1833:47). In 1839 a public sale of the lots on which the taxes remained unpaid was held at the home of Joseph Eames in Searsburg. Joseph Crosier added seven whole lots and one partial lot to his landholdings. Each lot, whether whole or partial, was sold for $7.17. Levi Crosier, as the Town Tax Collector, conveyed the title to these properties to his father the following year (Searsburg Deed Book 1:106, 146). These lands, along with six contiguous lots that he had acquired in 1831, gave Joseph Crosier 1,302 acres of land in Searsburg (Searsburg Grand List 1842).

During that time economic investment ensued, including the establishment of a hotel and James Crosier's sawmill, built at the head of Devil's Stair Falls. Construction of other mills began, including the 1842 Squires and Swift Tannery (Site VT-BE-60), the 1845 "Doane Mill" built by Solomon Rich (Site VT-BE-59), the 1845 Aaron Pike sawmill, and the 1850 Haynes and Livermore sawmill. In 1856 the Doane sawmill and washboard/clothespin factory was built at the foot of Devil's Stair Falls.

Searsburg enjoyed productive and economically viable years in the mid-nineteenth century. Census data show a rather stable population of less than 10 individuals from 1791 through 1820 (there are no census data for 1800 and 1810). Beginning in 1830 the population steadily increased, reaching its peak in 1860 with 263 individuals, and then gradually declined (Child 1880). The major product of Searsburg was lumber, as can be gleaned from the number of sawmills that were established during the town's formative years. The primary timber stands of the area include beech, birch, maple, spruce, fir, and hemlock. The available timber provided lumber and shingles, adding to the economy (Hemenway 1868:232). Readsboro's economy was also largely dependent on lumber. The town had several lumber mills and factories that produced wood products such as trays and brooms, among other things. Heartwellville had a lumber mill and chair factory in the nineteenth century; however, cattle and sheep farming remained a mainstay in the outlying rural areas (Hemenway 1868:221).

Just over 200 people lived in Searsburg, with only eight farmers listed in the Agricultural Schedule of the 1850 census. Three members of the Crosier family owned farms, and inhabitants with the Crosier surname accounted for nearly one-quarter of the entire town's population. The Crosier farm on the west side of Route 8, north of the town line, was by far the most productive farm in town. Their beef cattle, sheep and wool production, dairy cows, and the production of butter and cheese surpassed those of other farmers in Searsburg. The hilly terrain was not suited to growing cereal crops, yet the Crosier farm produced the most oats and was the only farm to grow buckwheat. Like the other farmers, Samuel Crosier grew Irish potatoes, and produced maple sugar, at a quantity four times as much as anyone else in Searsburg (U.S. Bureau of the Census, Agricultural Schedule 1850:173). Readsboro had concentrations of people in the villages of Readsboro and Heartwellville, and even the more rural farms and settlements were located in the southern portion of the town.

The 1860s were the peak years for population and agricultural production in Searsburg. Thirty additional farms had been established in Searsburg by 1860, even though the population had only increased by another 62 individuals. The earlier concentration on raising beef cattle was shifted to dairy cattle. The Crosier farm, run by Samuel Crosier, produced the most butter, 600 pounds, and the most cheese, 1,000 pounds, in Searsburg. The farm still produced the most oats in town, and, like the other farmers, grew

Irish potatoes. The Crosiers also produced the most maple sugar, 1,000 pounds (U.S. Bureau of the Census, Agricultural Schedule 1860:201-202; 1870:539, 542).

By 1870 Samuel Crosier's farm had diminished somewhat in value, including the number of livestock; however, the Crosier farm was still one of the most productive, harvesting a large amount of Irish potatoes and hay and producing 600 pounds of butter. This trend was mirrored in the other 25 farms in Searsburg (U.S. Bureau of the Census, Agricultural Census, 1870:1-2). The project area in 1880 is depicted in Figure 7.

Readsboro's economy relied heavily on lumber, but diversified somewhat in the 1800s with the construction of the Deerfield River Pulp and Paper Company. The company began production in 1882, and the property was transferred to the National Metal Edge Box Company in 1889, which then began manufacturing wood pulp board. The facility was sold in 1915 and destroyed by fire in 1922 (Ross 1936:35-6). Throughout the remainder of the nineteenth and into the twentieth century, the manufacture of lumber and related items was the driving force of Readsboro's economy. Mills established early in the nineteenth century were purchased by large lumber companies, such as the Hoosac Lumber Company, and operated by the Hoosac Lumber Mills Corporation until the late 1920s, when the property was purchased by the Readsboro Chair Company (Ross 1936:33).

E. Archaeological Sensitivity Assessment

The goals of the Phase IA background research with regard to cultural resources were to: (1) determine local chronological sequences; (2) characterize the distribution and type of known sites; (3) summarize environmental characteristics; (4) outline the history of the project area; and, (5) delineate pertinent research issues with which yet-to-be-identified cultural resources may be associated.

The Phase IA background research involved examination of archaeological site files within an approximately 5-mile radius of the project area, maps, and cultural resource management reports held by the VT DHP, including Berger's (1995a, 1995b) surveys of the existing facility (there have been no new reports since the 1995 survey); examination of National Register files, historic architectural documentation, and related materials available at the VT DHP; and examination of appropriate soil and surface geology maps. Berger also consulted with David Lacy, Archaeologist with the GMNF, who provided GIS mapping of archaeological sites and potential sites on NFS lands (Figure 8).

1. Prehistoric Sensitivity

Prehistoric background research proceeded along two fronts: previous archaeological work conducted in the area, in particular Berger's previous Phase IA (1995a) and Phase IB (1995b) of the Searsburg facility, which will adjoin the eastern project area, and paleogeography. To provide a preliminary assessment of the potential for prehistoric archaeological resources, the basic predictive modeling used included completion of VT DHP's *Environmental Predictive Model for Locating Archaeological Sites*. This form provides a differential ranking of topographical features and soil associations. Berger also conducted a project area inspection to assess the conditions, noting areas of potential concern.

The proposed eastern and western project areas both possess locations that would be sensitive for prehistoric resources. For example, peaks represent areas with higher probability for prehistoric resources, as do vistas and wind-protected, small, flat areas or saddles. Berger's previous Phase IA (1995a) work in the project area vicinity reached similar conclusions and field tested the approach during the Phase IB survey (1995b). No prehistoric sites were identified, although two prehistoric artifacts, a quartzite biface reduction flake and a quartzite flake fragment, were recovered during the investigation of Site VT-BE-228, historic farm outbuildings associated with the Crosier farmstead. This site was avoided during

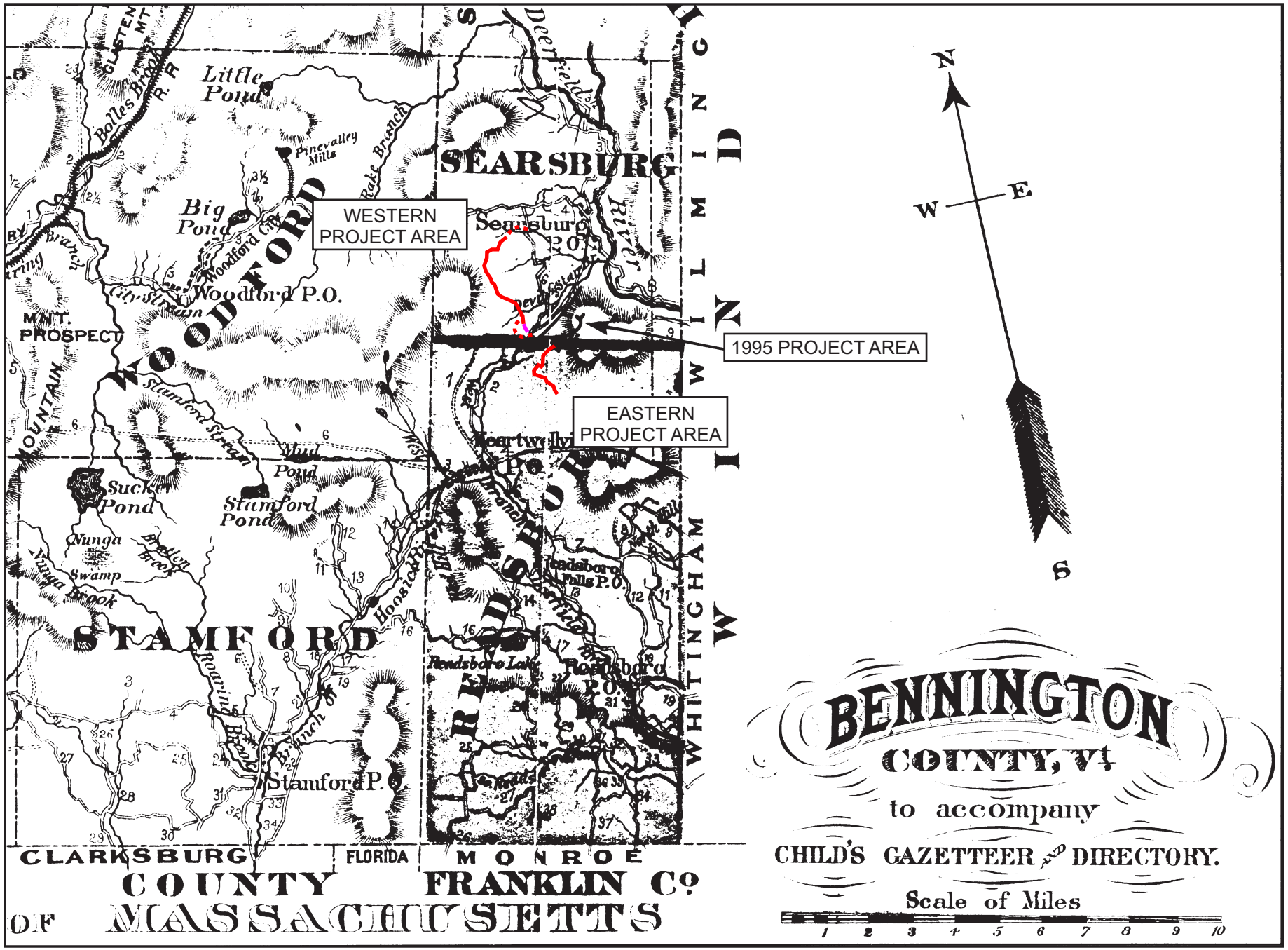
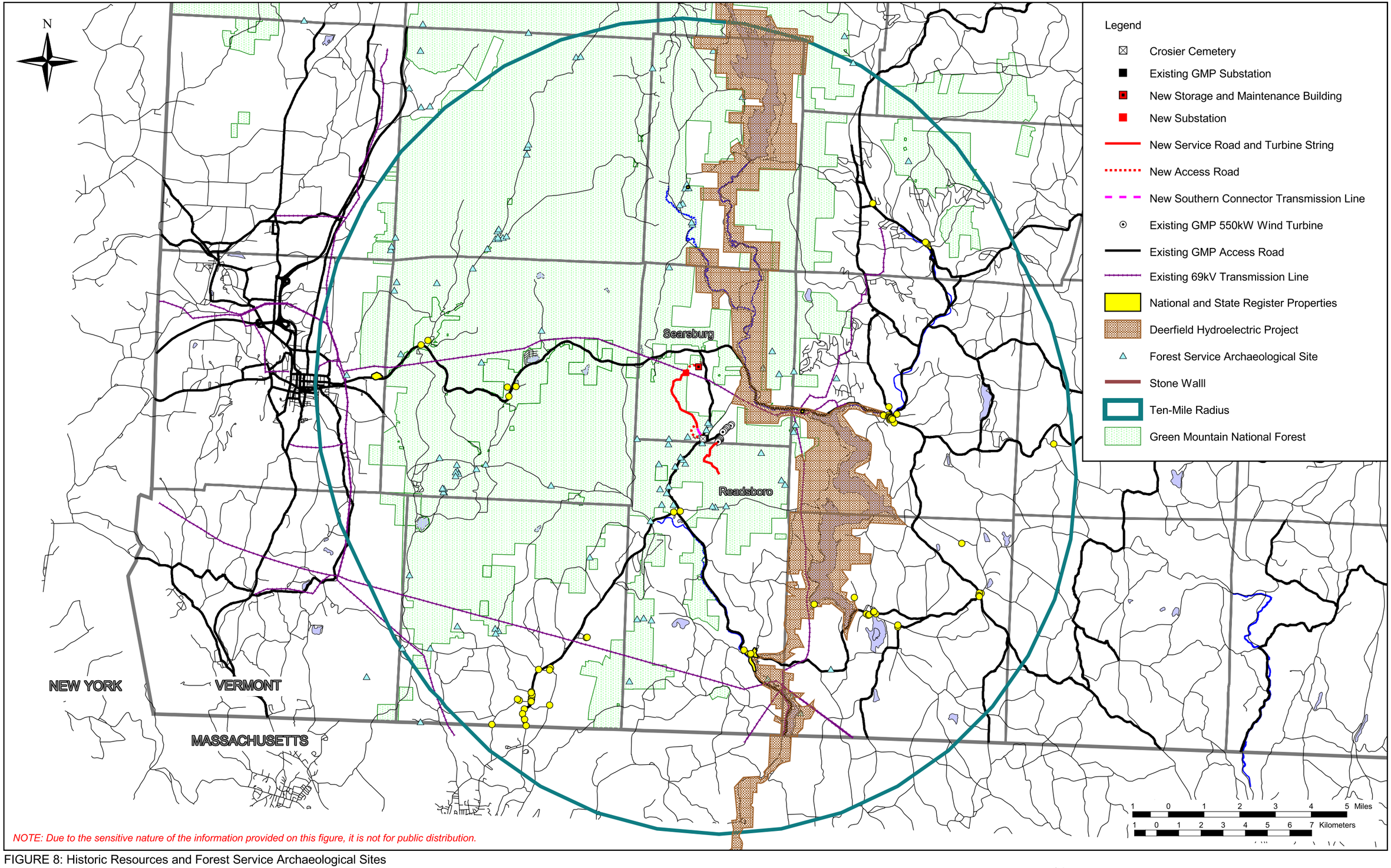


FIGURE 7: Project Area in 1880

SOURCE: Child 1880



NOTE: Due to the sensitive nature of the information provided on this figure, it is not for public distribution.

FIGURE 8: Historic Resources and Forest Service Archaeological Sites

construction of the Searsburg facility and no further work was undertaken. Discussions with David Lacy (2005) suggest that the prehistoric site location model for the project area vicinity remains the same today as it was during the 1995 surveys.

In general, prehistoric sensitivity along both project areas is judged to be variable and is predicated on localized variations in topography, presence of water, resource base exploitability, and more nuanced variables, such as viewsheds and locations providing a measure of personal comfort (Lacy 1994). As conditions vary within the project area, the prehistoric sensitivity varies accordingly. Areas with a low sensitivity ranking include those portions of the project area with severe slope (e.g., greater than 15 percent; Plate 2). However, the potential for unknown prehistoric sites remains a serious consideration because of the project area's location and attributes as described above. Plates 3 and 4 depict typical areas for both the proposed western and eastern project areas that would be earmarked for subsurface testing as they are similar to those tested during the Phase IB survey undertaken for the Searsburg facility (Berger 1995b).

2. Historic Sensitivity

VT DHP archaeological site files list a total of 22 historic archaeological sites within a 4-mile radius of the general project area vicinity, with six historic archaeological sites located within a 1-mile radius and one within the project area (Site VT-BE-83/SSG03.00). Two of the sites are kilns reported by Rolando in 1983 (Sites VT-BE-51/RSO54.02 and VT-BE-52/RSO54.01), and the other four represent homestead/farmsteads reported by Record in 1984 (Sites VT-BE-81/RSO55.00, VT-BE-82/SSG04.00, and VT-BE-83/SSG03.00).

NFS GIS maps show an additional five historic sites in close proximity and one site within the project area. A survey conducted by Berger (1995b) identified one historic site (VT-BE-228/RSO 71.00) immediately south of the Crosier cemetery, although this site is not shown on the Vermont Archaeological Inventory (VAI) maps. Sites SSG06.01, SSG06.02 and SSG06.03 are located 305 to 610 meters (1,000 to 2,000 feet) north of the project area on both sides of Route 8. Site SSG02.00 is located at the juncture of the proposed access road and Route 8 in a proposed preliminary building footprint for the project.

Historic archaeological sensitivity in the eastern project area is low. The entire alignment sits on a ridge that is removed from the dendritic historic settlement pattern exhibited along watercourses in the region's valleys. Berger previously conducted subsurface testing along the same ridge immediately north of the proposed alignment and found one isolated bottle fragment (Berger 1995b).

Historic archaeological sensitivity in the western project area is high. Site SSG02.00 is located within the project's proposed preliminary building footprint. This site is the "S. Crosier" residence indicated on the 1856 Rice and Harwood map and on an 1869 Beers map. Samuel Crosier's father is Joseph Crosier, who is recognized as the first permanent settler of Searsburg. Child (1880) states that the location of Samuel Crosier's homestead was opposite the family cemetery, and Aldrich (1889) indicates that upon Joseph Crosier's death his homestead passed to his son Samuel. Thus, the "S. Crosier" residence shown on the 1869 Beers and 1856 Rice and Harwood maps may in fact be Joseph Crosier's original homestead. It is not known if Samuel constructed a new house upon gaining control over the property; however, Child (1880) and Aldrich (1889) both suggest that Joseph's house was made of spruce logs and bark, contributing to its potential significance as a site associated with an early nineteenth-century log cabin and the associated lifeways of early Euro-American settlement in rural Vermont.

One site, the J. Leroy/Hunt & Co. Site (VT-BE-83), exists within the proposed access road alignment. Only portions of it (an orchard and a stone wall) lie within the proposed alignment; there is no observable

PLATE 2: Steep Area at South End of Western Project Area. View to Southeast

PLATE 3: Relatively Level Area Along Western Project Area Ridge Top. View to South

PLATE 4: Relatively Level Area Along Eastern Project Area Ridge Top. View to West

evidence of the cellar hole, well, family cemetery, or outbuilding within the project area. This site along with an unnamed site (VT-BE-82/SSG04.00), Site SSG06.01 (shown as "H. Walker" on the Beers 1869 map), Site SSG06.02 (shown as "S.H." on the Rice and Harwood 1856 map and/or "A. Hale" on the Beers 1869 map), and the potential site of "J. Carley" (Rice and Harwood 1856) further illustrate the high level of sensitivity of this area for archaeological sites reflecting early farmstead/homesteads. This area of sensitivity is between Route 8 and the location of the orchard (Site VT-BE-83) to the west. No evidence of historic land use was observed further west (upslope or on top of the ridge) within the project area.

3. Sensitivity Summary

The project area lies within a region of Vermont that is relatively remote and for which predictive modeling for the presence of cultural resources requires flexibility. These two attributes mean that the potential for cultural resources in the project area must take into consideration several factors. First, prehistoric sites are known to occur in upland environments but can be ephemeral in nature, therefore making their identification difficult. Nevertheless, prehistoric populations did utilize the rich resource base provided by upland environments, indubitably to a much greater degree than our present record of known sites would suggest. With regard to the potential for historic resources, the presence of structural remnants and ruins in the project area supports the contention that the likelihood of encountering historic resources is high throughout the project area. Dispersed rural mountain farmsteads and homesteads were spread across the environmental landscape, taking full advantage of the available resources. Thus, structural remains and associated activity area features representing historic period occupation may be present at higher elevations. Lastly, the remoteness of the project area suggests that any resources identified in the project area may be relatively undisturbed.

Based on these findings, Berger recommends that a Phase IB archaeological survey of the project area, designed in consultation with VT DHP, be conducted to identify additional cultural resources in the project area. Such a survey would indicate whether the project area will impact additional cultural resources and would provide the basis for determining the need for further work.

III. Historic Resource Screening Study

The historic resource screening component of the Deerfield Wind Project involved background research to identify known historic resources in the project viewshed and a vehicular reconnaissance to characterize the overall built environment and landscape with regard to potential for visual effects.

According to records in VT DHP files there are three National Register historic districts located within the project viewshed: the Wilmington Village Historic District, the Furnace Grove Historic District in Bennington, and the West Dover Village Historic District. There are four individually listed National Register properties in the project viewshed: the Crow's Nest and the Medburyville Bridge, both in Wilmington, the District No. 1 Schoolhouse in Somerset, and the Tudor House in Stamford. Additionally, there are 70 individually listed State Register properties in seven towns within the 10-mile radius. Two resources, a residence in Wilmington on Ray Hill Road and the Deerfield River Hydroelectric Project running through the towns of Somerset, Searsburg, Readsboro, and Whitingham, have been recommended as eligible for listing in the State and National Registers, respectively (see Figure 8; Table 1).

A vehicular reconnaissance was undertaken in November 2005 to obtain a general impression of the types of historic period resources to be found in the area.

TABLE 1

RECORDED HISTORIC RESOURCES WITHIN A 10-MILE PROJECT VIEWSHED

RESOURCE NAME	RESOURCE LOCATION	LISTED, STATE (SR) OR NATIONAL REGISTER (NR)	COMMENTS
Wilmington			
Wilmington Village Historic District	VT 9 and VT 100, Wilmington, Windham Co.	NR	
Crow's Nest	36 Sturgis Drive, Wilmington, Windham Co.	NR	
Medburyville Bridge	Town Hwy 31 over Deerfield River, Wilmington, Windham Co.	NR	
Pettee Memorial Library	South Main Street, Wilmington, Windham Co.	SR	In NR District
Bissell Parish house	South Main Street, Wilmington, Windham Co.	SR	In NR District
O.O. Ware Store	Corner of East and South Main streets, Wilmington, Windham Co.	SR	In NR District
Barber & Jarvis Insurance Building	Route 9 near Junction with Route 100, Wilmington, Windham Co.	SR	In NR District
Town Office Building	Route 9 near Junction with Route 100, Wilmington, Windham Co.	SR	In NR District
Parmelee and Howe Drug Store	Junction of Route 100 and Route 9, Wilmington, Windham Co.	SR	In NR District
Vermont House	Route 9 west of Route 100, Wilmington, Windham Co.	SR	In NR District
Memorial Hall	Route 9 opposite Vermont House, Wilmington, Windham Co.	SR	In NR District

TABLE 1 (continued)

RESOURCE NAME	RESOURCE LOCATION	LISTED, STATE (SR) OR NATIONAL REGISTER (NR)	COMMENTS
Crafts Inn	Route 9 at Deerfield River, Wilmington, Windham Co.	SR	In NR District
Vermont National Bank Building	Corner of South Main Street and Route 9, Wilmington, Windham Co.	SR	In NR District
Congregational Church	Route 9 East of Route 100, Wilmington, Windham Co.	SR	In NR District
Masonic Hall	Route 9 East of Route 100, Wilmington, Windham Co.	SR	In NR District
O.L. Shafter House	Shafter Street, Wilmington, Windham Co.	SR	
Wilmington High School	School Street, Wilmington, Windham Co.	SR	
Wilmington Baptist Church	Route 100, Wilmington, Windham Co.	SR	
King-Atwood House	57 Ray Hill Road, Wilmington, Windham Co.		Surveyed, not listed in National or State Registers
Bennington			
Furnace Grove Historic District	1 mile east of intersection of Route 9 and Burgess Road, Bennington, Bennington Co.	NR	
Somerset			
District No. 1 Schoolhouse	Somerset Road, Somerset, Windham Co.	NR	
Deerfield River Hydroelectric Project	Deerfield River, Somerset, Windham Co.		1913 dam and footbridge considered eligible for the National Register
Dover			
West Dover Village Historic District	Route 100, Dover, Windham Co.	NR	
Dover Town Offices	Route 100, Dover, Windham Co.	SR	In NR District
Congregational Church	Route 100, Dover, Windham Co.	SR	In NR District
West Dover Inn	Route 100, Dover, Windham Co.	SR	In NR District
Belstrom or Grout Farm	Route 100, Dover, Windham Co.	SR	
Stamford			
Tudor House	Route 8, Stamford, Bennington Co.	NR	
State Line House	East side of Route 8, Stamford, Bennington Co.	SR	
Grudin Residence	Route 8, Stamford, Bennington Co.	SR	
Bliss Residence	East side of Route 8, Stamford, Bennington Co.	SR	
Sacco Residence	West side of Route 8, Stamford, Bennington Co.	SR	
Van Steemburg Residence	Northwest corner of Route 8 and Jepson Road, Stamford, Bennington Co.	SR	
Catholic Church	East side of Route 8 opposite Jepson Road, Stamford, Bennington Co.	SR	
Call Residence	East side of Route 8, Stamford, Bennington Co.	SR	
Gamari Residence	East side of Route 8, Stamford, Bennington Co.	SR	

TABLE 1 (continued)

RESOURCE NAME	RESOURCE LOCATION	LISTED, STATE (SR) OR NATIONAL REGISTER (NR)	COMMENTS
Stamford General Store	East side of Route 8, Stamford, Bennington Co.	SR	
Phelps Residence	East side of Route 8, Stamford, Bennington Co.	SR	
Stamford Community Church	Southwest of intersection of Route 8 and Mill Road, Stamford, Bennington Co.	SR	
Methodist Church	Northeast of intersection of Route 8 and Mill Road, Stamford, Bennington Co.	SR	
Ruebesam Residence	North side of Jepson Road, Stamford, Bennington Co.	SR	
McNulty Residence	North side of Jepson Road, Stamford, Bennington Co.	SR	
Sanford Residence	West side of Route 8, Stamford, Bennington Co.	SR	
Paradise Farm	West side of Route 8 at Old County Road, Stamford, Bennington Co.	SR	
Clough House	Old Route 8, Stamford, Bennington Co.	SR	
Wheaton Residence	West side of Old Route 8, Stamford, Bennington Co.	SR	
Bracht Residence	East side of Route 8, Stamford, Bennington Co.	SR	
Robillard Residence	West side of Old Route 8, Stamford, Bennington Co.	SR	
Demasi Residence	West side of Old Route 8, Stamford, Bennington Co.	SR	
Old Goodrich Place	East side of East Road, Stamford, Bennington Co.	SR	
Dolle Residence	West Road at the top of Peak's Hill, Stamford, Bennington Co.	SR	
Woodford			
Woodford Hollow Elementary	North side of Route 9, Woodford, Bennington Co.	SR	
Woodford Hollow Church	Route 9 and Harbour Road, Woodford, Bennington Co.	SR	
Martin Residence	West side of Harbour Road, Woodford, Bennington Co.	SR	
Woodford City Union Church	VT 9 at the top of Woodford Mountain, Woodford, Bennington Co.	SR	
Felix Castellano Residence	VT 9 at the top of Woodford Mountain, Woodford, Bennington Co.	SR	
Old Bugbee Sawmill	VT 9 at the top of Woodford Mountain, Woodford, Bennington Co.	SR	
Readsboro			
Old Wesleyan Methodist Church	Main Street, Readsboro, Bennington Co.	SR	
Vermont Hardwoods Mill Complex	Route 8, Readsboro, Bennington Co.	SR	
First Baptist Church	Main Street, Readsboro, Bennington Co.	SR	

TABLE 1 (continued)

RESOURCE NAME	RESOURCE LOCATION	LISTED, STATE (SR) OR NATIONAL REGISTER (NR)	COMMENTS
Methodist Church	Route 8, Readsboro, Bennington Co.	SR	In village of Heartwellville
Old Coach Inn	Routes 8 and 100, Readsboro, Bennington Co.	SR	In village of Heartwellville
Deerfield River Hydroelectric Project	Deerfield River, Readsboro, Bennington Co.		1924 powerhouse, surge tank, footbridge, and 1946 storehouse considered eligible for the National Register
Marlboro			
Adam's Crossroad	Intersection of Butterfield and Old Bennington-Brattleboro roads, Marlboro, Windham Co.	SR	
Whitingham			
Glory Hole	Lake Whitingham, Whitingham, Windham Co.	SR	
Deliverance Wheeler House	Town Road, Whitingham, Windham Co.	SR	
Jillson Brothers Store	Route 100, Whitingham, Windham Co.	SR	
Green Mountain Hall	Route 100, Whitingham, Windham Co.	SR	
Whitingham Community Church	Route 100, Whitingham, Windham Co.	SR	
Sadawga Lake House	Route 100, Whitingham, Windham Co.	SR	
Sawyer's Saw Mill	Route 100, Whitingham, Windham Co.	SR	
Percy Dodge Blacksmith Shop	Route 100, Whitingham, Windham Co.	SR	
C.A. France House	Town Hill, Whitingham, Windham Co.	SR	
Lamorder's Manor	Town Hill, Whitingham, Windham Co.	SR	
Jacksonville Community Church	Route 112, Whitingham, Windham Co.	SR	In village of Jacksonville
Masonic Hall	Route 112, Whitingham, Windham Co.	SR	In village of Jacksonville
Cromack's Store	Junction of Routes 100 and 112, Whitingham, Windham Co.	SR	In village of Jacksonville
Howatt House	Route 100, Whitingham, Windham Co.	SR	In village of Jacksonville
Stone House – Josiah Blanchard House	Town Road, Whitingham, Windham Co.	SR	In village of Jacksonville
Amos Brown House	Town Road, Whitingham, Windham Co.	SR	
Deerfield River Hydroelectric Project	Deerfield River, Whitingham, Windham Co.		1924 dam and outlet control tower/intake house considered eligible for the National Register
Searsburg			
Deerfield River Hydroelectric Project	Deerfield River, Searsburg, Bennington Co.		1922 dam, dam headhouse, storage shed, powerhouse, surge tank and storage building/garage considered eligible for the National Register

Berger also contacted the consultants preparing the project viewshed analysis for information about potential visibility of the project (see Appendix A for preliminary viewshed analysis maps). This area of Vermont has a complex landscape in which numerous hills of varying sizes and shapes, small mountains, and diverse vegetation all contribute to a rich scenic environment and obstruct many actual views toward the project. Where any given feature or element is visible, its perceived size diminishes significantly with distance as the view around and beyond the element expands. In general, objects within ½ mile of a viewer are considered within the foreground of the view, those up to 5 miles within a wide middle ground of the view, and objects 5 miles or further from the viewer appear as part of the background.

The consultants performing the viewshed analysis included a number of known historic properties in their field examinations. The project would not be visible from the Williamsburg Village, West Dover Village, Whitingham Village, or Jacksonville historic districts, nor from resources such as Crow's Nest or the Medburyville Bridge. The project would have only limited visibility from the King-Atwood House, Heartwellville, Amos Brown House, Sadawga Lake House, and the area of Stamford village. Such preliminary findings strongly suggest that the area's complex topography and extensive vegetation greatly limit the locations from which the project would actually be seen. From some locations, in which Green Mountain Power's wind project is already visible, the proposed project would simply add one or more like elements in the middle or far distance. These factors warrant consideration in the determination of the project's APE.

IV. Conclusions and Recommendations

The Phase IA archaeological survey has found that the project area possesses variable potential for both prehistoric and historic archaeological resources. The records search conducted in association with the historic resource screening study found three National Register-listed historic districts, 74 individual National/State Register-listed properties, and two potentially eligible properties (not listed in National or State Registers), the King-Atwood House in Wilmington and the Deerfield Hydroelectric Project, within 10 miles of the proposed project. However, none of the towns represented in this area have been comprehensively surveyed for architectural resources, and thus other significant architectural resources potentially subject to effects from the project may exist.

Based on the Phase IA archaeological survey findings, Berger recommends that a Phase IB archaeological survey of the area associated with ground disturbance be conducted to identify additional archaeological resources that could be affected by project construction. This work should be conducted in consultation with the VT DHP. Such a survey would indicate whether the project would impact archaeological sites in addition to those already identified, and would provide the basis for determining the need for further work or mitigation (e.g., Phase II/site evaluation investigation, Phase III/data recovery excavation).

The historic resource screening study concludes that the presence of the project within the foreground view (within ½ mile) and nearer portion of the middle ground view (up to approximately 3 miles) from a historic property could potentially alter characteristics of setting that qualify that property for inclusion in the National/State Register, if in fact the property's setting is integral to its significance. However, locations in which the project would be visually perceived as simply another element in a large and varied landscape (generally around and beyond 3 miles) would not fall within the area in which the project would have demonstrable potential to affect historic properties. It would therefore appear appropriate to use the viewshed within 3 miles of the project as the APE for the project.

V. References

Aldrich, Lewis Cass
1889 *History of Bennington County, VT*. D. Mason & Co., Publishers, Syracuse, New York.

Beers, F.W.
1869 *Map of Bennington County, Vermont*. Reprinted in 1969. Charles E. Tuttle Company, Rutland, Vermont.

Berger (see The Louis Berger Group, Inc.)

Bremer, H.E.
1929 The Dairying Interests. In *The Vermont of Today*, edited by Arthur F. Stone, pp. 585-597. Lewis Historical Publishing Company, Inc., New York.

Bumstead, P.L.
1980 VT-CH-94: Vermont's Earliest Known Agricultural Experiment Station. *Man in the Northeast* 19:73-82.

Carr, P.G., I.A. Worley, and M.W. Davis
1977 Post-Lake Vermont History of a Pond and Wetland in the Champlain Basin. *Proceedings of the Fourth Annual Lake Champlain Basin Environmental Conference*:71-111.

Child, Hamilton
1880 *Gazetteer and Business Directory of Bennington, County, VT for 1880-81*. Hamilton Child, Syracuse, New York.

Curran, M.L.
1984 The Whipple Site and Paleoindian Tool Assemblage Variation: A Comparison of Intrasite Structuring. *Archaeology of Eastern North America* 12:41-71.

Day, G.M.
1978 Western Abenaki. In *Northeast*, edited by B.G. Trigger, pp. 148-159. Handbook of North American Indians, vol. 14, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Dincauze, D., and M. Mulholland
1977 Early and Middle Archaic Site Distributions and Habitats in Southern New England. In *Amerinds and Their Paleoenvironments in Northeastern North America*, edited by W.S. Newman and B. Salwen, pp. 439-456. Annals of The New York Academy of Sciences No. 288.

Ellis, C.J., and J.C. Lothrop (editors)
1989 *Eastern Paleoindian Lithic Resource Use*. Westview Press, Boulder, Colorado.

Funk, R., and B. Wellman
1984 Evidence of Early Holocene Occupations in the Upper Susquehanna Valley, New York State. *Archaeology of Eastern North America* 12:81-109.

Gramly, R.M.
1982 *The Vail Site: A Paleoindian Encampment in Maine*. Bulletin No. 30, Buffalo Society of Natural Sciences, Buffalo, New York.

Haviland, William, and Marjorie Power
1982 *The Original Vermonters*. University Press of New England, Hanover, New Hampshire.

Haynes, C.V., D. Donahue, A. Jull, and T. Zabel
1984 Application of Accelerator Dating to Fluted Point Paleoindian Sites. *Archaeology of Eastern North America* 12:184-191.

Hemenway, Abby Maria (editor)
1868 *The Vermont Historical Gazetteer: A Magazine embracing A History of Each Town, Civil, Ecclesiastical, Biographical and Military*. Miss A. M. Hemenway, Burlington, Vermont.

Lacy, David
1994 Prehistoric Land Use in the Green Mountains: A View from the National Forest. *The Journal of Vermont Archaeology*. 1:92-102.

2005 Archaeologist with the Green Mountain and Finger Lakes National Forest. Personal communication with Berger personnel, November 30.

Loring, S.
1980 Paleoindian Hunters and the Champlain Sea: A Presumed Association. *Man in the Northeast* 19:15-42.

1985 Boundary Maintenance, Mortuary Ceremonialism and Resource Control in the Early Woodland: Three Cemetery Sites in Vermont. *Archaeology of Eastern North America* 13:93-127.

Lothrop, J.C.
1989 The Organization of Paleoindian Lithic Technology at the Potts Site. In *Eastern Paleoindian Lithic Resource Use*, edited by C.J. Ellis and J.C. Lothrop, pp. 99-138. Westview Press, Boulder, Colorado.

The Louis Berger Group, Inc. [Berger]
1995a *Phase IA Historical and Archaeological Background Study, Green Mountain Power Corporation's Wind Turbine Project, Town of Searsburg, Bennington County, Vermont.* Submitted to Vermont Environmental Research Associates, Inc., Waterbury Center, Vermont, by The Louis Berger Group, Inc., East Orange, New Jersey.

1995b *Phase IB Archaeological Survey, Green Mountain Power Corporation's Wind Turbine Project, Town of Searsburg, Bennington County, Vermont.* Submitted to Vermont Environmental Research Associates, Inc., Waterbury Center, Vermont, by The Louis Berger Group, Inc., East Orange, New Jersey.

MacDonald, G.
1968 *Debert: A Paleoindian Site in Central Nova Scotia*. Anthropology Papers No. 16, National Museum of Canada, Toronto.

Meeks, Harold A.
1986 *Time and Change in Vermont: A Human Geography*. The Globe Pequot Press, Chester, Connecticut.

Meltzer, D.
1984 On Stone Procurement and Settlement Mobility in Eastern Fluted Point Groups. *North American Archaeologist* 6(1):1-24.

Moeller, R.
1980 *6LF21: A Paleoindian Site in Western Connecticut*. Occasional Paper No. 2, American Indian Archaeological Institute, Washington, Connecticut.

Petersen, J.B., and M.W. Power
1985 Three Middle Woodland Ceramic Assemblages from the Winooski Site. In *Ceramic Analysis in the Northeast: Contributions to Methodology and Culture History*, edited by J.B. Peterson, pp. 109-159. Occasional Publications in Northeastern Anthropology No. 9, Part II.

Power, M., F.L. Cowan, and J.B. Petersen
1980 Artifact Variability at the Multicomponent Winooski Site. *Man in the Northeast* 19:42-55.

Rice, E. and C.E. Harwood
1856 *Map of Bennington County, Vermont*. H.F. Walling's New York Map Store, New York.

Ritchie, W.A.
1953 A Probable Paleo-indian Site in Vermont. *American Antiquity* 18:249-258.

Rolando, Victor R.
1992 *Two Hundred Years of Soot and Sweat, The History and Archaeology of Vermont's Iron, Charcoal, and Lime Industries*. Vermont Archaeological Society, Mountain Publications, Manchester, Vermont.

Ross, Frank Seth
1936 *Down Through the Years at Readsboro, Vermont*. In the collection of the Vermont Historical Society, Barre, Vermont.

Sargent, H.R.
1969 Prehistory of the Upper Connecticut Valley. In *An Introduction to the Archaeology and History of the Connecticut Valley Indians*, edited by W.R. Young, pp. 28-32. New Series 1(2), Museum of Science, Springfield, Massachusetts.

Searsburg Deed Books and Grant Lists
var. Land and tax records, on file, Searsburg Town Clerk's Office, Searsburg, Vermont.

Steponaitis, Louis W., Jr.
1975 *The Textile Industry in Vermont, 1790-1973*. Master's thesis, University of Vermont, Burlington.

Stewart, D.P., and P. MacClintock
1969 *The Surficial Geology and Pleistocene History of Vermont.* Vermont Geological Survey Bulletin 31, Montpelier.

Thomas, Peter A.
1980a Comments on Recent Trends in Vermont Archaeology. *Man in the Northeast* 19:3-14.

1980b The McNeil Generating Plant Site (VT-CH-93), Burlington, Vermont. *Man in the Northeast* 19:57-72.

1994 Vermont Archaeology Comes of Age: A Perspective on Vermont's Prehistoric Past. *The Journal of Vermont Archaeology* 1:38-91.

United States [U.S.] Bureau of the Census
1830-1920 *Population Schedules for Searsburg, Bennington County, Vermont*. Available on microfilm, Bennington Museum Library, Bennington, Vermont, and the Vermont State Library, Montpelier.

1850-1880 *Agricultural Schedules for Searsburg, Bennington County, Vermont*. Available on microfilm at the Vermont State Library, Montpelier.

United States Geological Survey [USGS]
1986 *Mount Snow, VT*. 7.5-Minute Series Quadrangle. United States Geological Survey, Washington, D.C.

1987 *Readsboro, VT*. 7.5-Minute Series Quadrangle. United States Geological Survey, Washington, D.C.

Vermont Division for Historic Preservation [VT DHP]
1989 *Vermont Historic Preservation Plan: Industry and Commerce Theme*. Overview and Context Summaries. Vermont Division for Historic Preservation, Montpelier.

1990 *Vermont Historic Preservation Plan: Planning for the Future of Vermont's Heritage*. Brief overview available from Vermont Division for Historic Preservation, Montpelier.

1991a *Vermont's Prehistoric Archaeological Heritage.* Final, unnumbered part of Vermont Historic Preservation Plan. Vermont Division for Historic Preservation, Montpelier.

1991b *Vermont Historic Preservation Plan: Culture and Government Theme*. Overview and Context Studies. Vermont Division for Historic Preservation, Montpelier.

Vermont Laws
1833 *Acts Passed by The Legislature of the State of Vermont at their October Session*. State of Vermont, Montpelier.

Vermont State Papers
var. Petitions on file, Vermont State Archives, Secretary of State's Office, Montpelier.

Web Soil Survey
2005 Natural Resource Conservation Service, United States Department of Agriculture. Accessed online 12/06/05 at <http://websoilsurvey.nrcs.usda.gov/app/>.

Witthoft, John
1953 Broad Spearpoints and the Transitional Period Cultures. *Pennsylvania Archaeologist* 23:4-31.

APPENDIX A

Preliminary Viewshed Analysis Maps

Deerfield Wind Project

Viewshed Analysis Map
Non-Forested Area
Map #3A

10 Mile Radius Study Area

Top of Nacelle: 80 meters
Top of Blade: 125 meters

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Legend

- Existing Turbines
- Proposed Turbines
- Major Roads
- Roads
- Hiking Trails
- 50' Contour Intervals
- Town Lines
- Viewshed Limit
- 1 Mile Increment Buffer Rings
- Boundary of Federal/State Lands
- State Boundary
- Forested Area with No Views
- Open Space with No Views
- Lakes

Potential Number of Visible Turbines - Top of Blade

1 - 22

N W E S

0 0.5 1 2 3 4 5

In Miles

T. J. BOYLE & ASSOCIATES
landscape architects and planning consultants

Deerfield Wind Project

Viewshed Analysis Map
Forested Area
Map #3B

10 Mile Radius Study Area

Top of Nacelle: 80 meters
Top of Blade: 125 meters

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ARLINGTON
SUNDERLAND
STRATTON
SOMERSET RESERVOIR
WARDSBORO
SHAFTSBURY
GLASTENBURY
SOMERSET
DOVER
NEWFANE
BENNINGTON
WOODFORD
SEARSBURG
WILMINGTON
MARLBORO
READSBORO
HARRIMAN RESERVOIR
POWNAL
STAMFORD
WHITINGHAM
HALIFAX

Legend

- Existing Turbines
- Proposed Turbines
- Major Roads
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- 50' Contour Intervals
- Town Lines
- Viewshed Limit
- 1 Mile Increment Buffer Rings
- Boundary of Federal/State Lands
- State Boundary
- Forested Area with No Views
- Open Space with No Views
- Lakes

Potential Number of Visible Turbines - Within Forested Area

1 - 22

N
W E
S

0 0.5 1 2 3 4 5
In Miles

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