

ARCHEOLOGICAL SENSITIVITY ZONES
for the
MAD RIVER VALLEY PLANNING DISTRICT

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A. VERMONT'S ARCHEOLOGICAL SITES

Vermont's archeological sites contain a fragile, complex and irreplaceable record of past human activities. This rich archeological heritage ranges from 10,000 year old camp sites, occupied by the earliest native peoples in the New World, to early 20th century historic sites such as the abandoned ruins of a grand resort hotel, to Revolutionary War shipwrecks lying on the bottom of Lake Champlain.

For the past 10,000 years, Vermont's prehistoric Native American people predominantly focused their activities within our river and lake basins. These early inhabitants settled in Vermont soon after glacial recession and adapted their lifestyle over many millenia of changing climates and landscapes. To Vermont's prehistoric people, river and lake basins constituted key lands: they defined community and hunting territories, provided many varieties of food and other subsistence resources, served as transportation arteries throughout and between watersheds, and acted as geographic markers.

River corridors, in particular, provided relatively easy access into and throughout Vermont for 18th century Europeans--explorers, soldiers and settlers. Although many late 18th/early 19th century settlements focused on the hill country, commercial and industrial needs of the 19th century resulted in ever increasing development of lands adjacent to rivers and streams to harness the abundant hydropower.

The ruins and oftentimes buried remains of 18th, 19th and early 20th century buildings, structures, and activity areas comprise historic archeological sites. Thus, the ruins and remains of forts, military encampments, homes and farmsteads, mills, forges, blast furnaces, charcoal kilns, mining works, settlements, shipwrecks, and manufactories of a wide range of goods and materials constitute Vermont's historic archeological heritage. Visible remnants of these sites frequently consist of stone foundations or collapsed ruins although much of the archeological information is buried.

In contrast to historic archeological sites, Vermont's prehistoric Native American sites are not as recognizable on the landscape. Large and small residential camps, villages, hunting and fishing camps, hunting overlooks and entrapments, seasonal special activity areas, burials, tool manufacturing areas and stone quarry centers, clay sources,

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and portages have no obvious structural, surface shape as do historic sites. In Vermont, as in most of the northeastern United States, evidence of prehistoric settlements and activities are typically contained within upper soil layers or may be deeply buried within floodplain deposits.

Not all prehistoric Native American sites are located along present-day watercourses. Today's landscape often does not reflect that of 8,000 or even 3,000 years ago. River valleys have been downcut, stream and river channels changed shape and location, floodplains eroded and built up to varying degrees, and wetlands developed and eutrophied. For example, a prehistoric camp along a river bank-- 6,000 years ago-- may now lie 1000' away from the present river channel on an abandoned oxbow. Sometimes, prehistoric activities were focused around springs (now dry) or outcroppings of specific rock types or some special food resource. Sites have thus been found on hilltops, mountainsides, and valleys far removed from present-day watercourses.

Most of Vermont's archeological sites have not yet been found. However, based on information from archeological studies, written records (such as personal accounts, local histories, and maps), oral histories, ethnologies, professional and avocational archeologists and collectors, we are refining our ability to predict where both prehistoric and historic archeological sites are expected to be found. Although most areas of Vermont are poorly known archeologically, predictive models of archeologically sensitive areas --that is, areas that are likely to contain archeological resources-- are being developed in various parts of the state.

B. VERMONT'S ARCHEOLOGICAL RESOURCES ARE IMPORTANT AND WORTHY OF PRESERVATION

Our prehistoric and historic archeological sites constitute an essential link to our recent and distant human past. Archeological sites are the sole source of information for the longest part of human activity in Vermont. As tangible links to our past, archeological sites are important educational resources for Vermont 's school kids. Many kinds of archeological sites have outstanding interpretive value and can compliment existing recreation or tourism resources and programs within a community or region.

Archeological sites are being destroyed at an alarming rate. Accordingly, archeological sites and archeologically sensitive lands should be considered during the early planning stages of land development activities and should be recognized as important, non-renewable resources in local and regional plans.

C. EXISTING STATUTORY PROTECTIONS AND OTHER PRESERVATION TOOLS

Under various state and federal laws (most importantly Act 250 of Vermont's Land Use and Development Law; 22 V.S.A. Chapter 14, also known as the Vermont Historic Preservation Act; and Section 106 of the National Historic Preservation Act) many private development projects and all federally funded, assisted, licensed, or permitted projects must identify archeological resources during project planning and must mitigate any impacts to these resources. Project redesign is often an effective option for site preservation. Recovery of the archeological information contained within sites is a more costly option but allows a project to proceed after excavation.

Archeological resources are contained within land: forests and woodlots, cornfields, pasture, empty lots, yards, etc. Therefore, preservation of land, such as prime agricultural lands, open spaces, natural areas, and wetland margins, will also preserve archeological sites.

Both fee simple purchase of land as well as acquisition of development rights are important methods for preserving archeological sites or archeologically sensitive lands. Often, conservation efforts for one resource, such as farmland, can be integrated with preservation of other resources, for example, prehistoric or historic archeological sites, an historic farmhouse and outbuildings, and rare and endangered species. A community's purchase of land for active or passive recreation can sometimes be combined with protection of archeological sites.

Preservation of known archeological sites and archeologically sensitive lands can be accomplished through zoning regulations. Several permitted types of zoning regulations can be effective tools for conserving both known archeological sites or lands that have a high potential for containing archeological sites. Experienced planners can provide guidance in this type of preservation effort.

Local governments, non-profit organizations, and interested citizens need to become more aware of the need to consider archeological resources within their communities and to actively plan for their identification and protection. Once these resources are gone, they are gone forever.

D. ARCHEOLOGICAL SENSITIVITY MAPS AND ENVIRONMENTAL MODELS

In some areas of Vermont, evidence of prehistoric settlements and other cultural activities and historic archeological remains have been identified and documented. These are known archeological sites, listed on the State Archeological Inventory. These sites may be eligible for inclusion in the State Register of Historic Places and/or the National Register of Historic Places.

Because only a few areas of Vermont have been systematically surveyed to identify and evaluate archeological sites, it is misleading to precisely map known sites. Thus, the known, inventoried sites constitute only a fraction of sites that potentially exist. Also, archeological sites are easily and too often vandalized. For these reasons, site locations are not specifically pinpointed on the accompanying map. The archeological sensitivity map thus highlights those landforms that exhibit environmental conditions typically associated with known sites.

Although most archeological sites have not yet been found, we can predict where archeological sites are likely to be located. Results from many archeological investigations in Vermont over the last decade have helped us to develop and refine a "predictive model" for where we expect to find some kinds of archeological sites. This model is based on predictable human use of the landscape and natural environment and is designed to predict the location of particular kinds of prehistoric Native American sites. Very simply stated (but see E. below), the model predicts that prehistoric sites will be located within 300' from an **extant or relict water source**, on gently sloped (<8%) landforms having moderately/poor to well-drained soils, and may sometimes have a southeast-south-southwest exposure.

The predictive model addresses Native American **settlement sites only**. Other types of prehistoric activities, such as Paleo-Indian camp spots, quarry sites, caves and rockshelters, or burial plots, have differing sets of environmental criteria. Models to accurately predict the location of these types of sites have not yet been developed.

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E. ARCHEOLOGICAL SENSITIVITY MAP FOR FAYSTON, WAITSFIELD AND WARREN

The predictive model helps identify archeologically sensitive lands. These lands are highlighted on the accompanying map for the Towns of Fayston, Waitsfield and Warren. Archeological sensitivity means that the land has a high likelihood of containing archeological sites. In archeologically sensitive lands, different environmental factors---such as present and past topography, exposure, slope, distance to water (extant and relict sources) and availability of food and other critical resources---exist now, or in the past, in various combinations. This concentration of essential resources attracts human populations and did so in ancient times. Prehistoric Native peoples exploited these resources and produced archeological remains at these locations.

The archeological sensitivity map considers prehistoric Native American settlement sites only. Other types of prehistoric activities have differing sets of environmental criteria and their locations are not easily predicted. This map does not include historic archeological resources either.

F. SUMMARY

- 1) Vermont's archeological sites range in size from small, tool manufacturing or special activity sites to multi-acre prehistoric camps and villages, as well as abandoned early 20th century hydroelectric or industrial sites. These remains span a period of over 10,000 years of human history and development in Vermont.
- 2) In general, archeologically sensitive zones extend for 300' away from primary and secondary water systems, lakes, ponds, bogs or marshes, as well as tertiary tributaries that have slopes less than 5%. For any tributary that has a gradient between 5 - 10% the archeologically sensitive zone is reduced to 200' from a specific water source.
- 3) Because the Mad River has meandered and shifted position throughout the flood channel over the past ten thousand years, the entire floodplain is considered archeologically sensitive. Terraces or knolls within 200' of the floodplain are also considered sensitive, even though the river may now be located at some distance from the landform.

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- 4) The archeological predictive model used in Vermont identifies prehistoric settlement locations only. Other special-use sites, such as burial grounds or stone quarries for tool making, and historic archeological sites must be considered using differing sets of criteria.

G. How To Use the Archeological Sensitivity Map and Other Recommendations

To most effectively and easily use the Archeological Sensitivity Map, the following recommendations are provided:

- 1) Be familiar with the important points in the above narrative.
- 2) If a project, needing a local permit, is proposed within any of the archeologically sensitive lands on the map, let the applicant know that archeological issues will probably arise during any Act 250 review, and/or, if the project involves any federal monies, loans, permits or licenses.
- 3) Any local planning within highlighted areas on the map should include consideration of archeological sites. This may include: carrying out archeological surveys to locate and inventory sites; nominating inventoried sites to the National Register of Historic Places; and using some of the preservation tools mentioned in Section C, above.
- 4) Long-term plans to inventory and protect archeological sites--prehistoric and historic--within the highlighted zones on the map should be developed by the MRVPD. Based on the importance of these sites, appropriate preservation methods can be used to ensure their protection.
- 5) Since historic archeological sites exist outside of the highlighted sensitivity zones on the map, plans to inventory these sites should be developed. Significant sites, using the criteria for inclusion in the State and National Register, should be protected.
- 6) If more detailed information on the actual extent of a particular archeologically sensitive zone for a given area is desired, please contact the Vermont Division for Historic Preservation in Montpelier.
- 7) The Vermont Division for Historic Preservation will provide towns with updated information as it becomes available. The Division can provide guidance on preparing plans to inventory and protect archeological sites.