

Introduction to the Vermont Division for Historic Preservation's Environmental Predictive Model for Locating Precontact Native American Archeological Sites

The Division uses an environmental predictive model to identify areas with a high potential for containing precontact Native American residential sites. However, because of the environmental requirements during Euro-American early settlement times or by Native Americans in the historic period, the model may also be helpful in establishing the likelihood of these sites as well.

The locations of Native American burials, cemeteries, and special use areas during any time period are not readily predictable and the model is unlikely to help in their identification.

An environmental predictive model is based on the concept that there were universal human needs during most of human history for certain necessities of life, for example, food resources, fresh water, excellent shelter, and ample raw materials. Certain parts of the landscape -- and particular environments and micro-environments -- were more likely to support reliable and predictable foods during certain seasons; they provided the freshest water; or the best transportation routes; or certain premium raw materials (such as the right stone for tool making); and so forth. These universal requirements and the places where they could be found made some aspects of past human behavior fairly predictable: certain activities were focused on particular parts of the landscape and particular environments. This was most true during Native American precontact and post-contact history and early Euro-American history.

Of course, environments and landscapes changed dramatically over 12,000 years. Thus predictive models have to account for these changes. In particular, water courses have changed over time. Today's water sources (i.e. current river channels or springs) do not necessarily correlate with water sources 3,000, 6,000 or 10,000 years ago (now relict water sources).

The Vermont Advisory Council on Historic Preservation (VTACHP) must review and approve all predictive models used in the regulatory review process in accordance with the Vermont Historic Preservation Act Rule 2. The Division uses one, broad predictive model approved by the VTACHP on April 13, 2001.

The Division applies the predictive model during desk review of development projects subject to federal and state laws. However, under Section 106, qualified archeological professionals in state and federal agencies or consulting archeologists can apply the model at the beginning of project review.

The predictive model is an initial desk review tool; it's only a coarse filter that may highlight potential site areas. A project area that indicates a high potential for containing

a significant site on the predictive model triggers a site visit. The site visit results in a recommendation for further archeological investigation, or, results in a “sign off.”

The Division conducts site visits triggered by the predictive model for Act 250 and state reviews, although developers and state agencies may choose to hire archeological consultants to apply the predictive model to a project area. Under federal Section 106 reviews, federal agencies (or their delegates) responsible for funding, licensing, or permitting a project hire a qualified archeological professional to apply the predictive model and do a site visit.

A site visit should confirm that some, all, or none, of the project area has a high potential for containing a significant site. The site visit identifies highly disturbed, exceedingly wet, or steep areas; clarifies whether or not sensitive areas lie within areas of potential impact; and recommends ways for avoiding sensitive areas.