

# BELOW THE SURFACE

Using the LEAP approach to avoid cultural resource sites

BY LESLEY T. CUSICK



**T**oo often, project managers get a call from someone on the project site saying they've stumbled onto a cultural resource site. Regardless of whether this is a pioneer cemetery, a colonial era farmstead or a prehistoric village, the problem is that it wasn't indicated on a map. And making matters worse, this call often happens when the corridor has been decided and costly machines are already mobilized. Imagine what this discovery does to the project timeline, financial projections and the company's goodwill and public image once social media begins to spread the word.

Several states have invested resources in developing predictive models for natural resource sensitivity, but only a few have predictive models specifically for cultural resources. Predictive models are important because so little of the country has been surveyed for subsurface cultural resource sites. Thousands of sites have yet to be identified and put on maps, but through enhanced predictive modeling, we can estimate likely locations of high sensitivity areas.





## Understanding Cultural Resource Regulations

Cultural resource regulations are not environmental regulations, although they are often grouped with them. Important distinctions of cultural resources, in particular archaeological sites, are as follows:

- The majority are not visible from the surface.
- They are not mapped in a way that is readily available.
- They may require the context of their location in order to be interpreted and understood.
- They cannot be restored if they are damaged.
- Depending on the nature of the resource, they may have cultural, spiritual and emotional attachments to descendants that cannot be mitigated.

The issues facing cultural resources can be significant. Let's say your project is *not* regulated under the National Historic Preservation Act. Would you still follow its requirements? What if there were methods and tools available to enable you to perform efficient cultural resources research to assist in project planning and manage risks brought about by inadvertent discoveries?

Leaders in Energy and Preservation (LEAP) was formed to address just these challenges. The LEAP approach is one advocated by industry experts in unregulated environments and is designed to minimize risk to energy companies and energy projects, *and* to achieve positive preservation outcomes. It is also gaining interest among cultural resource management (CRM) regulators and advisory bodies, and its applicability to overall economic development opportunities is clear. A non-profit organization guided by leaders in oil and gas, renewable energy and cultural resource management fields, LEAP seeks to provide project developers with greater insights about historic resources early in a project so that cultural resources can be

considered in the project planning stages. The LEAP methods provide for early risk management decision-making, which offers opportunities for preservation, mitigation and greater predictability. In implementing this, LEAP champions a dual approach to operationalizing risk management: voluntary corporate practices and the development of better screening tools.

The benefits of this approach can be substantial. Ernest Ladkani, a Senior Advisor, U.S. Environmental Planning & Permitting with TransCanada, describes it this way: "Our projects are typically schedule-driven projects where any potential delay can have extensive cost implications. We rely on the types of tools being developed by LEAP to reduce the risk of project delays caused by unanticipated discoveries."

### A Look into the LEAP Toolbox

In addition to personnel trained in LEAP methods, the LEAP Toolbox includes voluntary practices to help you "get it right" from the start, a GIS screening tool to help with project planning and a sensitivity algorithm (sensitivity tool) to refine knowledge of the cultural resources in your project path.

### Voluntary Practices

LEAP provides a framework for developers to voluntarily address heritage resources during all phases of project development. The LEAP Voluntary Practices Guide defines a methodology that affords flexibility in siting/system design through the use of up-front planning and engagement to identify resources, assess mitigation options and evaluate alternatives. The guide identifies means and methods to address the effects of development in an environment that does or may contain heritage resources.

### The GIS Screening Tool

LEAP has developed a GIS-based screening tool that, in areas where it is available, companies can identify regions of high, medium and low risk for the presence of heritage resources. Armed with information about the relative sensitivity of proposed development

locations, companies can make decisions about cultural resource risk avoidance at this early stage of planning. The screening tool uses an aggregated dataset of previously-discovered sites, environmental data (such as soil type, slope and distance to water sources) and a range of documentary evidence to predict where additional sensitive sites are located. The screening tool also aggregates sensitive archaeological data so that their locations are not compromised. LEAP is partnering with NatureServe, a 501(c)(3) organization that has developed decision-support tools for natural resources and electronic state permitting tools across the country.

### The Sensitivity Algorithm

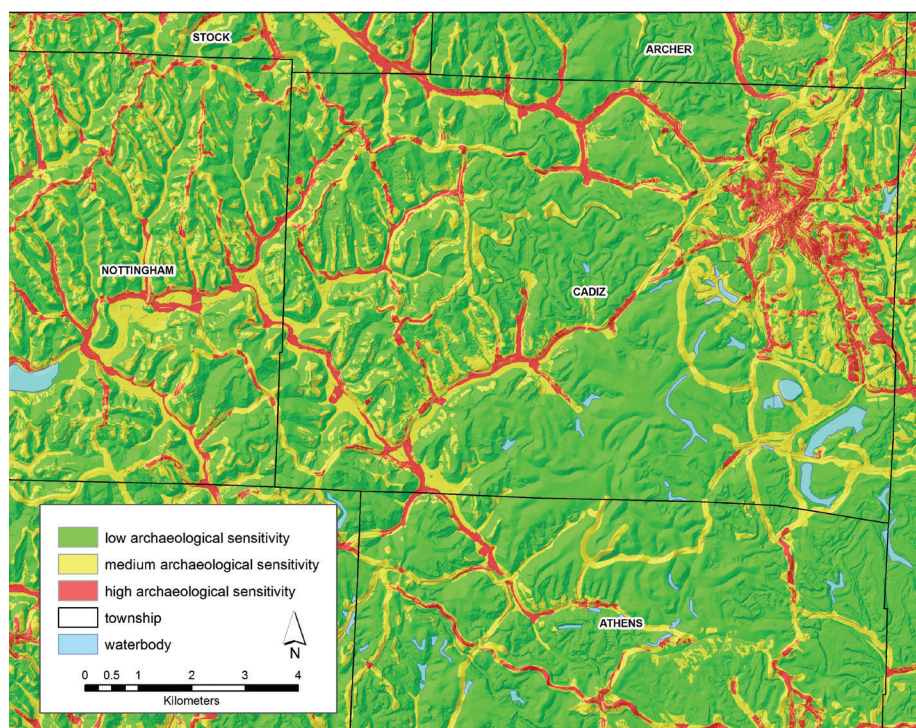
Once an archaeological site is identified in the path of development, the first step is to identify how sensitive it is. Is it a one in a million site that should be avoided at all costs? The LEAP sensitivity tool is designed to assess the relative sensitivity of archaeological sites in a standardized manner, but it is also customized to archaeological resources in a project area. Sensitivities to the cultural values of a community can also be considered in the evaluation at this phase. Users input various characteristics of the site into the tool, which weighs attributes and advises the user on the site's relative sensitivity.

### Supporting All Phases of Development

The consideration of cultural resources should be performed early in the planning stage of a project. If medium or high-risk areas cannot be avoided, the engagement of heritage resource professionals to survey specific areas and provide assessments is prudent.

When used early on, the screening tool is a significant benefit to save corporate resources. In the design phase, the analysis of known or newly identified sites using the sensitivity tool occurs. Based on the type of site, the heritage resource professional can assist with avoidance methods and/or additional research to support client decision-making. As noted by LEAP Board Member Afton Sterling of Southwestern





A map developed from information in eastern Ohio using the GIS-based screening tool. GIS image courtesy of Michael Heilen, Statistical Research, Inc.

Energy's NE Appalachia Region, "Being good stewards of the environment and the communities where we live and work is a top priority for us. Tools, such as the one being developed by LEAP, help us protect sensitive resources." The LEAP approach takes into consideration that the level of support needed during the construction phase can vary, ranging from providing real-time field presence if requested to developing mitigation measures to alleviate impacts.

"All archaeology is local," says Nathan Boyless, President of Metcalf Archaeological Consultants, Inc. "We know this as do our clients and partners. Empowering industry with the right tools and information can inject more predictability and return on investment into the process, not to mention foster a stronger relationship with local communities. A little pre-planning can yield better results and that's where the LEAP approach really comes in to play. Our tools provide the information every developer needs to be a responsible steward of our shared history and heritage."

## International Relevance

In their 2018 publication, "Making the Business Case for Corporate Social Responsibility," IPIECA, the global oil and gas industry association for environmental and social issues, includes the destruction of cultural and archaeological heritage as a type of "adverse social and human rights impact which may lead to business risk." The analysis also provides proof points on the costs of failing to identify and address social and human rights impacts. The costs can be extraordinary. In some cases, projects may not only be stopped from being built, they can even be prohibited from operation once built or they can be destroyed in acts of vandalism. Countries filled with natural resource wealth and ripe for infrastructure development may also be filled with unknown cultural resources sites. Corporate Social Responsibility, the need for corporate risk management, and the proactive LEAP methods are consistent in their relevance to enhancing economic development opportunities.

## Looking Ahead

The cultural values of a community, and the sensitivity of a community to their cultural values, are important factors in development planning and should not be underestimated. The intangibles of emotion and attachments to things like particular landscapes or quiet environments can be impacted by development in many of the same ways that destruction of a tangible cultural resource can. In recent months, we have seen the negative effects of inadequate cultural resource planning. Discovering these issues on site can be expensive and cause significant reputational harm. The LEAP approach is designed to help companies understand, plan for and mitigate cultural resources risk.

The LEAP Screening Tool is envisioned as a nationwide tool for energy and infrastructure development companies to use early in their planning process. However, its broader applicability to all types of ground-disturbing development projects is clear.

Ultimately, up-front planning is less costly than project delays or outright stoppages and injunctions when construction is already underway. While additional time and resources may be required in the planning phase, companies can make more informed decisions when they fully understand the potential risks. Not only will they save time and money, this extra effort will go a long way toward maintaining positive community relations. 🌟

To learn more about the LEAP approach, visit <https://www.energyandpreservation.org>.



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