



GAS AND PRESERVATION PARTNERSHIP

# The Gas and Preservation Partnership

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# Overview

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- Mission
- Approach
- Partners
- Pilot Project
- How You Can Help





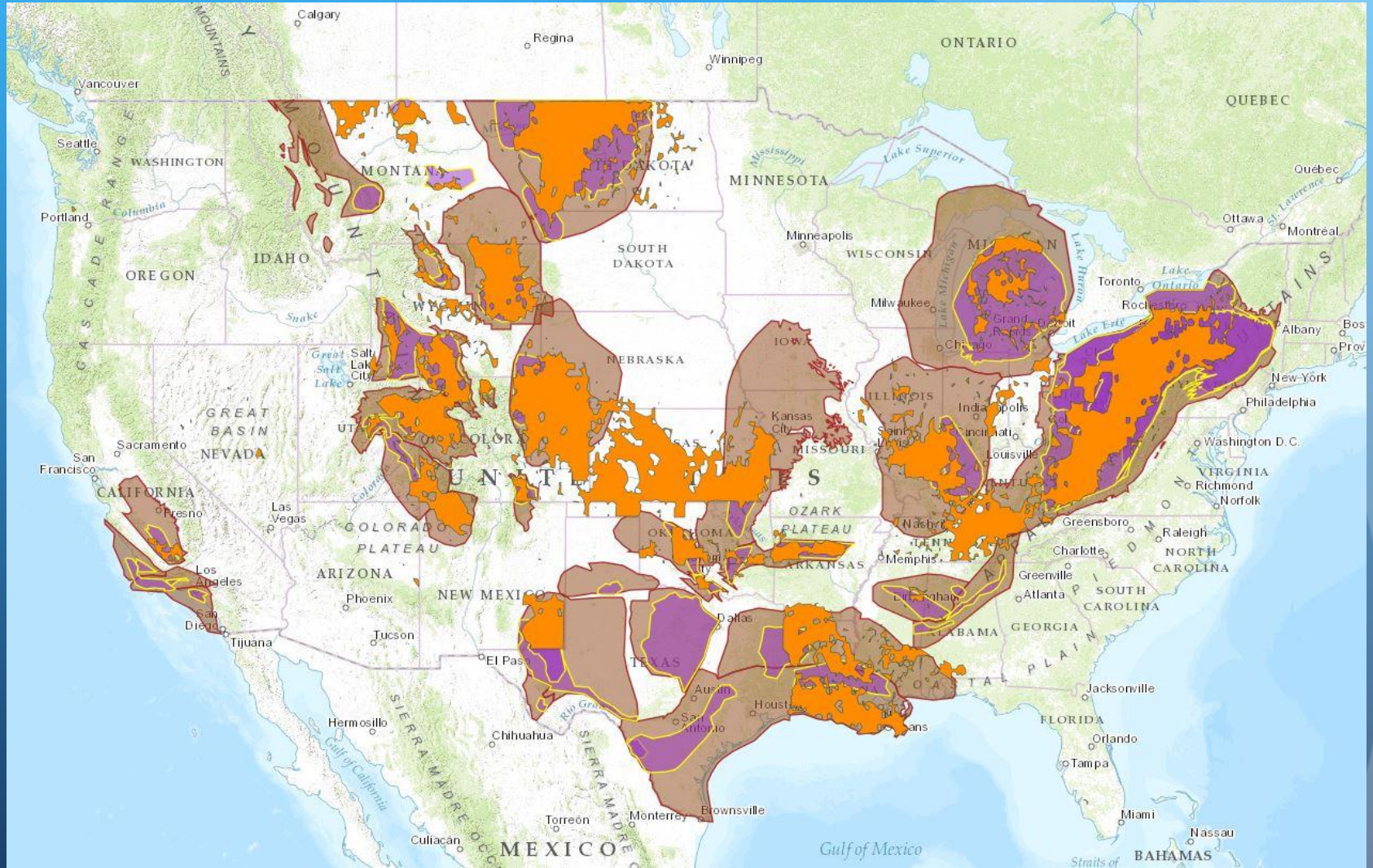


# GAPP's Mission

Identify and properly manage historic and cultural resources while encouraging exploration and development of energy reserves.



# Scale of Shale Development



# Ohio Shale Development

- Utica = 15 trillion cubic feet of natural gas and 5.5 billion barrels of oil
- 3 million acres already leased in Ohio (\$7.5 billion to landowners)
- 1,061 horizontal wells drilled as of 9/6/2014; 1,487 wells permitted



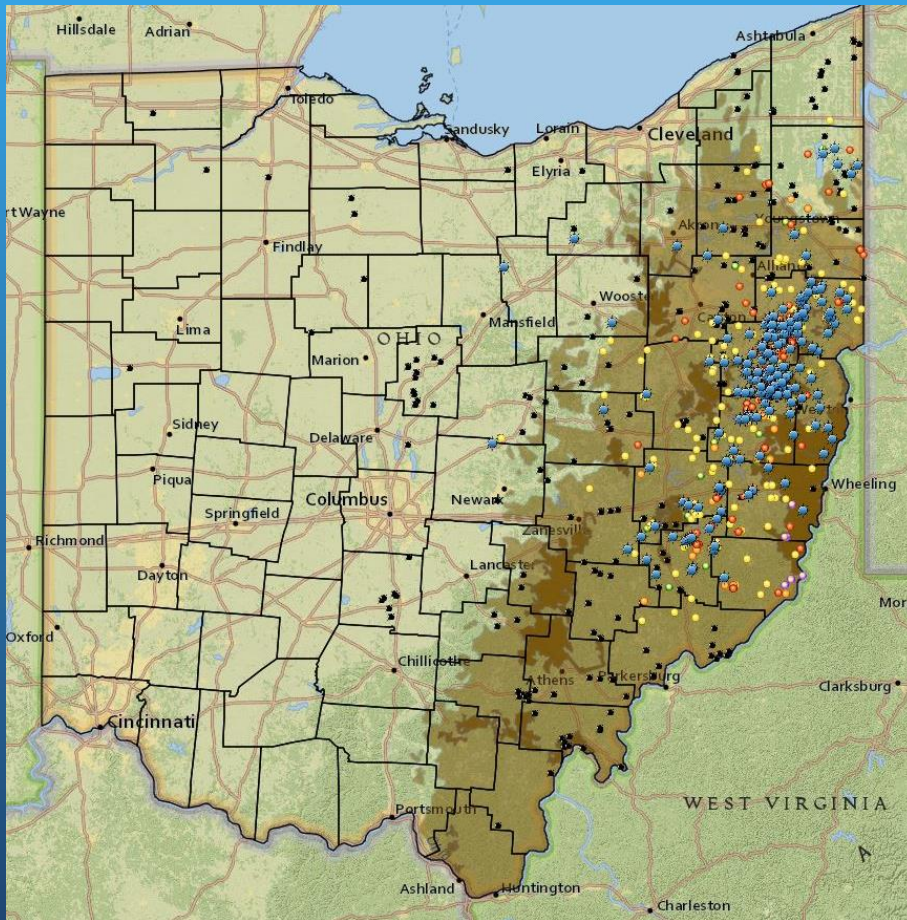


# The Risk

- Vulnerable sites include prehistoric villages, ceremonial sites, cemeteries, and battlefields
- More than 230,000 sites are located in shale plays nationwide
- Only 4% of the Utica shale has been surveyed, and the Society for American Archaeology estimates 44,975 sites could be at risk



# Ohio Risk Assessment Model



Utica Shale	Core 10 Counties	Periphery 27 Counties
Known Sites	3,162	12,771
National Register Properties	25	130
Area Surveyed	2.7%	4.1%
Estimated Sites @ 0.03/acre	213,390	86,074



# Our Approach

Devise, exchange, and help implement **voluntary practices** that facilitate development, manage risk, and yield positive outcomes for historic and cultural resources and the communities that value them.



# Our Partners

- Shell
- Southwestern Energy
- Hess Corporation
- Society for American Archaeology
- American Cultural Resources Association
- ... and many others

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and promotional partners

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The Society for Pennsylvania Archaeology, Inc.

# Working Groups

- Identification & Information Resources
- Significance & Valuation
- Adoption, Implementation & Assessment
- Public Value & Public Engagement



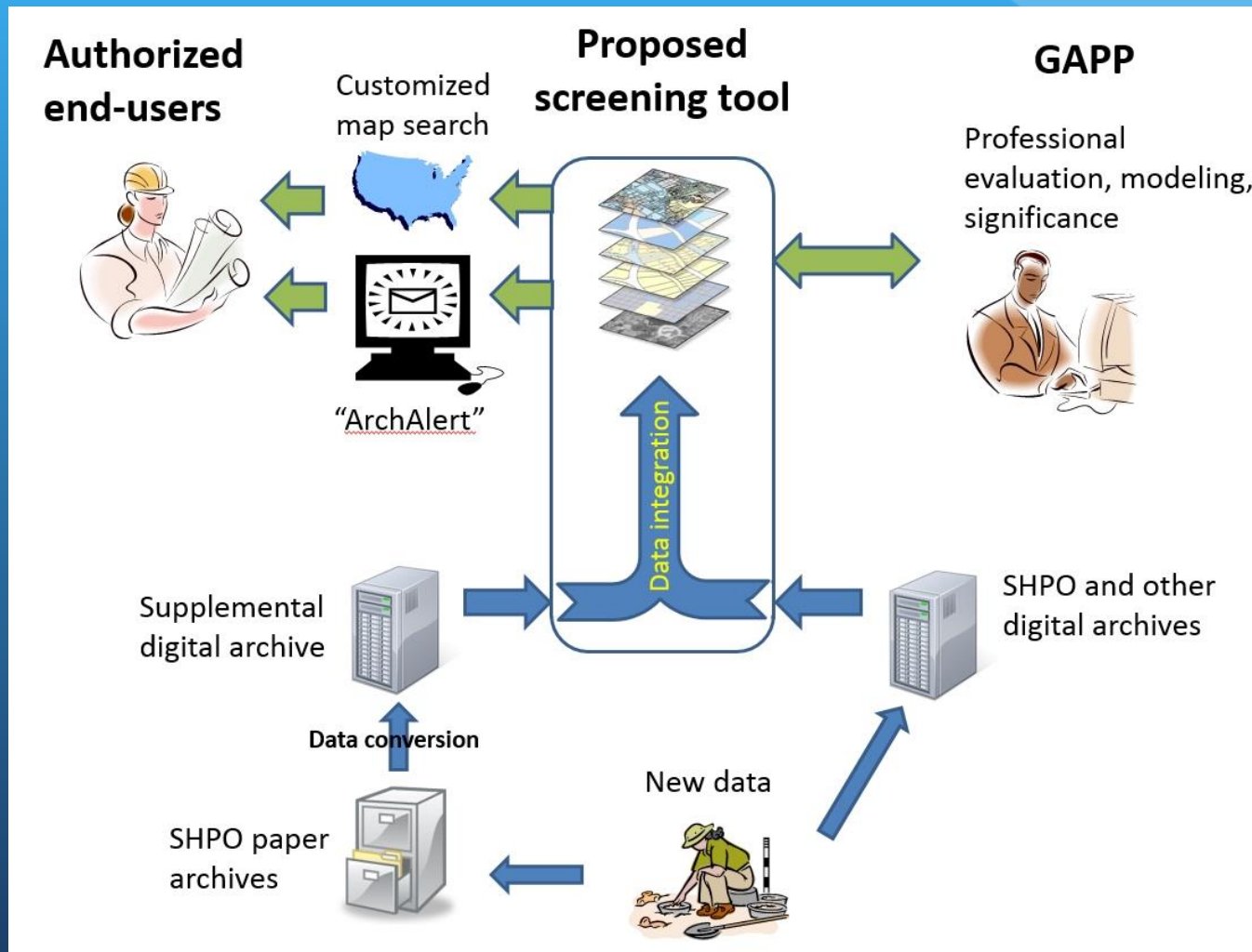


# Voluntary Practices

- Screening Tool
- Significance Model
- User Manual



# Screening Tool



# Publicly Available Data



National Register  
Historic Properties

Mapped cemetery  
locations

Heritage  
management areas





# Identify Project Area

Locate | Draw | Report | Layers | Legend

Version: 1.1 Log On

Current Tool  
Active Layer **SSURGO**  
Map Scale 1:25060.15

Gnomon, Inc.

**Draw Your Proposed Project Area**

1. Pick a drawing tool
2. Draw a shape with the chosen tool
3. Choose a buffer distance  
(required for points and lines)  
Buffer Distance  Meters
4. Choose a project name  
Project Name
5. Press Done Drawing This Shape
6. Choose to Save this shape or to Cancel it

**Our project**

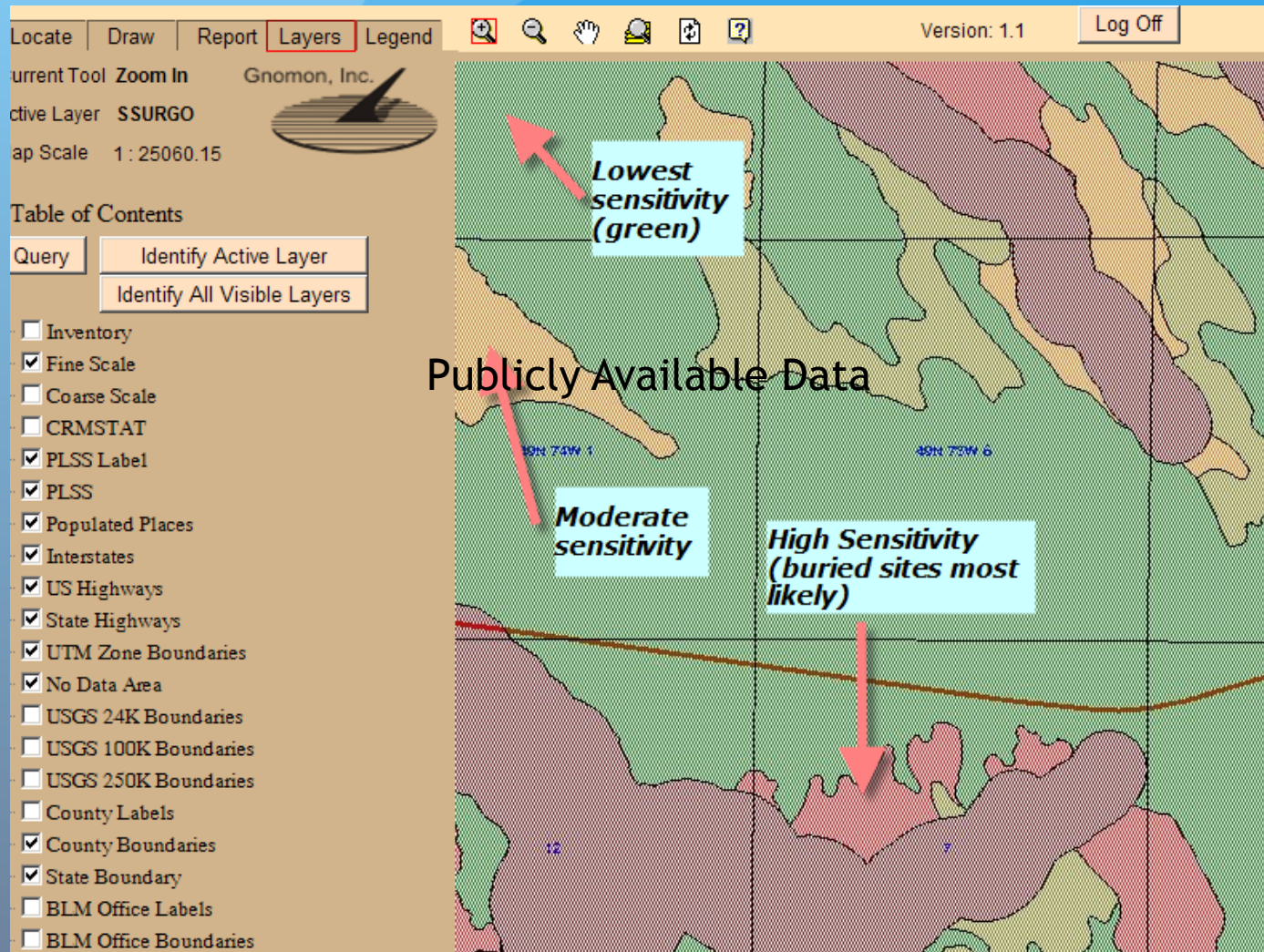
**GAPP Test Project**

**We use simple drawing tools to create our project**

**OR**

**we can upload a GIS file**

# Buried Site Potential





# Summary Report



## The Summary Report

### Cultural Resources Sensitivity Model 2

Model name: *Fine Management Model, Potential for Buried Archaeology*

Model description: *Conservative model for estimating likelihood of encountering buried archaeological sites. Based upon county 1:24,000 scale soils data and up to this scale but not for larger scale or greater detail.*

Suggested uses and limitations: *Use for general project planning purposes. Do not use for specific project smaller than 10 acres. Boundary areas between sensitivity zones should be considered tentative.*

Model revision date: 11/1/2004

Model author: *Edkerle*

Potential Project Area, percentage in model area: 193.85 %

Potential Project Area (percentage) by model strata:

Out of model: 0% Acres: 0 Hectares: 0

Very High: 4.19% Acres: 22 Hectares: 8.91

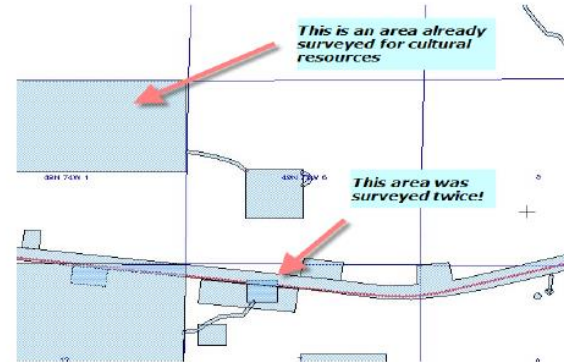
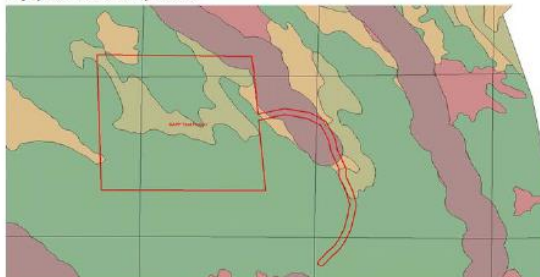
High: 0% Acres: 0 Hectares: 0

Moderate: 67.17% Acres: 352.7 Hectares: 142.72

Low: 26.01% Acres: 136.6 Hectares: 55.3

Very Low: 2.63% Acres: 13.8 Hectares: 5.57

Map of FPA and Sensitivity Model 2



### POTENTIAL PROJECT AREA SUMMARY STATISTICS

Number of distinct polygons in Potential Project Area: 1  
Total area of Potential Project Area: 525.1 Acres 212.5 Hectares

Red line - Potential Project Area

### POTENTIAL PROJECT AREA - ARCHAEOLOGICAL RESOURCE SENSITIVITY SUMMARY

*Note: the following values are derived from a set of models pertaining to cultural resources sensitivity. The information presented here is intended as a forecast of potentially encountering buried archaeological resources. The information provided here is intended for planning purposes only, and does not constitute investigations or consultation with the State Historic Preservation Office, federal agencies, or other parties as prescribed by Section 106 of the National Historic Preservation Act and associated federal, state, and local law.*

#### Previous Cultural Resources Investigations

Potential Project Area, area having previous cultural resources investigations: 119 Acres 48.16 Hectares

Potential Project Area, percent of area having previous cultural resources investigations: 22.66

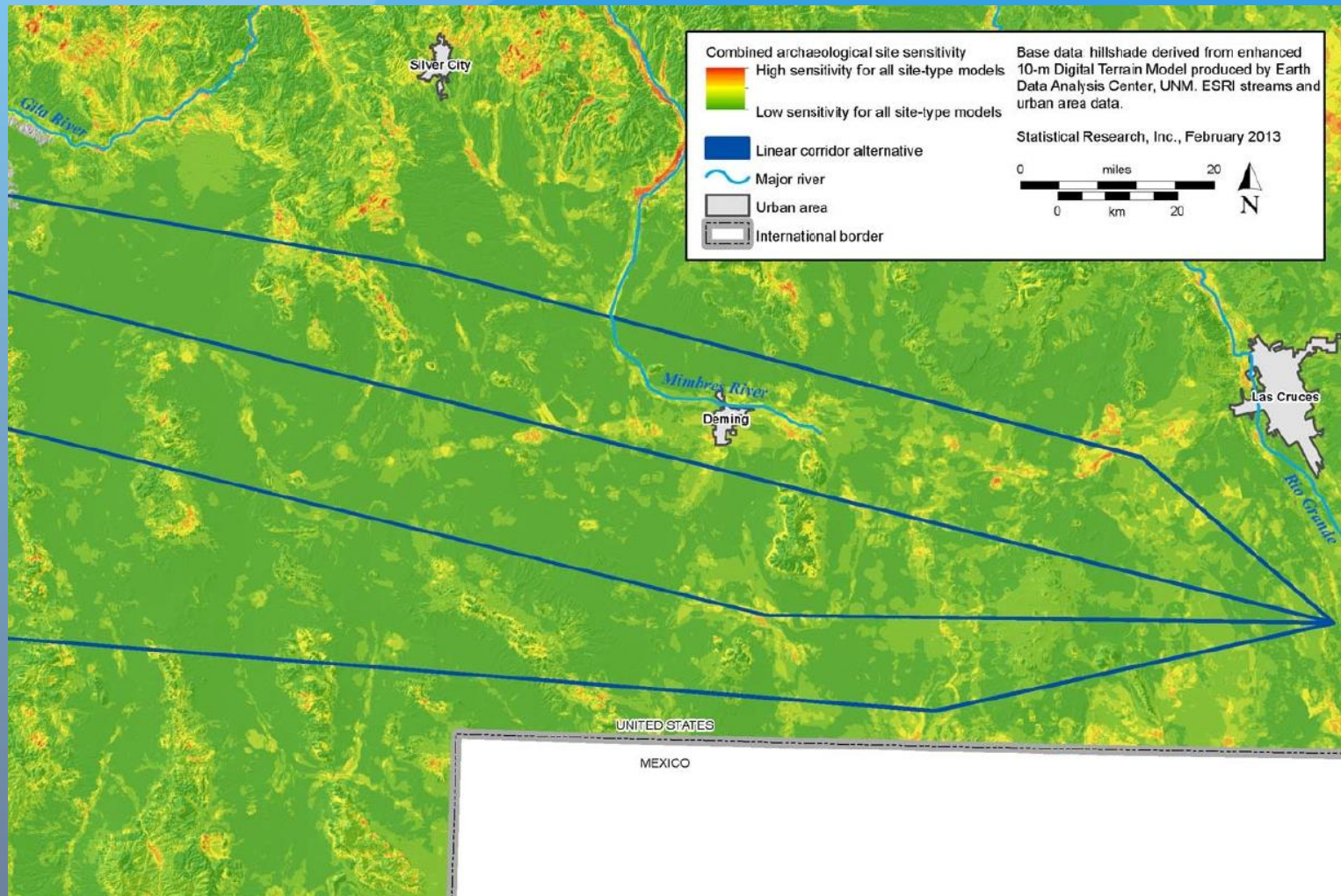
#### Known Cultural Resources Summary by Section

Count of isolated finds 1  
Township 0490N Range 0730W Section 7  
Count of report documents 4  
Inventoried Acres 236  
Count of Sites Reported 2  
Count of Sites considered eligible or potentially eligible to National Register of Historic Places 0  
Count of isolated finds 0

Known sites



# Sensitivity Models



# Site Location Information



- State Historic Preservation offices
- Individual state digital repositories
- National digital repository
- Integrated data



# Challenges

- Who owns the data?
- Who has a right to access the data?
- Where are the repositories?
- What organization serves as the repository?
- What standards?
- What are the QA/QC procedures?
- Who is responsible for accuracy?
- What are the costs of conversion & maintenance?
- How will the screening tool be funded?



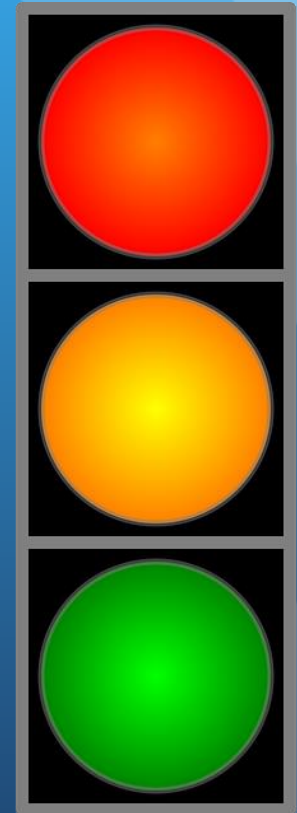
# Determining Significance

Known sites are analyzed and assigned a numeric value based on criteria determined by GAPP cultural resource experts. These values are then translated into an easy to understand value:

Red: Avoid if at all possible

Yellow: Additional investigation is recommended

Green: Low significance/ no avoidance necessary



# User Manual

- Process / decision tree that can be integrated into existing business practices
- Chance finds procedure
- GAPP provides training and technical assistance to both energy companies and cultural resources consultants



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