



**Archaeological Site Location Sensitivity/Predictability Model for the Tahoe National Forest
Request for Proposal
North Yuba Forest Partnership**

Summary of Request

The South Yuba River Citizens League (SYRCL), on behalf of the North Yuba Forest Partnership (NYFP) seeks a consultant to provide archeological services to develop a forest wide sensitivity model for the identification of environments where archaeological sites most often occur. The Partnership is working to address forest resilience within the North Yuba River watershed at an unprecedented scale and therefore must effectively prioritize planning and implementation by utilizing partner and contractor expertise. The North Yuba Forest Partnership analysis area is 275,000 acres, with 210,000 acres managed by the Forest Service on Tahoe National Forest.

Background

The North Yuba Forest Partnership (NYFP) is a group of nine entities working in common purpose to plan and implement a landscape-scale forest restoration project in the North Yuba River watershed. The partners are working alongside the US Forest Service, Tahoe National Forest (TNF) to design, plan, finance, and implement a large landscape 210,000-acre 20-year restoration plan. Through ecologically based vegetation management including thinning and controlled burning and other ecological restoration objectives (i.e., watershed, meadow, aspen), the partnership seeks to reduce the threat of catastrophic wildfire to North Yuba communities and restore the watershed to a healthier and more resilient state.

The NYFP consists of nine committed partners, a mix of agencies, non-profits, and private organizations: the US Forest Service/Tahoe National Forest, South Yuba River Citizens League, The Nature Conservancy, Yuba Water Agency, Camptonville Community Partnership, Nevada City Rancheria Nisenan Tribe, National Forest Foundation, Sierra County, and Blue Forest Conservation. Through the development of a memorandum of understanding, the restoration plan has four main goals: 1) improve and restore forest health and resilience; 2) reduce the risk of high-severity wildfire; 3) protect and secure water supplies; and 4) protect communities from the effects of high-severity wildfire and climate change.

Since first convening in 2018, the Partnership has worked to conduct a wildfire risk assessment, prioritize restoration goals on US Forest Service/TNF managed lands, and is in the process of identifying the first 20,000 acres for treatment. Over the next two years, the 210,000-acre Tahoe National Forest restoration plan will go through NEPA and CEQA environmental review.

The current schedule calls for development of the Proposed Action in spring 2021, field surveys for the first 20,000 acres of treatment between 2021-2022, and a record of decision in 2023.

Objectives

The forest wide predictability/sensitivity model will guide US Forest Service, TNF through early-stage project planning. It will also be used to facilitate targeted identification efforts within the North Yuba Forest Partnership analysis area boundary that will focus on areas where archaeological sites are most likely to occur within high probability/sensitivity zones as defined by the model. The model will be used to meet TNF's obligations under the National Historic Preservation Act of 1966 (as amended), *Amendment 1 to the Programmatic Agreement among the U.S.D.A. Forest Service, Pacific Southwest Region (Region 5), the California State Historic Preservation Officer, the Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Processes for Compliance with Section 106 of the National Historic Preservation Act for Management of Historic Properties by the National Forest of the Pacific Southwest Region* (Regional PA 2018), and Forest Service Manual (FSM) 2300, chapter 2360.

The model will be developed as item two in the historic property plan for the Tahoe National Forest (FSM 2362.3, see description below): A historic property plan will include: "A synthesis of projected cultural resource numbers, types, and locations based on predictive modeling, site identification strategies, and known cultural resources."

The Forest Service's identification policy (FSM 2363.03) states: "Use landscape sensitivity, cultural resource probability, or similar predictive models or methods to assess cultural resource potential for land use and cultural resource planning and management."

FSM 2363.15 describes conditions under which field survey may be waived or modified: The agency official, in consultation with the SHPO and Indian tribes as appropriate, may modify or waive field survey requirements when any one of the following conditions is present:

1. Past natural or human-caused ground disturbance has modified the surface so extensively that the likelihood of finding evidence of cultural resources is negligible.
2. Existing inventory data and landscape-sensitivity-predictive models are sufficient to indicate that the specific environmental situation did not support human occupation or use to a degree that would make further field survey information useful or meaningful.

Stipulation 7.4 of the Regional PA (2018) states:

The HPM/DHPS staff will design an inventory strategy with prescribed coverage methods based on a Forest's/ District's cultural resource sensitivity model (e.g., a model employing environmental and geomorphic variables such as slope, aspect, elevation, hydrology, flora, landforms, or other landscape attributes and natural features). Such

inventory strategy may include a variety of coverage methods to identify historic properties throughout the APE. Inventory strategies employing survey traverses spaced no more than 30 meters apart shall be considered intensive for the purposes of this agreement. A Forest may choose to develop a Forest-wide inventory strategy (FSM 2360) in consultation with the SHPO, and affected THPOs and Indian tribes. Once a Forest-wide inventory strategy has been approved by the SHPO of the affected state(s), the Forest may apply that strategy to applicable undertakings without prior consultation with the SHPO.

Scope of Work

The NYFP seeks archeological geospatial services to develop a GIS-based sensitivity assessment for identifying cultural resource sites spanning the prehistoric through historic archeological periods. Contractor will collaborate with US Forest Service, Tahoe National Forest cultural resource and GIS specialists, SYRCL, and other GIS specialists working for the partnership, to access existing GIS layers or to develop layers based on defined variables. TNF's GIS staff, for example, have developed a slope layer that is currently used by the heritage program to exclude steep slopes from survey.

Modeling

Contractor will develop a forest wide sensitivity/predictability that is a GIS based model. It will be used both as a planning tool for increased efficiency and to focus targeted inventory efforts. It will define areas that will be excluded from identification efforts based on the model (i.e., high, medium, and low probability of occurrence zones). GIS expertise and demonstrated development of models for archaeological sites application is required. Model variables used for similar Bureau of Land Management (BLM) efforts will be reviewed and analyzed for applicability to the Tahoe National Forest. This analysis will include variables that have been previously considered in other modeling effort, how they have been tested, and rejected (Ingbar and Wriston 2017, Hall et al. 2013). The top tier statically relevant variables will be used for the model.

Tahoe National Forest staff will serve as a liaison with the local and regional tribes (two federally recognized tribes (Washoe and United Auburn Indian community), non-federally recognized NYFP Tribal partner (Nevada City Rancheria), and non-federally recognized Colfax-Todds Valley Consolidated Tribe of the Colfax Rancheria) to collect Tribal input regarding the GIS model methods and variables for precontact sites.

Base environmental variables to consider include evidential layer variables defined by BLM Idaho modeling. They include:

- Slope
- Aspect
- Distance to Buttes
- Viewshed from Buttes
- Distance to Lithic Source
- Distance to Major River
- Distance to Secondary River
- Distance to Intermittent Drainage
- Distance to Major Confluence
- Distance to Wetland, Lake or Playa
- Distance to Spring

Contractor will evaluate, add to, modify, refine, and analyze these environmental variables for applicability to the Tahoe National Forest.

High, Moderate and Low probability zones for the occurrence of archaeological sites will be defined by the model. Existing site data within the North Yuba Forest Partnership analysis area will be utilized to test the model and prepare a non-intensive survey strategy for the analysis area that will be submitted by TNF to SHPO for review and concurrence as part of obtaining concurrence on the forest wide sensitivity model. Existing sites within each zone will be categorized into site types using existing PDF site records and placed in a summary table. Site types will be defined for historic and precontact sites. Site sensitivity definitions and site types should be based on vendor expertise and in consideration of the historical context of the forest. Examples of BLM defined site types for Idaho include (*these are provided for examples only and may not be applicable to the Tahoe National Forest*):

- **Residential:** Sites exhibiting residential and long-term use through density and diversity of artifact classes including flaked stone debris, formal tools (edge modified flakes, scrapers, drills, bifaces [generally later stage]), projectile points, milling tools, pottery, and features such as midden deposits, hearths, house pits and rings. Sites contain 3 or more artifact classes and a diversity of formal tools.
- **Temporary Base Camp:** Logistical or embedded procurement camps similar to residential bases, but used for short-term, task specific hunting, gathering or tool stone procurement. The density and diversity of artifacts decreases with these types of occupations exhibiting the functional traits of the type of resource procurement being conducted. Sites may lack evidence of living floors or structures.

- Task Specific: These locales will exhibit very specific short-term activities and will lack density and diversity of artifacts and no midden, hearths, or house features. Generally categorized as sparse lithic scatters and can dumps. These sites generally lack quantity and quality of data to be eligible for listing on the NRHP based on surface constituents.
- Specialty Sites: These sites will lack diversity of artifact or feature types but include very specialized sites such as rock art, burial areas, vision quest sites, caches, cairns, hunting blinds, trails, etc.
- Isolate Finds: Locations exhibiting brief episodes of activity with 10 or less artifacts. Sites are marked by a lack of artifact density and diversity of artifact classes and features.

If necessary, the Contractor will define and model separate environmental zones within the TNF independently to capture any unique variables and qualities of the landscape (i.e., east vs west side of the Forest, lower vs upper elevation zones, etc.).

Contractor will review applicability and incorporation of relevant survey strategies as discussed in the *Framework for Archaeological Research and Management, National Forest of the North Central Sierra Nevada* (Jackson et al 1994) (FARM) [scanned copy is available from the Tahoe National Forest].

Model Documentation/Reporting

- The modeling steps and process will be fully documented as well as a discussion of statistical analyses.
- A report will be completed discussing modeling steps and procedures, statistics employed, discussion of evidentiary variables analyzed and selected, conclusions and recommendations.
- References and bibliographic entries must follow the American Antiquity Style Guide.
- All GIS data and model parameters will be provided for TNF application in a GDB.

Existing survey and site data within the 210,000-acre North Yuba analysis area will be used to test and train the model during development and analyses. The modeling outputs will be used as a management tool to predict the presence and absence of sites, informing on-the-ground cultural resource inventories in the future. It will be used as a tool to exclude areas from pedestrian survey. It will meet the TNF needs as defined in FSM 2360 and the 2018 Region 5 PA.

The NYFP project area exists within the Ancestral and Traditional homelands of the Nisenan Tribe bounded by Mountain Maidu, Konkow and Washoe. Large Basalt toolstone sources are located at the head waters of the North Yuba River and on Truckee Ranger District. Unique petroglyphs called Style 7 are found in a north south band across the forest. Most of the

precontact sites consist of isolated bedrock milling stations, lithic scatters or a mix of bedrock milling and lithic debris and mainly appear to represent seasonal use of the forest. During California’s Gold Rush, the west side of the forest was intensively mined, with evidence of hydraulic and hardrock mines, homesteads, ranching/farming, former town sites, cemeteries, water conveyance systems, emigrant routes, historic transportation routes exist today.

Project Location

The Tahoe National Forest is bisected east west by Interstate 80 and the forest receives heavy recreational use. The largest community to the west is Auburn, CA. Lake Tahoe is south of the Forest. Other highways within the forest are Highway 20, Highway 49, Highway 89. Population centers within the forest boundaries are Nevada City/Grass Valley, Foresthill, Truckee, and Downieville. There are 4 ranger districts with the west side districts of American River and Yuba River ranger districts whereas the east side districts are Sierraville and Truckee ranger districts.

The NYFP project boundary stretches from New Bullards Bar Reservoir at the base of the watershed up to the headwaters at Yuba Pass – a total of 271,000 acres, of which approximately 210,000 acres is national forest land (Appendix. Map 1). Highway 49 bisects the project area, including the communities of Camptonville, Goodyears Bar, Downieville, and Sierra City.

Estimated Project Schedule and Timeline

	Deadline
Consultant on-boarding, NYFP Planning Committee Introduction, USFS initial tribal consultation completed	Mid-late April, 2021
USFS Data Transfer	June 1, 2021
Prehistoric sensitivity assessment dataset, documentation, and reporting	July 15, 2021
Historic sensitivity assessment dataset, documentation, and reporting	July 15, 2021
Consultant presentation of outputs to NYFP Planning Committee	July 20 or August 17, 2021

Instructions for Submittals

Respondents must submit proposals in digital (i.e, PDF) format. Hard copy submittals will not be accepted. Proposals must be submitted to: andrew@yubariver.org with the Subject Line: “Archeology Sensitivity Model RFP Proposal.”

- **Cover Letter** Proposals must include a cover letter signed by a person authorized to legally bind the applicant. The letter should contain a brief statement of the applicant’s understanding of the work to be done, and a commitment to perform the work within the timeline provided. Include proposal’s topic, date, organization, physical address, and primary contact name, phone number, and email address.

- **Project Narrative:** Describe the proposed approach and process. Include a summary of the work and a project schedule broken down by sub-task.
- **Budget and Payment Terms:** Submit a project budget that includes personnel, travel, equipment/supplies, contractual, and other categories. Break budget into specific work tasks and deliverables outlined in this RFP. Do not include expenses for preparing this proposal.
- **Qualifications:** Describe relevant experience, identify project team in one-page biographies for each member involved. Biosketches should include relevant experience, education, knowledge, technical expertise, certifications, permits or licenses directly related to the project services.
- **References:** List three clients for whom similar work has been performed within the past five years. Include a brief description of services rendered, names, titles, addresses and phone numbers. Not to exceed one (1) page.
- **Work Samples**

Submission Timeline

February 24, 2021	RFP Release
March 24, 2021	Deadline for receipt of proposals to RFP (by noon Pacific Standard Time)
April 10, 2021	Final selection and notification to all submitted firms. Begin development of contract.

Point of Contact

For questions about the details of producing the RFP, please contact:

Andrew Salmon
 South Yuba River Citizens League, Forest Conservation Program Manager
 571-242-0187
Andrew@yubariver.org

Disclaimer

This RFP does not commit SYRCL to award a contract or to pay any costs incurred during the preparation of the proposal. SYRCL reserves the right to reject any or all of the proposals for completing this work.

Selection Process

SYRCL will evaluate submittals based on the following criteria:

- Demonstration of significant and effective experience implementing similar sensitivity models to the project described in this RFP;
- Demonstration of successful cooperation, communication, and partnership with non-profits, local, state and federal agencies and private partners and a commitment to accountability;
- Demonstration of past project experience and success;
- Demonstration of project management effectiveness and experience of primary personnel;

- Demonstration of commitment to workforce equity as reflected in internal policies and selection of sub-contractors;
- Quality of work evaluated against cost for services; and,
- Clarity, quality of writing and presentation of proposal.

Equal Opportunity Provider

SYRCL is an Equal Opportunity Employer and does not discriminate in hiring or employment on the basis of race, color, religion, national origin, gender, marital status, age, disability, veteran status, sexual orientation, or any other protected status.

Appendices

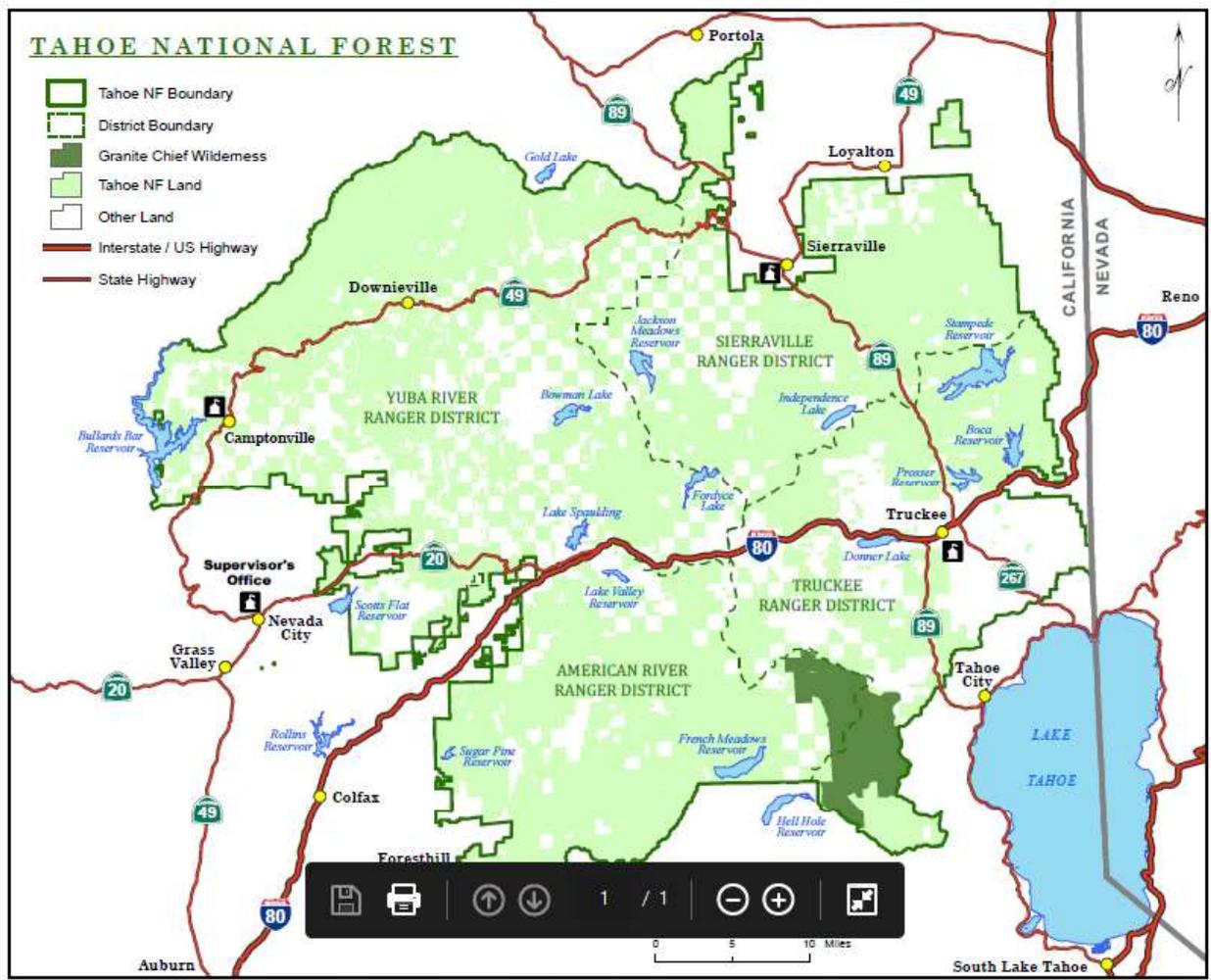
- A. References**
- B. Map 1. Context - Tahoe National Forest**
- C. Map 2. North Yuba Forest Partnership Project Area**
- D. Project Boundary Shapefile (see file attached)**

References

Hall, J Drews, MP Ingbar, EE Parrish ME Noll C 2013. Cultural Resource Model and Class III Inventory for Owyhee Land Exchange: Part I: Research Design and Model Building. Bureau of Land Management Report # L12PD01714

Ingbar, EE, Wriston, TA 2017. Owyhee Land Exchange Cultural Resource Model Version 3. Bureau of Land Management Report # L15PD00996

Map 1. Context - Tahoe National Forest



Map 2. NYFP Project Area

