

Expanding Research Accessibility of Archaeological Collections

Development of a Geospatial Database for the WSU Museum of Anthropology

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Introduction

The Washington State University Museum of Anthropology (WSU MoA) is a repository for archaeological collections and their associated records. WSU has also been a center for archaeological scholarship of the Pacific Northwest for several decades, which has resulted in material from over 1,600 sites being maintained at the MoA. In the summer of 2018 we began a project to develop a centralized geospatial database containing summary and other information for site collections curated in the MoA in an effort to enhance the use of the museum's collections, which are important resources in the study of Northwest Archaeology. Table 1 below shows the goals for this project in three phases, the results of the first which are presented here.

Table 1. Current and Future Development of Project

Phase 1	Phase 2	Phase 3
Site number(s)	Project/Survey	Storage features
Site name(s)	Radiocarbon data	Faunal data
Coordinates	General artifact categories	Artifact types
Agency	Refined site coordinates	Artifact material
Artifacts (yes/no)	House pits	Additional features
Records (yes/no)		

Archaeology at WSU

The Dam Era and Salvage Archaeology

Archaeological investigations by scholars at WSU began in earnest in the middle of the twentieth century with the explosion of dam construction on the Columbia River system. Large-scale survey and excavation projects sought to assess and salvage the archaeological resources of areas that were to be inundated by the dam construction.



Figure 1. A WSU crew excavates the upper layers of a housepit at the Asotin Site (45A582) site on the lower Snake River in 1972.

Contract Archaeology

An archaeological contracting wing of WSU Anthropology—the Center for Northwest Anthropology—took on a wider variety of projects, largely for federal agencies. By the time the Center ceased operations in the early 1990s, hundreds of sites had been investigated leaving a legacy of data and archaeological material from throughout the Northwest, particularly eastern Washington (Figures 1 and 2).



Figure 2. A WSU crew excavates the upper layers of a housepit at the Wexpúsnime (45GA61) site on the lower Snake River in 1969.

Rehabilitation & Modernization

Efforts began in the 1990s to rehabilitate these legacy collections. Workers at the MoA systematically investigate collections from sites from all over the region, implementing modern standards for storage and documentation. Today the museum continues to work with agency partners to make our collections accessible to better understand the archaeology of the Pacific Northwest (Figure 3).



Figure 3. Staff and student workers at the MoA examine the contents of old boxes associated with a legacy collection for rehabilitation.

Methods

A list of sites was generated by combing through electronic and paper museum records and compiling a database in Microsoft Access. Coordinates for the sites were collected from three sources: 1) the Walla Walla Army Corps of Engineers site database, 2) site forms and other records accessed through WISAARD, and 3) site forms and other records held at the MoA but not available through WISAARD. A simple ArcGIS model (Figure 4) allows researchers to easily generate an up to date GIS database of the sites.

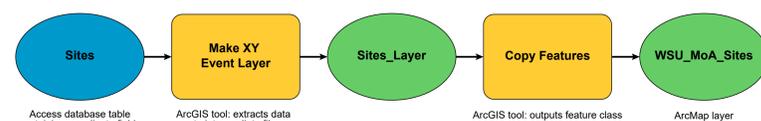


Figure 4. This flowchart illustrates the ArcGIS model used to generate a spatial file readable by GIS programs for analysis and cartography.

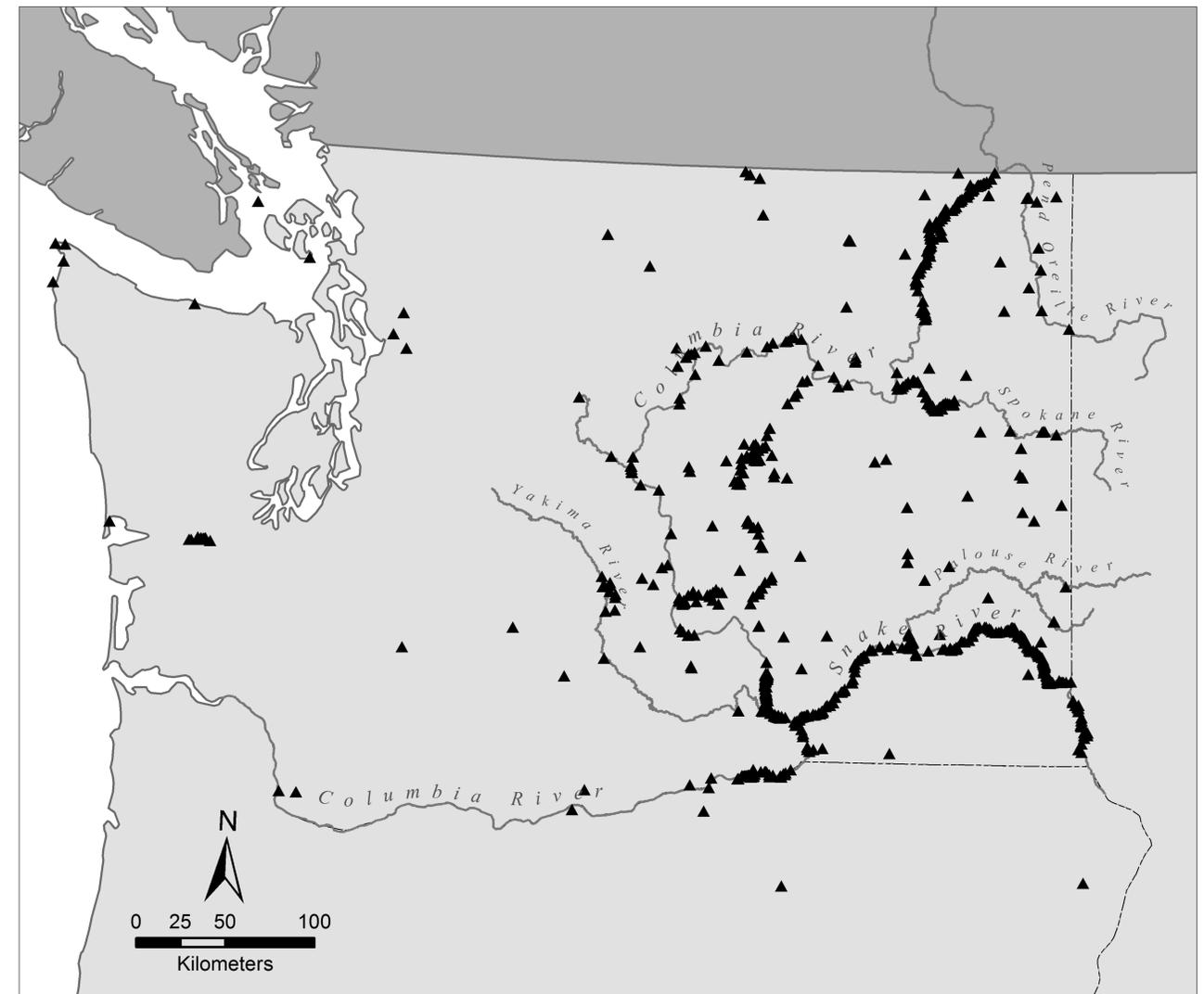


Figure 5. This map shows the distribution of sites in Washington and Oregon with collections of archaeological materials or records in the WSU MoA. The most obvious pattern in this distribution is the clustering of sites along the rivers that comprise the Columbia system. This is a result of two factors: 1) Department of Anthropology archaeology's historic participation in salvage excavation and survey projects associated with dam construction and 2) the fact that the Native peoples of the Northwest Plateau tended to concentrate their habitations along the rivers of the region, which provided, among other things, access to important food resources like salmon.

Results

The WSU MoA holds materials from 1,635 archaeological sites, 1,073 of which include artifact collections. This includes 807 sites from the Cedar Mesa project, owned by the Utah Bureau of Land Management. The majority of other sites are located in the interior of Washington, reflecting the historical foci of the WSU Department of Anthropology and affiliated bodies. The vast majority of the collections are owned by agency partners: fewer than 100 are the sole responsibility of the MoA (Table 2).

Figure 5 shows the distribution of the sites with collections at the MoA (excepting those in Utah). The most obvious pattern in this distribution is the clustering of sites along the rivers that comprise the Columbia system.

Table 2. Main Agency Partners

Agency	Number of Sites
Bureau of Land Management, Utah	807
Army Corps of Engineers, Walla Walla District	374
Bureau of Reclamation, Pacific Northwest Region	124
Bureau of Land Management, Oregon-Washington	88

Stewardship for the Future

The MoA is a public institution whose broader mission is not just to preserve those materials as they were collected through archaeological excavation, but to enhance them in ways that maximize their potential as sources of data.

The ongoing development of a database that will eventually incorporate richer site data (see Table 1) will promote the development of regionally-focused research programs. Finally, as we develop and encourage use and research of MoA collections, it is critical that a formal research protocol is in place that is developed with local Tribal communities and collection owners. The MoA is committed to ethical use of collections, transparency of all activities, and collaboration with Tribal communities.

Acknowledgments

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