

Archaeologists, the Public, and Collectors:
Establishing a Regional Database of Archaeological Sites on Private Land and
Collections with a Process for Professional-Public Archaeological Research in the
Portland, Oregon Area

by
Katherine Louise Tipton

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Thesis Committee:
Shelby Anderson, Chair
Virginia Butler
Douglas Wilson

Portland State University
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Abstract

Over the course of daily life, people engage with archaeology in various ways, including experiences with archaeology on their own land and as part of family collections of archaeological material. As a result, members of the public often hold considerable archaeological knowledge that professionals have historically overlooked. Recent scholarship focuses on the issue of incorporating the public and collectors into archaeological research and ways for capturing that information. Professional-public collaboration is particularly important in the Portland, Oregon area, where many archaeological sites are located on private land and there is a long history of collecting.

The goal of this thesis was to develop and evaluate a systematic process for collecting and investigating information about archaeological sites on private land and collections in private hands throughout the Portland, Oregon area. To achieve this, I designed and carried out a five part project that involved: 1) developing a database and associated Geographic Information System (GIS) to organize publicly reported archaeological sites and private collection information; 2) population of the database with archaeological information from various archival sources; 3) testing public outreach approaches for gathering additional information for the database; 4) assessing the effectiveness of the approach through observations made from outreach results; and 5) conducting fieldwork on private land to further evaluate the process investigating publicly reported archaeological data.

I conducted outreach at seven events, using my outreach methods and materials with different degrees of success; the response rate to the public survey was low but face-

to-face interactions yielded new information on sites and collections, and identified potential future collaborators. The archaeological survey was successful, identifying the location of a potential Merrybell Phase site in a previously under investigated area. I recommend that future outreach and database development efforts should focus on active, face-to-face outreach in the region to continue to improve relationships between professional archaeologists and collectors. I also recommend that efforts continue to build on the database that I constructed, through continued work with the public, Tribes, and agencies.

My project shows that fostering collaboration between different entities, including collectors, can make a significant contribution to the archaeological record and in the area. This project has identified the efforts it takes to establish trust before collaboration may begin and that a continuously active outreach is needed to maintain and improve the relationships between professionals and the public.

Dedication

To my Grandpa, Norman Stewart, who persisted in talking about Neanderthals. He still knows more than I do.

To Serendipity, (noun) finding something good without looking for it.

Acknowledgements

It takes a village to complete a thesis and this is certainly true. I am eternally grateful to those whom I have had the pleasure to talk, think, and work with on this project. First and foremost, I would like to thank my advisor, Dr. Shelby Anderson for her unwavering support throughout this entire process. A big thank you to my committee members, Dr. Virginia Butler and Dr. Doug Wilson. Your expertise, positivity, and insight helped in designing this project and pushed me as archaeologist.

Thank you to all participants in the public surveys and follow-up interviews. This project is just the beginning! I am especially indebted to Ms. Carol Luscher. I cannot thank her enough for our long phone calls about quick cakes, and for sharing while listening to her vast knowledge about Oregon and beyond.

My heartfelt thank you to the Confederated Tribes of Grand Ronde Cultural Staff for all your guidance and input, and for participating in fieldwork. Thank you to all the volunteers who participated in the archaeological survey. Your willingness to take time out of your weekend to excavate shovel tests in surprisingly clayey soil in the rainy Pacific Northwest means the world to me. I am grateful to my co-workers at Bonneville Power Administration for their constant enthusiasm that I would complete my thesis. A big thank you to David Minick for all your insight and discussion about the Oregon Archaeological Society (OAS). I am grateful for the time you took to meet and talk the ins-and-outs of this project.

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Nobody has been more important to me in the pursuit of archaeology than my family. “The bond that links your true family is not one of blood, but of respect and joy in each other” – Richard Bach. I would like to thank my parents, Maggie Fynn and Mike Tipton, whose love and guidance are with me in whatever I pursue. Thank you to my stepparents, Judith Minton, and Richard Fynn, for never thinking twice and jumping aboard this crazy voyage. A special thanks my brother, James Tipton, for always pushing the limits of random knowledge. Finally, last but certainly not least, I am grateful to my partner, Keith Emmons, for your endless patience and constant encouragement.

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Chapter 1. Introduction

The public is an important source of archaeological information and can play a substantial role in heritage preservation (Bustam 2010; Herva et al. 2016; Pokotylo and Guppy 1999; Rizvi 2006; Wilson 2012). Over the course of daily life, people encounter and engage with archaeology in various ways, including experiences with archaeology on their own land and as part of family collections of archaeological material. As a result, members of the public can hold considerable archaeological knowledge and insight regarding the location, character, and larger significance of archaeological sites relative to their lives; thus, the public is a key source of heritage knowledge and information. Professionals in the field have historically overlooked or minimally engaged with the public as a viable source of archaeological knowledge. This lack of meaningful engagement results in part from archaeologists' fear that professional-public collaboration will encourage site destruction, which may ruin the integrity of the archaeological research. As many professionals recognize the challenges of working with private collections and archaeological sites residing on private property, they also acknowledge the benefits of engaged collaboration with collectors and private landowners (Cox 2015; Shott and Pitblado 2015; Wright 2015).

In the United States, archaeologists and other heritage or cultural resources professionals lack clear, universally accepted, best practices for working with the public to capture archaeological site and private collections data. These issues are particularly notable in the Portland, Oregon area where many archaeological sites are located on

private land and where there is a long history of collecting. The contexts of countless archaeological sites are damaged (Cox 2015; Strong 1959).

Due to the complexities of professional-public relationships in the Portland area, it is critically important that we begin to facilitate collaboration for systematically gathering information about archaeological sites on private land and privately held collections in this region. Recently, archaeologists have begun to examine the public as a potential source of archaeological knowledge, including the implications of collaboration when designing or implementing projects (Clearman 2020; Colwell-Chanthaphonh 2004; LaBelle 2003; North 2020; Plumer 2018; Shott and Pitblado 2015; Wallen 2016).

Archaeologists are working to establish best practices for incorporating archaeological data from the general public in the Portland area and across the nation. These data are vital to expanding our shared understanding of the archaeological record and establishing a process for professional-public collaboration in the future.

My thesis project stems from an April 2017 panel discussion held at Portland State University (PSU) that brought together cultural resource professionals and interested members of the public/avocational community to discuss local archaeological issues. The panel, hosted by Dr. Virginia Butler (Anthropology Department Chair and Professor at Portland State University (PSU)) for the public archaeology class, was comprised of seven individuals: three Oregon Archaeology Society (OAS) members, three representatives of the Confederated Tribes of Grand Ronde (CTGR), and a representative from the Oregon State Historic Preservation Office (SHPO). The panel explored the curation of OAS collections of former OAS members, collaboration with

Tribes, the University of Oregon Museum of Natural and Cultural History (MNCH) collections, and other topics surrounding public archaeology and working with collectors in Oregon. The idea of a database to house private collection information and potential archaeological sites on private land manifested from this panel discussion.

Following the panel, a private landowner who resides in the Portland, Oregon area, Ms. Carol Luscher, approached Dr. Butler at the 2017 Archaeology Roadshow with the knowledge of a potential archaeological site on her property near North Plains, Oregon. The investigation of an archaeological site situated on private property provided an opportunity to develop and test a process for professional-public collaboration that includes outreach, private collection and site information compilation, and field investigation.

Research Overview

The goal of my thesis is to demonstrate a systematic process for collecting and investigating information from the public about archaeological sites on private land and collections in private hands throughout the Portland, Oregon area (Figure 1). For the purposes of this project, the public includes collectors. My research aims to build upon local community interest and engagement in archaeology generated from outreach efforts by the PSU Archaeology Roadshow and the Fort Vancouver National Historic Site. Throughout the course of the project, my research addresses several questions surrounding public archaeology, specifically around the issue of professional-public collaborations in archaeology: What are the most effective ways to engage the public in creating a collection/private site database? Is a database with private collection

information a useful tool for professional-public collaboration in archaeological research?
How can the database best build on current outreach efforts in the Portland, Oregon area?
And, how does one engage professional-public collaboration in recording sites on private property?

To achieve this goal, my research was organized into five components: 1) developing a relational database and associated Geographic Information System (GIS) to organize publicly reported archaeological sites and private collection information; 2) population of the database with archaeological information from various archival sources; 3) testing approaches for gathering additional information for the database through public outreach and engagement; 4) assessing the effectiveness of the approach through analysis of outreach results and the public survey of participants; and 5) conducting fieldwork at a site located on private land to further evaluate the process for gathering and investigating publicly reported archaeological data.

My thesis research builds mutual professional-public understanding of local heritage and establishes a process for sharing and investigating publicly reported archaeological information. In the future, researchers and students can investigate sites reported and recorded in the database, furthering our knowledge of the region's history. My project further establishes PSU as a center for community-engaged and collaborative archaeological research. My research also builds from other public archaeology models and will serve as a model for other regions where there is a need for increased professional-public partnership for archaeological research.

Thesis Structure

This thesis is organized into six chapters. Chapter 1 is this introduction to my thesis project. In Chapter 2, I present the background of public archaeology and general history of professional-public collaboration in the United States and abroad. I also discuss amateur archaeology, collectors, and public outreach in the Portland, Oregon area and how it affects current archaeological research. Lastly, I examine models used by different institutions and organizations across the nation and abroad for collecting and disseminating archaeological information in the public sphere and consider how these models influenced my thesis project. In Chapter 3, I explain my research methods and materials, including the database design, approaches, and materials used for outreach, as well as my method for assessing the effectiveness of my approach, and for investigating the Luscher Site. I present my results in Chapter 4, including the status of the database, outreach results, and outcomes of fieldwork. In Chapter 5, I discuss the broader topics and implications of the results, as well as informative interactions with both professionals and the public while carrying out the project, and next steps for improving the database and outreach process. Finally, I present my conclusions and discuss future directions for the use of the database and the process established by my work.

Project Study Area

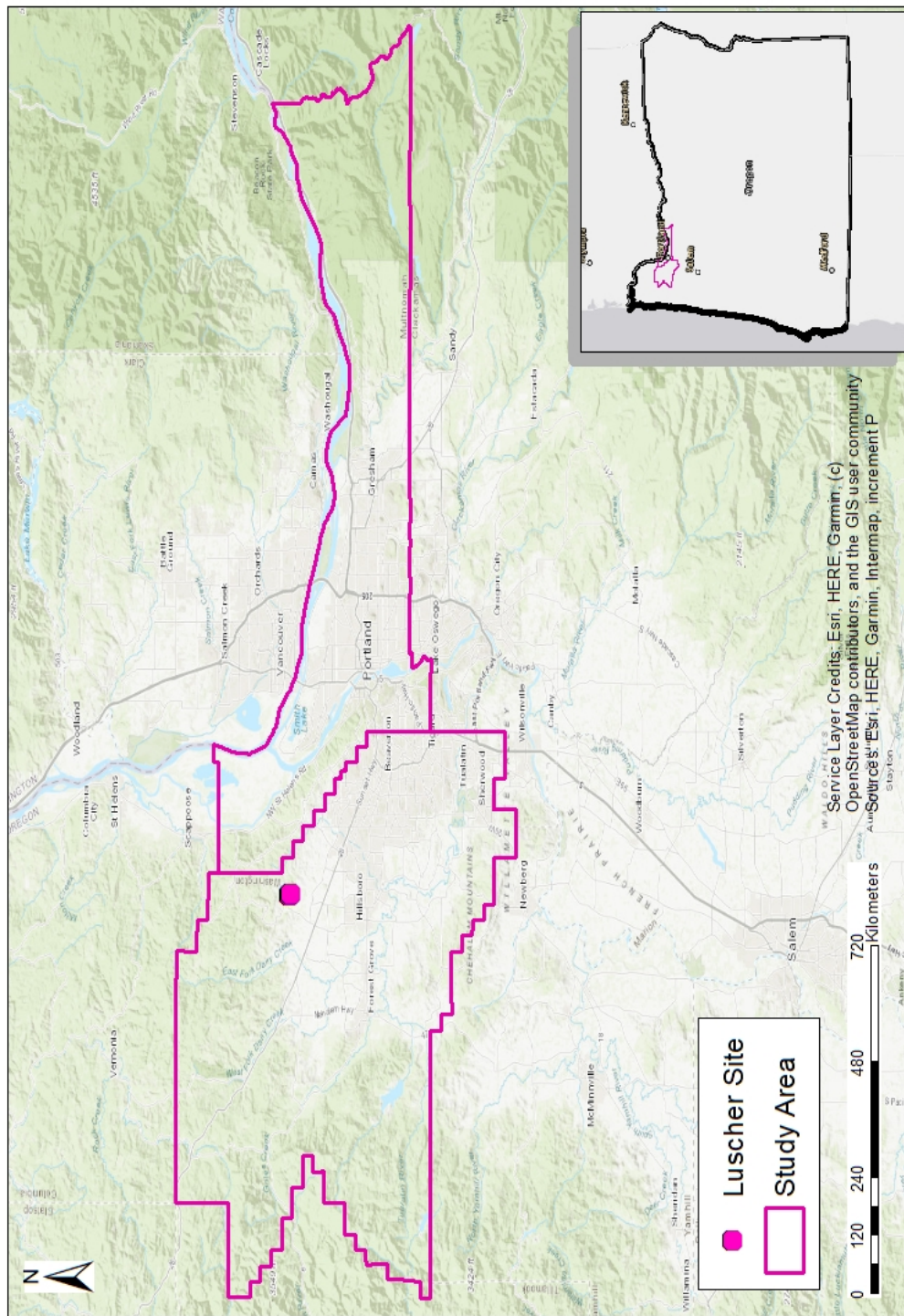


Figure 1. Map of study area

Chapter 2. Background

Members of the public often hold considerable archaeological knowledge that professionals in the field have historically overlooked. Many archaeological materials and collections reside on private property and in private hands, and are often found through private land use practices, including agricultural activities and residential development (Pitblado 2014; Watkins 2015).

Recent scholarship focuses on the issue of incorporating the public and collectors into archaeological research, focusing on optimal and ethical ways for capturing that information. In this chapter, I explore public archaeology and the complexities of professional-public collaboration (Pitblado 2014) across the United States, including amateur archaeology, collectors, and current public outreach in the Portland, Oregon area. I present background on public archaeology and a general history of professional-public collaboration in the United States. I also examine models used by different institutions and organizations across the nation and abroad for collecting and disseminating archaeological information to the public. I discuss how and why these models informed the development of my thesis project.

Public Archaeology and Professional-Public Collaboration

The Society for American Archaeology (SAA) promotes public archaeology through several initiatives and with the discussion of public archaeology in the SAA Principles of Archaeological Ethics (SAA 1996) (Table 1).

Table 1. SAA Principles of Archaeological Ethics and description (SAA 2018).

<p><u>No. 1: Stewardship</u></p>	<p>The archaeological record, that is, in situ archaeological material and sites, archaeological collections, records and reports, is irreplaceable. It is the responsibility of all archaeologists to work for the long-term conservation and protection of the archaeological record by practicing and promoting stewardship of the archaeological record. Stewards are both caretakers of and advocates for the archaeological record for the benefit of all people; as they investigate and interpret the record, they should use the specialized knowledge they gain to promote public understanding and support for its long-term preservation.</p>
<p><u>No. 2: Accountability</u></p>	<p>Responsible archaeological research, including all levels of professional activity, requires an acknowledgment of public accountability and a commitment to make every reasonable effort, in good faith, to consult actively with affected group(s), with the goal of establishing a working relationship that can be beneficial to all parties involved.</p>
<p><u>No. 3: Commercialization</u></p>	<p>The Society for American Archaeology has long recognized that the buying and selling of objects out of archaeological context is contributing to the destruction of the archaeological record on the American continents and around the world. The commercialization of archaeological objects - their use as commodities to be exploited for personal enjoyment or profit - results in the destruction of archaeological sites and of contextual information that is essential to understanding the archaeological record. Archaeologists should therefore carefully weigh the benefits to scholarship of a project against the costs of potentially enhancing the commercial value of archaeological objects. Whenever possible they should discourage, and should themselves avoid, activities that enhance the commercial value of archaeological objects, especially objects that are not curated in public institutions, or readily available for scientific study, public interpretation, and display.</p>
<p><u>No. 4: Public Education and Outreach</u></p>	<p>Archaeologists should reach out to and participate in cooperative efforts with others interested in the archaeological record with the aim of improving the preservation, protection, and interpretation of the record. In particular, archaeologists should undertake to: 1) enlist public support for the stewardship of the archaeological record; 2) explain and promote the use of archaeological methods and techniques in understanding human behavior and culture; and 3) communicate archaeological interpretations of the past. Many publics exist for archaeology including students and teachers; Native Americans and other ethnic, religious, and cultural groups who find in the archaeological record important aspects of their cultural heritage; lawmakers and government officials; reporters, journalists, and others involved in the media; and the general public. Archaeologists who are unable to undertake public education and outreach directly should encourage and support the efforts of others in these activities.</p>
<p><u>No. 5: Intellectual Property</u></p>	<p>Intellectual property, as contained in the knowledge and documents created through the study of archaeological resources, is part of the archaeological record. As such it should be treated in accord with the principles of stewardship rather than as a matter of personal possession. If there is a compelling reason, and no legal restrictions or strong countervailing interests, a researcher may have primary access to original materials and documents for a limited and reasonable time, after which these materials and documents must be made available to others.</p>

<u>No. 6: Public Reporting and Publication</u>	Within a reasonable time, the knowledge archaeologists gain from investigation of the archaeological record must be presented in accessible form (through publication or other means) to as wide a range of interested publics as possible. The documents and materials on which publication and other forms of public reporting are based should be deposited in a suitable place for permanent safekeeping. An interest in preserving and protecting in situ archaeological sites must be considered when publishing and distributing information about their nature and location.
<u>No. 7: Records and Preservation</u>	Archaeologists should work actively for the preservation of, and long-term access to, archaeological collections, records, and reports. To this end, they should encourage colleagues, students, and others to make responsible use of collections, records, and reports in their research as one means of preserving the in situ archaeological record, and of increasing the care and attention given to that portion of the archaeological record which has been removed and incorporated into archaeological collections, records, and reports.
<u>No. 8: Training and Resources</u>	Given the destructive nature of most archaeological investigations, archaeologists must ensure that they have adequate training, experience, facilities, and other support necessary to conduct any program of research they initiate in a manner consistent with the foregoing principles and contemporary standards of professional practice.
<u>No. 9: Safe Educational and Workplace Environments</u>	Archaeologists in all work, educational, and other professional settings, including fieldwork and conferences, are responsible for training the next generation of archaeologists. Part of these responsibilities involves fostering a supportive and safe environment for students and trainees. This includes knowing the laws and policies of their home nation and institutional workplace that pertain to harassment and assault based upon sex, gender identity, sexual orientation, ethnicity, disability, national origin, religion, or marital status. SAA members will abide by these laws and ensure that the work and educational settings in which they have responsible roles as supervisors are conducted to avoid violations of these laws and act to maintain safe and respectful work and learning environments.

Public archaeology encompasses archaeology used to fulfill regulatory requirements or publicly funded projects (Little 2012). Broadly understood as a sub-discipline of archaeology, public archaeology includes both disciplinary practice and a theoretical position, which is applied through the democratization of archaeology and through communication and involvement of the public with the preservation and administration of archaeological resources (Richardson and Sanchez 2015). The name public archaeology itself is not always accepted by all its practitioners and the sub-discipline is still forging its identity within archaeology (Bartoy 2012:553). Many still

reference public archaeology as “cultural resource management” and consider it an add-on to archaeological practice rather than as a field unto itself (Bartoy 2012).

To communicate and involve the public in archaeology, the SAA Principles of Archaeological Ethics urges archaeologists to share results with the public through exhibits, websites, brochures, educational talks, and historical societies (SAA 2012). However, the SAA does not provide straightforward guidelines for how archaeologists and institutions should actively engage with the public when conducting research in the framework of public archaeology.

Furthermore, multiple barriers discourage professional-public collaboration. These issues require further consideration when developing best practices for collecting publicly reported archaeological information and the development of a database to process and organize these data (Beck and Neylon 2012; Morgan and Eve 2012; Richardson 2013). Professionals in archaeology continue to grapple with ethical issues related to ownership of archaeological material including the ethics surrounding collecting and collectors (Pitblado 2014).

While the laws and processes applicable to artifact collecting, site looting, and looters are clear (American Antiquities Act 1906 [16 USC 431-433]; ARPA 1979; ORS 358.905-358.961; ORS 358.905-358.961), mainstream archaeologists noticeably avoid or minimize interaction with collectors who have archaeological sites on private land or artifacts in their possession (Bartoy 2012, LaBelle 2003, Nassaney 2012). For the purposes of my project, I make a definitive distinction between *collectors* and *looters*. Collectors are anyone with knowledge of archaeological sites situated on private property

and/or people who have archaeological artifacts in their possession through family inheritance or from private land use practices. Looters are individuals or groups who deliberately destroy archaeological sites for commercial gain (Proulx 2013).

Despite the differences between these two groups of people, archaeologists often conflate collectors and looters and avoid collaborating with both groups altogether (Goebel 2015; Plumer 2018; Proulx 2013). Often it is thought such association would violate SAA Principle 3. Principle 3 condemns the commercialization of archaeological materials, but archaeologists often interpret this principle more broadly and avoid working with collectors as well as looters (Shott and Pitblado 2015). Avoidance of open dialogue with collectors along with dismissal of public interactions leads to larger gaps in the archaeological record and persistent misunderstanding between professionals and collectors (Wilson 2012).

Not all professionals believe avoidance of collectors is the best practice. Many archaeologists see value in professional-public collaborations and provide current examples and research for best practices while critically examining existing practices in public archaeology (Colwell-Chanthaphonh 2004; Hart and Chilton 2015; Hofman 1987; LaBelle 2003; Proulx 2013; Rizvi 2006; Richardson and Almansa-Sanchez 2015; Shott and Pitblado 2015, Smith 2014; Wallen 2016; Wright 2015). Researchers recognize it is inevitable that members of the public collect artifacts; professionals cannot prevent artifact collecting altogether (Colwell-Chanthaphonh 2004; Hart and Chilton 2015; Hofman 1987; LaBelle 2003; Shott and Pitblado 2015). Unfortunately, by lumping

private collectors into the same category as looters, professional archaeologists neglect to make a reasonable effort to work with the many members of the public.

When professional archaeologists severely limit their interaction with members of the public and collectors, they disregard several SAA Principles that call for engagement with the public (Principles 1, 2, 3, 4, and 7). Working with the public helps professionals negotiate our complex responsibilities to the public and to archaeology. And, professionals-public collaboration can be mutually beneficial (Lynott and Wylie 1995:8; Jameson, Jr. 2002; LaBelle 2002; Moser et al. 2002; Pitblado 2014; Watkins 2015).

Wilson (2012:73) specifically argues that professional's disinterest and avoidance of engaging with an interested public is detrimental to the discipline of archaeology because it keeps the public in the dark about what archaeology is and how archaeological research is relevant. Dismissal of the interested public, including collectors, keeps professionals and the community from effective and meaningful dialogue. Wilson makes a point about the ethical ramifications of professionals ignoring and avoiding discussions and interactions with the public. Avoidance includes professionals neglecting to follow up with examining potential archaeological materials reported by the public, for example, Burrows Cave in southern Illinois (Wilson 2012:74). Non-peer reviewed publications can misinform the public about how archaeology is conducted and ignored public reports can lead to the continuous spreading of inaccurate information about past lifeways. When professionals sit idly by and continue to ignore, rather than take the opportunity to engage the public about diverse viewpoints, the systematic problem of misinformation continues to persist (Wilson 2012:77). This circles back to the stigma of associating with non-

professional entities and professionals. Archaeologists need to confront controversial topics, as the dismissal of sensational topics can lead to detrimental view of both archaeology and public interest in the discipline (Wilson 2012).

The continued isolation of professionals and the public can have larger implications for the positive public support of, and engagement in public archaeology. Currently, there are several examples of successful professional-public collaborations for archaeologically related projects. For instance, Pitblado (2014) argues that the Clovis archaeological record would be sparse if archaeologists rejected the findings of collectors, who have reported most of the known Clovis site locations.

In another study, LaBelle (2002) gained valuable information about local sites, collections, and archaeology through conversations with local members of the public in eastern Colorado. LaBelle recognized that private collections were often not formally reported due to the misconception that land rights and collections would be stripped from those members of the public in possession of archaeological material (LaBelle 2002). By continuing outreach to locals about private archaeological collections, LaBelle fostered dialogue and understanding about historic preservation, which developed into collaborative, multiyear projects, as well as a mutual understanding of historic preservation.

Prior collaborations across the United States shows how the benefits of professional-public collaboration outweigh the potential detriments including LaBelle (2003), Pitblado (2014), Proulx (2013), Shott (2015), Wallen (2016), Watkins (2015), and Wilson (2012). Even contentious collaborations with the public and collectors can

add value to archaeological research (Wilson 2012). Critical and respectful engagement with the public encourages archaeologists to work with collectors and provides an opportunity to involve communities in the reporting and recording process. Given the extensive local history of avocational archaeology in the Portland area (OAS Screenings 2018), increased professional-public partnerships will both be mutually beneficial and necessary for furthering the archaeological record, stewardship, and community knowledge in the region.

Amateur Archaeology, Collectors, and Public Outreach in the Portland Area

There is a long history of amateur and professional archaeological investigations and of artifact collecting in the Portland area (David Minick, personal communication 2018; OAS 1997; Slocum 1968). In the early 1900s, collectors sought known archaeological sites to build their own collections. Many descendants of amateur collectors still own these collections (Pettigrew 1981; Seaman 1946; Slocum 1968). Publications in the early half of the twentieth century demonstrate public interest in archaeology, at times providing direction in how to locate artifacts in the region (e.g. Butler 2007; Seaman 1946; E. Strong 1906; N. Strong 1959). Considerable amateur archaeological collecting occurred throughout the region during this time, much of it conducted by the Oregon Archaeological Society (OAS). Founded in 1951, the OAS is a non-profit organization. As a key regional archaeology-focused organization, the OAS led amateur investigations during the early-to mid-twentieth century throughout Oregon and Washington. Many of the amateur investigations and collections occurred before the enactment of laws protecting cultural resources on federal, state, and private land (in

some cases). The OAS, and current State and Federal laws, no longer permits members to take home objects from archaeological digs. The OAS strongly advocates the importance of working with professional archaeologists and tribes.

While collecting is no longer allowed, early OAS investigations involved extensive collection; the majority of early OAS collected materials went home with OAS members rather than to a museum or other repository for curation (OAS 1997; Pettigrew 1981). This resulted in a scattering of local archaeological materials among OAS members' families and their descendants (Slocum 1968). For example, the Wakemap Mound project report specifically states that OAS members (the finder) held uncovered artifacts "in trust", i.e. personal collections, although no specifics are given (OAS 1959:12). The OAS Shoto Clay report (Slocum and Matsen 1968) includes an artifact list by collector, including names and addresses (Slocum and Matsen 1969:25). These reports offer baseline of information about prior amateur work and provide records of the potential whereabouts of some archaeological material. Consolidating this kind of information in a central database will allow future researchers to better pinpoint the location of these objects.

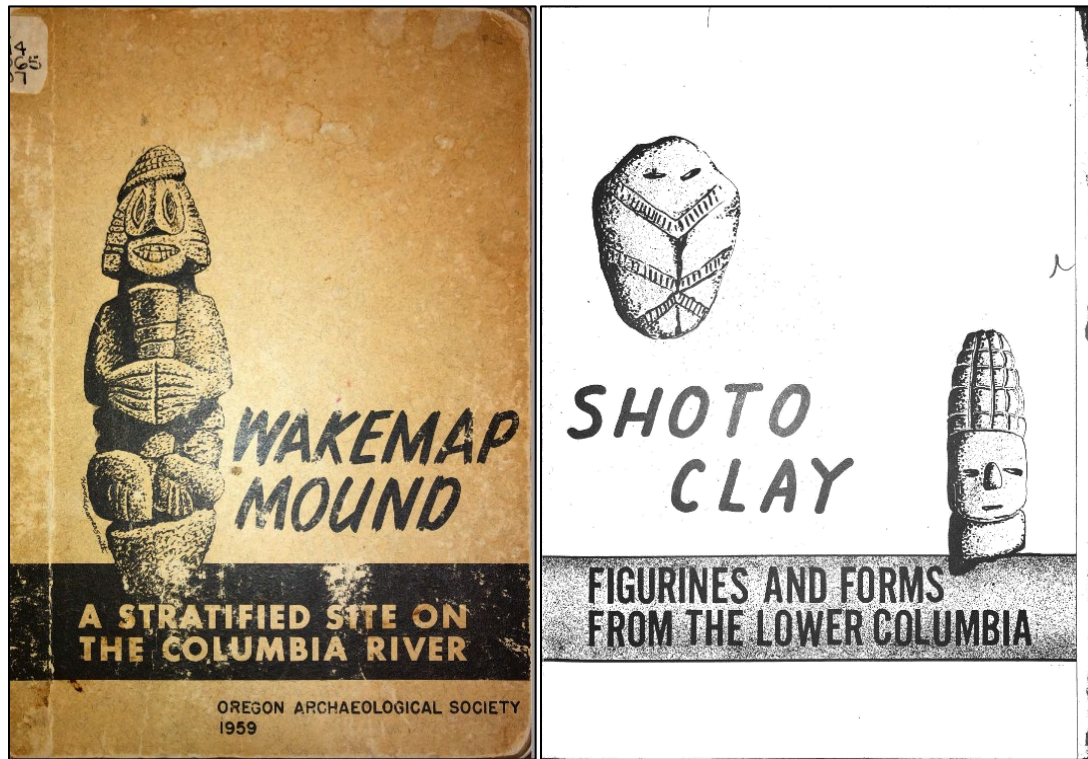


Figure 2. Covers for OAS Publication No. 1 *Wakemap Mound* (1959) and Publication No. 4 *Shoto Clay* (1968).

Since the 1960s, the expansion of federal and state cultural resource laws furthered the protection of archaeological sites. However, protection of archaeological sites on private land is still limited (ARPA 1979; Bundy 2005; NAGPRA 1990; NHPA 1966; Pettigrew 1981; ORS 358.905-358.961, ORS 390.8905-390.925, ORS 271.715-271.795; Wallen 2016). Oregon Revised Statutes (ORS) 558.905-358.961, protects significant archaeological sites on both non-federal public and private lands in the State of Oregon. Yet, archaeological sites on private land belong to the landowner and professionals are not allowed on private land without consent, regardless of the presence of an archaeological site (Oregon SHPO 2015, revised 2016). ORS 358.920[1][b] permits the collection of a point or “arrowhead” from the surface of private land if the collection can be accomplished without the use of a tool. This law is meant to remove penalty from

a person discovering and collecting an arrowhead. However, ORS 358.920[1][b] also memorializes and allows surface collecting on private property across the state of Oregon.

Oregon SHPO Archaeology Bulletins offer a summary of recommendations for the treatment of archaeological sites (<https://www.oregon.gov/oprd/OH/pages/archaeology.aspx>). These documents provide information to the public about archaeological laws in the state of Oregon. These bulletins also outline of the protection of archaeological sites on public versus private property and steps for hiring an archaeologist (Oregon SHPO 2019, 2019a, 2019b, 2019c). Links to the Archaeology Bulletins resides on the Project Review and Compliance/ Archaeological Investigations webpage for the Oregon SHPO for anyone to access. These documents also include useful information about how land use practices may continue on private property, even in the event of identifying archaeological objects or sites.

The Archaeology Bulletins set expectations for the treatment of archaeological sites and how to start the process of identification. However, these bulletins do not offer more in-depth guidance for cooperation with the public who may have private collections. No definition of appropriate relationships or defining parameters, leads to limited partnerships and programs between professionals and the public, specifically with collectors in Oregon. Overall, the misunderstanding of archaeology laws leads professionals and collectors to avoid one another entirely, and this is not just limited to Oregon (Shott and Pitblado 2015). The general lack of outreach for public knowledge of

cultural resources laws further contributes to site destruction (Oregon SHPO 2015, revised 2016).

To grow public understanding of heritage preservation and to know where to focus outreach efforts, it is important to understand current public outreach efforts happening in the Portland area. This includes present work conducted by the OAS, the PSU Archaeology Roadshow, and public involvement at the Fort Vancouver National Historic Site.

The OAS contributes to outreach and promotes the protection of local heritage by hosting a monthly lecture series and through publication of their quarterly OAS newsletter “Screenings”. The OAS also has a collections program and a Collections Committee formed to assist former OAS members, their families, and other members of the public who possess artifact collections. This program helps to locate established facilities to house their collections perpetually (David Minick, personal communication 2019, OAS 2019).

The PSU Archaeology Roadshow partners with tribes, federal and state agencies, cultural resources firms, schools, and many other community partners to host a free annual event in Portland and two satellite events currently in Harney County and Bend, Oregon. The PSU Archaeology Roadshow aims to increase the visibility and understanding of archaeology by breaking down barriers between archaeologists and the public, including collectors.

As part of the National Park Service (NPS), Fort Vancouver National Historic Site (Fort Vancouver) in Vancouver, Washington, connects multiple audiences through

tourism, heritage, urban development, and university research collaborations (Wilson 2015). The public archaeology program is one of several components aiding with the preservation and interpretation of the park and the region. The public archaeology program offers several ways of fostering education and stewardship. This includes a public archaeology field school and volunteer opportunities.

With this thesis, I built upon community interest and engagement that the OAS, PSU Archaeology Roadshow, and Fort Vancouver have created. Archaeologists taking more opportunities to engage with the public in the Portland area furthers the archaeological record and broadens professional-public collaborations (see further discussion below).

Other Models for Collecting and Disseminating Archaeological Information

Several organizations, programs, and databases in the United States, and abroad, show a successful history of professional-public collaboration and have established methods for collecting and disseminating archaeological information.

The Paleoindian Database of the Americas (PIDBA) is a large database that provides locational, attribute, and image data on Paleoindian materials (ca.10,000 calibrated years Before Present and older) from across the Americas (Anderson et al. 2010; 2011). Initially, the database provided summary data on the occurrence of Paleoindian projectile points by state and county within the United States. Since then, PIDBA has expanded to include Canada and Mexico and by 2005, the database expanded to include all the Americas.

Primarily used by researchers, PIDBA allows for researchers to examine the distribution of artifacts at varying levels of resolution. PIDBA grows through the contribution of primary data and currently contains locational data for nearly 30,000 projectile points and attribute data on over 15,000 artifacts (Anderson et al. 2010). PIDBA also houses radiometric, bibliographic databases, and updated distributional maps. PIDBA posts the locality of artifact data according to where objects were found, usually by county and/or internal political subdivisions, whichever is deemed easiest for recording location information (Anderson et al. 2010). PIDBA maps display the county centroids to obscure the exact location of the reported sample locations.

Use of these data includes documenting land and lithic raw material use, and the changes in numbers of artifacts over time. Examining changes in numbers of artifacts may show demographic trends within the Paleoindian period. Distributional maps can be used to suggest where and when past peoples were located on the landscape. The PIDBA website and database is a work in progress and the developers plan to expand the content in the years to come (Anderson et al. 2010).

Over the last few years, PIDBA primary attribute data provided in spreadsheets are now being transformed into a relational database with standardized attributes (Yerka et al. 2012). Standardizing attribute data allows for more functional joins in GIS files and allow data to be easily exported into formats native to statistical packages. These changes have increased PIDBA data integrity and reduced redundancies and data entry errors (Yerka et al. 2012). The continuous development of PIDBA represents an on-going cooperative effort between many people.

There are several other public archaeology networks and collaborative volunteer organizations across the U.S. The Florida Public Archaeology Network (FPAN) is a state-funded program that actively collaborates with the public. FPAN operates separately from the Florida Division of Historical Resources, which is the state's historic preservation office. FPAN is a statewide, state-funded network and program of the University of West Florida comprised of eight distinct regional centers hosted by local universities (FPAN 2017). FPAN aids members of the public with archaeological collections by connecting them to the appropriate entities for addressing their archaeological needs (Nicole Grinnan, personal communication 2017).

When an individual notifies FPAN about archaeological material on their property, they can visit one of the eight designated regional FPAN centers and the center will help the owner discover more about the site, and more importantly, how to protect it. The network's mission is to promote and facilitate the conservation of cultural resources, both on land and underwater, and to involve the public in the study of their past. The regional centers throughout Florida act as a clearinghouse for information, a place for learning and training, and serve as a headquarters for public participation in archaeology.

Other states have similar public networks including the Oklahoma Public Archaeology Network (OKPAN). Like FPAN, OKPAN is a newer program established in 2016 out of the University of Oklahoma. The program aims to bridge Oklahoma's communities with an interest in archaeology and the past, while promoting education, understanding, and outreach (OKPAN 2019).

I reached out to OKPAN to learn more about ways the program engages with the public about private collections, collectors, and anyone who approaches the OKPAN with archaeological sites on their land. As a newer organization, OKPAN does not have a formal system in place to collect data from collectors and avocational archaeologists, but they are in the process of establishing one (Meghan Dudley, personal communication 2018). Executive Director of OKPAN, Dr. Bonnie Pitblado, received my inquiries and provided valuable feedback about good faith efforts for navigating interactions with collectors (Bonnie Pitblado, personal communication 2018). Statewide public archaeology networks like FPAN and OKPAN do not exist in Oregon, nor does an established region-wide network exist in the Portland area to conduct active outreach among the many stakeholders of Oregon's past.

Some states, such as Mississippi and California, have programs that facilitate public involvement in the recording of archaeological sites. Mississippi is particularly relaxed in this manner, as members of the public can record sites on their property without the assistance of professional archaeologists (MDAH 2017). If an individual knows of, or comes across archaeological material, they may report the location information to any of the archaeology offices of the Mississippi Department of Archives and History (MDAH). MDAH archaeologists, however, do aid with recording sites and the Department's website provides documentation materials and legal information regarding the removal of artifacts and human remains on both public and private property.

Similarly, the Society for California Archaeology directs the California Archaeological Site Stewardship Program (CASSP), which allows volunteers to accompany professional archaeologists to visit and record sites on public lands (CASSP 2017). Volunteers attend a two-day training and sign a confidentiality agreement before becoming “site stewards”. Since 1999, over 1,200 volunteers have participated in this statewide stewardship program. CASSP offers a way for the public and professional archaeologists to consult with one another archaeological sites and educate others on cultural resources and policies that affect these resources (CASSP 2017).

International examples of successful collaboration exist as well. For instance, the Scottish Coastal Archaeology and Problem of Erosion (SCAPE) program promotes collaboration between professional archaeologists and the public. Coastal erosion threatens many sites in coastal Scotland. SCAPE actively engages the public concerning the importance of context for archaeological sites, as well as advocating for site preservation from coastal erosion. Scotland’s Coastal Heritage at Risk Project (SCH@RP) was developed through SCAPE. The project increases opportunities for volunteering with research and stewardship of Scotland’s eroding coastal heritage (SCAPE 2017). The project involves local communities in locating, recording, and monitoring archaeological sites along Scotland’s coastline using a free cellular application called ShoreUpdate (SCAPE 2017).

The application facilitates easy collaboration between the public and researchers by allowing the public to locate, record, and submit archaeological information digitally. The home screen in the application offers three choices: *ShoreUpdate Map*, *Add Heritage*

Site, and Download Forms. The *ShoreUpdate Map* displays coastal archaeological sites as clustered points. The user can zoom into clusters to reveal information about the status and recording of an individual site. The *Add Heritage Site* screen allows the user to record and submit new site data to the SCH@RP website. The *Download Forms* screen shows any forms that have been previously downloaded by the application user. This screen also allows the user to upload and submit completed forms. The information compiled through this application aids in collective identifying vulnerable archaeological sites along the coastline of Scotland. This research is important for detecting how climate change is influencing coastal process and updates information about remaining archaeological sites, including new information about sites (SCAPE 2017).

FPAN, MDAH, CASSP, and SCAPE all offer frames of reference for successful professional-public collaboration through outreach programs that proactively engage the public in all aspects of archaeology. These successful models informed the design and implementation of my public collaboration project.

Chapter 3. Research Design, Methods, and Materials

The main objective of my thesis research is to establish a systematic process for collecting and investigating information about archaeological sites on private land and collections in private hands throughout the Portland, Oregon area. I divided my research into five components to achieve this goal. The five components of my research included: 1) developing a database and associated Geographic Information System (GIS); 2) refining the database by initially populating through archival research of available databases; 3) testing several approaches for gathering additional information for the database through public outreach and engagement; 4) assessing the effectiveness of my approach through analysis of outreach results and public survey of participants; and 5) conducting fieldwork at a publicly reported site to further evaluate my overall process for gathering and investigating publicly reported archaeological data.

My research methods keep in mind the following questions surrounding public archaeology and professional-public collaborations in the discipline: What are the most effective ways to engage the public in creating a collection/private site database? Is a database with private collection information an effective tool for professional-public collaboration in archaeological research? How can the database best build on current outreach efforts in the Portland, Oregon area? And, how does one engage professional-public collaboration in recording sites on private property?

Database and Geographic Information System (GIS)

The database is designed to maintain and organize information about publicly known archaeological sites and collections in private hands. Also, the database is

designed to facilitate the display and sharing of information in both tabular and spatial (i.e. GIS and map) formats. Archaeological site location information is protected by state and federal laws (ORS 97.740-97.760; ORS 358.905-358.961; Antiquities Act of 1906; AHPA 1974; NHPA 1966) and for the purpose of this project, the final database and GIS map data would only be shared with professionals. Per IRB protocol, the identities of participants, including their archaeological material, was not shared with other entities, including the Oregon SHPO.

I created a relational database using Microsoft Excel tables to organize spatial and attribute data related to archaeological site and private collections data. A relational database stores and provides access to data points that are related to one another (Oracle.com 2019). Each relation is composed of tables, records, and fields that are established through matching values of a shared field (Hernandez 2013:13). For example, the *Site Description and Collections* tables within my database are related via the ID Number field (Figure 3). Microsoft Excel tables can also be imported and project in GIS (Law and Collins 2015: 472).

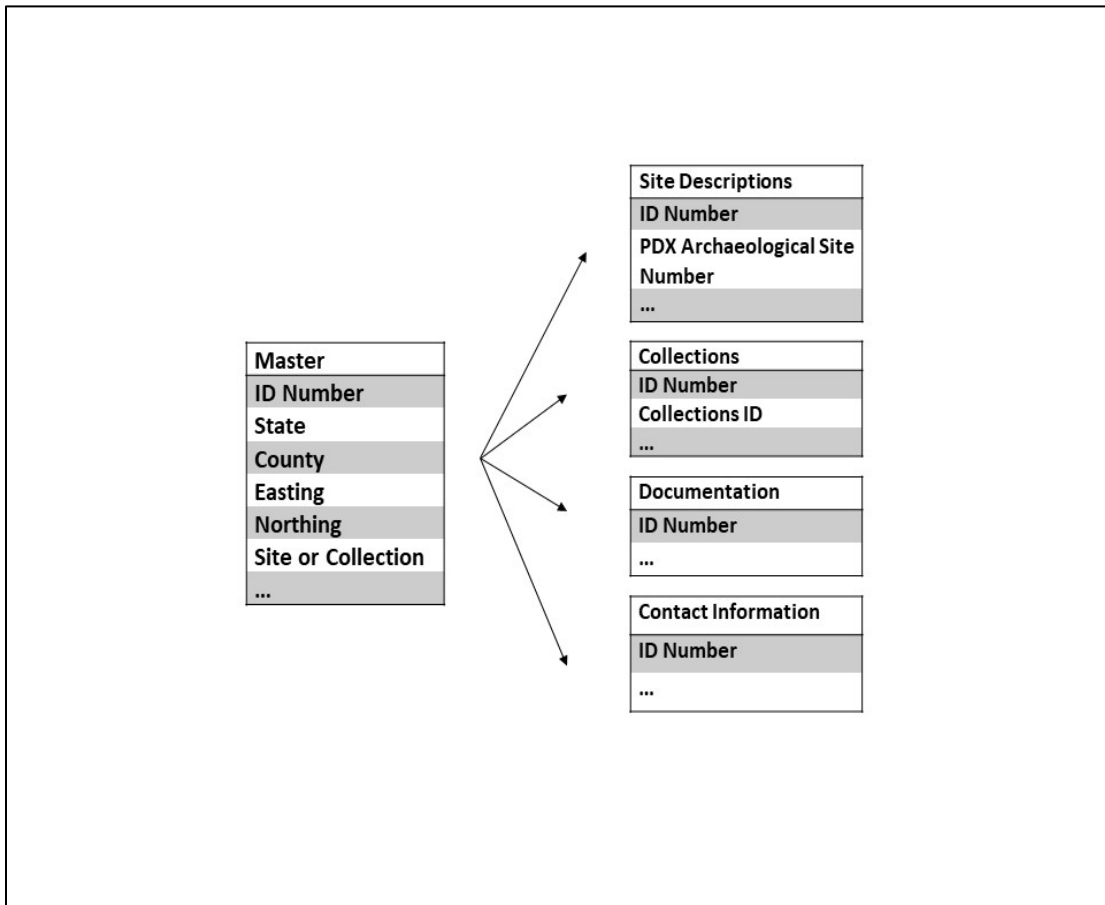


Figure 3. Example of the related tables in the database.

A relationship is an important component of a relational database because it “establishes a connection between a pair of tables that are logically related to each other” (Hernandez 2013:314). There are three different types of relationships that can exist between a set of tables: one-to-one, one-to-many, and many-to-many. For the purposes of my project, I chose to use a one-to-many relationship, where a single record in the first established tab can be related to one or more records in the subsequent tabs (Figure 4), but also a single record in another tab can only be related to one record in the first tab (Hernandez 2013).

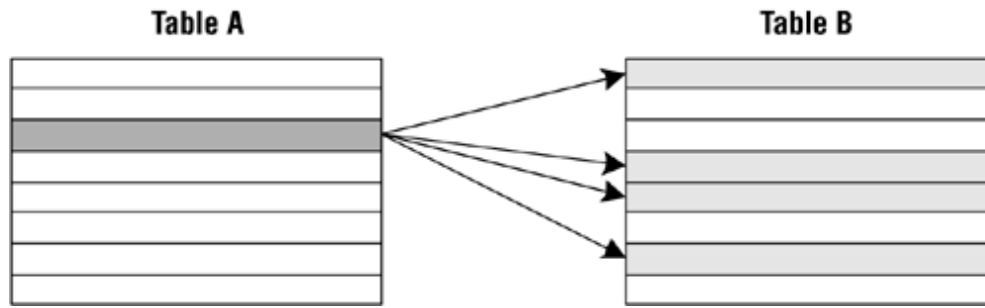


Figure 4. One-to-many relationship between Table A and B in database. Reprinted from Hernandez 2013.

The relational database to include seven tables, which are also referred to as *tabs*. These tabs are labeled: *Master Tab*, *Site Descriptions*, *Collections*, *Documentation* and *Photos*, *Contact Information*, and *Follow-Up*. Each tab is designed to connect through an Identification (ID) Number Field starting at 001. When searching throughout the database, the separate tabs linked by the ID Number Field, which will allow users to find relatable data between all the fields.

Each tab stores separate data sets. The *Master* tab houses the following data: general archaeological site information, site descriptions, site locations, documentation, and photograph tables. This tab also contains data regarding state, county, coordinate system, zone, northing, easting (if provided), owner, address, and extent of archaeological investigations conducted on the landowner’s property.

The *Site Description* table contains information pertaining to the extent of the publicly reported site and or “tickler” noted on OARRA, as well as types of artifacts and features present or/in the possession of the owner. The *Collections* table includes all the reported private collections from the Google Short Form Survey. These data include a cell with a description of the type of collection, number of objects, and any other notes from the individual about the collection. The documentation and photo tab house any

additional data pertaining to either the site description or collection tab and are linked via the ID Number initially assigned to the dataset. The *Contact Information* table includes the personal identification information for the individuals with the archaeological site and/or collection in their possession. To protect the privacy of participants providing input into the database, this tab remains locked and special permission is required to view personal identification data. Finally, the *Follow-Up* table is the place to document any additional communication that may take place about a reported site and/or collections.

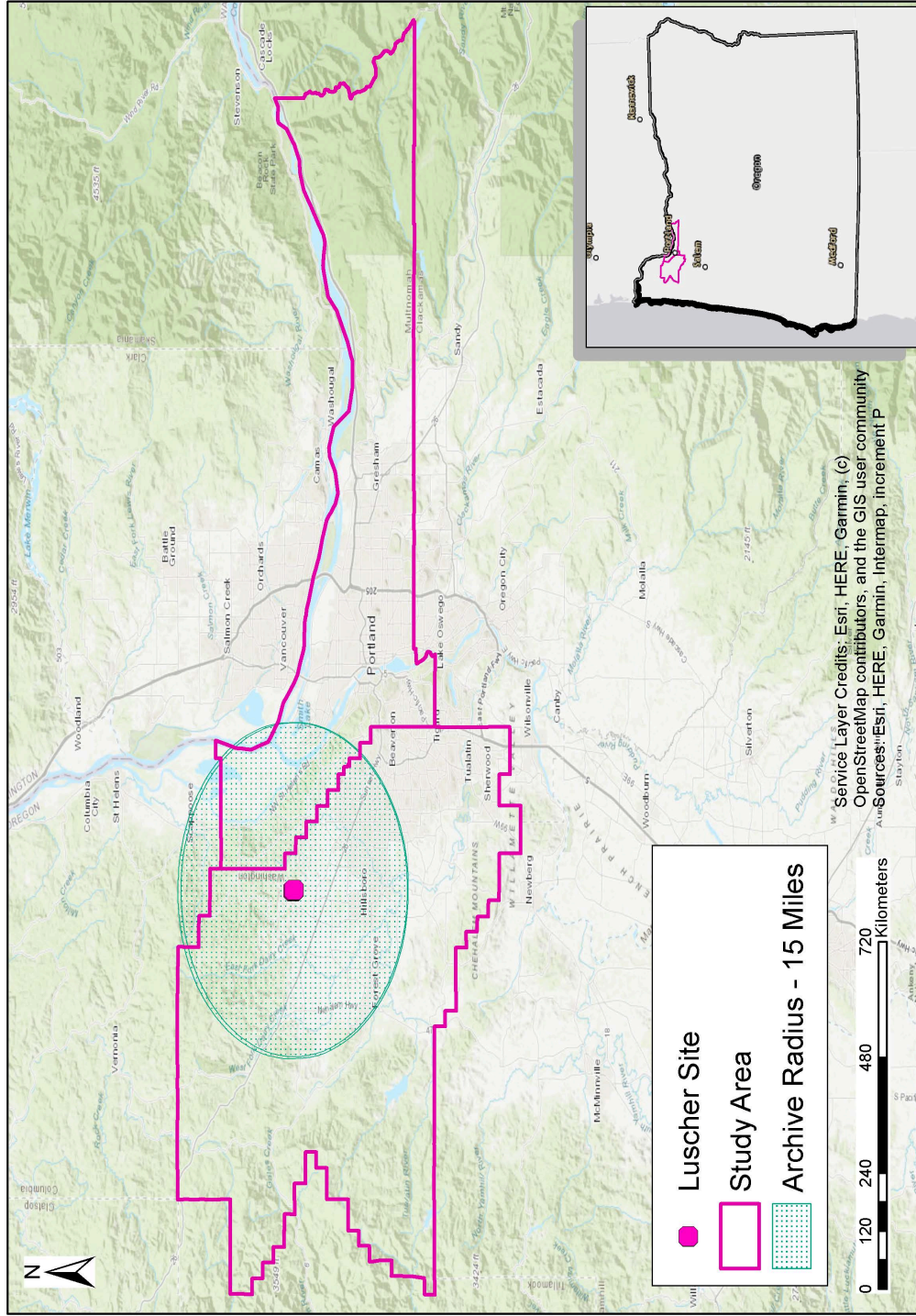
Archival Research

I focused the archival research within a 15-mile radius of a publicly reported site to populate the database (Figure 5). This captured archaeological information from both Washington and Multnomah Counties, which both have a high percentage of private land ownership. And, it helped me further develop the archaeological context for the Luscher Site while also narrowing the scope for this phase of my project in a systematic way (Appendix B).

I collected initial information for the database from the Oregon Archaeological Records Remote Access (OARRA) database. This effort allowed me to both refine the database structure and explore the inventory status of publicly reported archaeological data on private land and collections in my defined study area. I studied the OARRA “tickler” files. “Ticklers” are potential archaeological material or areas of potential historic significance reported by the public to Oregon SHPO staff. This information is added to the sites layer on the OARRA database, with the location and characteristics of the potential archaeological site noted along with informant contact information for

follow-up (John Pouley, personal communication 2017). “Ticklers” look exactly like a reported site on the OARRA database map but they are not assigned a trinomial and lack in-depth documentation that comes from formal archaeological site documentation (Figure 6). Some of the “tickler” entries in OARRA stem from the original establishment of the SHPO database (Gilsen 2014). Beginning in 1978, the Oregon SHPO began to plot project areas and cultural resource locations onto quad maps with color codes, including publically reported site locations and information. These notations were carried over into today’s digitized OARRA database (Gilsen 2014).

Project Study Area and Archive Radius



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
 Aerial Sources: Esri, HERE, Garmin, Intermap, increment P

Figure 5. Project Study Area and Archive Radius Map

Eligibility	Eligibility Date	Site Type	Comments	Biblio#	BiblioTitle
					Sewer Project, Washington County, Oregon
Unevaluated	Null	...	original Reed Farm, cemetery & Indian sites all along creek, as per notation on original SHPO map	<u>Null</u>	Null
Unevaluated	Null	...	FARMER OWNER OF LAND LOTS OF ARROWHEADS MAJOR CAMP	<u>Null</u>	Null

Figure 6. Example of two Oregon SHPO “ticklers”.

Public Outreach and Data Collection Methods: Short Public Survey and Secondary Interviews

I fostered communication with members of the public and encouraged public contribution of information to the database through various public outreach efforts. My intention was to establish long-term professional-public relationships and increase community awareness of heritage and preservation. I used several outreach methods to refine the collection of archaeological information for my database, which included announcements at public informational meetings, the creation of a website, business cards to hand out, participation in established public outreach events, and the implementation of public surveys (see Appendix A). In December 2018, I submitted a Human Research Protection Review Forms through PSU’s Institutional Review Board (IRB) process, to protect the rights and welfare of human subjects involved in my research.

Throughout the project, I asked individuals from certain interest groups if I might make announcements explaining my project and about the creation and purpose of the database . I created and contacted a list of interest groups through participation and

interest in the PSU Archaeology Roadshow; contacting a total of nine interest groups. I used Yet Another Mail Merge (YAMM) to send and track emails to potential interest groups and individuals for this project. YAMM allows Google users to send email campaigns, where the user may personalize and track each email sent using Google sheets (YAMM Support 2018). I was able to track the number of opened emails and responses in Google spreadsheets

I also connected with other PSU graduate students with community relationships including Kelley Martinez, Martin Plumer, Amy Clearman, and Michelle North. Additionally, I staffed a booth at the 2018 and 2019 Archaeology Roadshows hosted at Portland State University and the 2018 Roadshow in Harney County, Oregon.

For my booths at the 2018 PSU and Harney County Roadshows, I provided information about my project and encouraged the public to participate by having a contact sheet to follow-up with the individuals interested in the project. At the 2019 PSU Roadshow, I had the same booth materials as the 2018 event along with short surveys available for interested individuals to take. The announcements and Roadshow booth helped me gauge public interest in, and increase the visibility of, my project; I was also able to initiate a dialogue about archaeological sites on private lands and collections in private hands with a variety of professionals and members of the public. Likewise, I established a dedicated WordPress website (archdatabasepdx.wordpress.com) and email address (archdatabasepdx@gmail.com) where members of the public could learn more about my project and contact me later.

The website home page had several postings in relation to the project, including links to other websites with related content. The website also has three sub-pages: *About the Project*, *Portland Archaeology*, and *Contact*. The *About the Project* tab allowed the website visitor to learn more about my thesis and the main objectives of the project. Links to more information about archaeology in the Portland area and in the state of Oregon were located under the *Portland Archaeology* tab. I also uploaded Oregon State Laws for Archaeological Sites FAQ sheets for website visitors to quickly learn about laws surrounding archaeology. Finally, the *Contact* tab provided an easy way to get in touch with me and to learn more about my thesis or provide input about archaeology in the Portland area.

I used two data collection methods for capturing information from individuals who reached out to me about archaeological sites on private property and collections in private hands: 1) a short public survey and 2) a secondary interview with follow-up questions (see Appendix A).

The short public survey consisted of two formats, paper and digital. The short public survey took individuals five to 15-minutes to fill out, minimizing back-and-forth correspondence and improving the likelihood of obtaining necessary attribute data for the archaeological database. I created the digital short public survey form using Google forms, which connects and populates to a designated Excel spreadsheet that mirrors the master relational database. Some questions were open ended and had to be interpreted and manually entered in the master database (see Appendix A for questions asked in

survey). I prepared a paper form of the digital survey to have available for interested individuals at in-person informational meetings.

The paper form captured the same attribute data needed for the database. I manually entered the paper form into the master database. The short public surveys formally captured information from individuals who reached out about potentially having archaeological sites or archaeological collections in their possession. A yes/no question in the short survey asks: *Would you be interested in being contacted in the future about your archaeological objects?* Based on the answer to this question, I conducted a secondary interview if individuals expressed their willingness to participate from the short survey form.

The secondary interview included follow-up questions clarifying participants' answers from the short survey including collecting more details about the archaeological materials in their possession and/or observations about archaeological sites or materials found on the informants property (see Appendix A for the specific questions). I also asked questions that were aimed at gauging public perspectives on local heritage and archaeology in general.

At the outset, it was apparent that there would be ethical challenges involved in navigating my project and the issue of professional-public collaboration. To be ready to address these, I prepared basic scripts to help me address different scenarios ethically. For example, when members of the public approached me with physical collections for donation, I directed them to the OAS Collections Program to assist with identifying curation facilities to house their collections. When members of the public approached me

to appraise collections, I politely declined to give any monetary value to the collection and directed them to the OAS Collections Program, the Oregon SHPO, and provided materials about archaeological laws in the state of Oregon. When an individual approached me about instances of looting, I provided them with information on how to get in contact with the Oregon SHPO and law enforcement entities. Lastly, when and if an individual insisted on selling archaeological material or was interacting with me in bad faith, I reserved the right to excuse myself from the interaction.

Project Assessment Methods

I assessed the effectiveness of my outreach methods in several ways. At public events, I tallied the number of individuals who interacted with me and the number of materials handed out. The numbers included the number of business cards handed out and individuals who were willing to exchange contact information. The website had a visitor statistic page including number of visitors or views to the website. Finally, the podcast generated number of listens for the specific episode I made an announcement and discussed the project. I was able to compare the tallied numbers to the number of responses received through those outreach methods. Additionally, the short public survey contained a question about how the individual or group initially heard about my project.

Field Documentation of an Archaeological Site on Private Land (Luscher Site)

In addition to the public outreach and public data collection described above, I conducted a systematic archaeological survey of the Luscher property near North Plains in Washington County, Oregon (Figures 8 and 9). The “Luscher Site”, is a possible precontact site of unknown extent reported by the property owner, Ms. Carol Luscher, to

Virginia Butler at the 2017 PSU Archaeology Roadshow (Figure 7). Ms. Luscher has lived on her property since the mid-1940s (Carol Luscher, personal communication 2018). Ms. Luscher and her husband observed various projectile points and other lithic objects near a natural spring within the southern portion of their property.

The formal investigation and recordation of archaeological resources on the Luscher property provided an opportunity for me to further develop a process for collaboration between professional archaeologists and the public. Specifically, a process or model for carrying ethical collaboration with someone who collected artifacts from their property. Principles 1, 2, and 4 of the SAA Code of Ethics specify that it is the responsibility of all archaeologists to strive for the long-term conservation and protection of the archaeological record by practicing and promoting stewardship (Pitblado 2014; SAA 1996). This includes incorporating knowledge from collectors by gathering as much information as possible about artifacts in their possession. At the same time, archaeologists should seek to educate collectors when interacting, reinforcing the importance of context when it comes to preserving the archaeological record. These principals guided my interactions with the Luscher property owner throughout the process of documenting her collection and the archaeology on her property.



Figure 7. Various artifacts observed on the Luscher Property.

Prior to the archaeological survey, I conducted background research on the Oregon SHPO OARRA database. An examination of records on file on the Oregon Archaeological Records Remote Access (OARRA) database was conducted to identify previous archaeological investigations performed in or near the Luscher Property. The OARRA database indicates that five archaeological investigations were conducted within a two-mile (3.2 kilometers) radius of the survey area and two previously archaeological sites were recorded. According to the OARRA database, no previous archaeology was conducted, or archaeological resources recorded within the boundaries of the Luscher Property. The previous archaeological investigations and previously recorded archaeological sites within the two-mile radius of the project area were conducted because of regulatory compliance. A total of four previously recorded sites in the area include three historical and one precontact site.

Adding the publicly reported Luscher site and knowledge of the private collection expands upon the archaeological knowledge of the area. This form of engagement shows a viable avenue for public archaeology (Wright 2015). From a practical standpoint, conducting a formal archaeological investigation while collaborating with the landowner provides better stewardship of the site. As the residents will be the ones responsible for its protection and preservation once the professional leaves the site (Wright 2015). Leaving stewardship as another key benefit by connecting landowners or the resident community through place attachment, which further links them to the archaeological record of past people (Wright 2015).

In December 2018, before submitting the research design for the permit, I presented, in-person, a draft research design for the Luscher Property to cultural staff from the Confederated Tribes of Grand Ronde. This presentation afforded me the opportunity to actively involve interested parties early in the planning stages of the research design and overall involvement for my thesis project. Staff members gave valuable input and provided concerns about the research design and project. I incorporated all their comments into the research design, including using 1/8-inch mesh hardware rather than the Oregon standard of 1/4-inch for exploratory shovel probes. I also addressed language terminating the excavation of a shovel test probe and generating dialogue for future next steps of working with the landowner's collection (Christopher Bailey, Jessica Curteman, and Briece Edwards, personal communication 2018).

During the application process for the Oregon Archaeology Excavation permit, the Siletz Tribe of Indians and the Confederated Tribes of Warm Springs were consulted.

We received comments from the Confederated Tribes of Warm Springs to provide a draft copy of the report and contact their office if any suspected funerary items or items of cultural patrimony are encountered during testing.

Throughout all stages of the research design, I had regular follow-up calls and in-person meetings with Mrs. Luscher to learn more about her property and collaborate on the archaeological survey design. Communication with Mrs. Luscher was limited to telephone calls and in-person meetings at her home. She did not use email or cellular phones, which made communication difficult at times. Prior to the start of the archaeological surveys, I reached out to Ms. Luscher's family, via email, about participating in the archaeological field surveys and did not receive a response.

The goal of the archaeological survey of the Luscher Property was to establish the presence or absence of an archaeological site reported by a private landowner and to formally document any cultural deposits located on the Luscher Property. The systematic archaeological survey, included a pedestrian survey and shovel test probes (STPs) on the Luscher Property with graduate students from PSU and interested volunteers, accompanied by the property owner (Carol Luscher), and Tribal participants from the Confederated Tribes of Grand Ronde (see Appendix B for the final technical report and detailed methods and results of the fieldwork). The archaeological survey of the site was performed in accordance with Oregon State Historic Preservation Office guidelines for conducting field archaeology in Oregon (Oregon SHPO 2015, revised 2016). The archaeological survey area was treated as though a known site existed in the area. Oregon State Law (ORS 358.905-955, 390.235, OAR 051-360-080 to 090) requires that all field

investigations of known archaeological sites on private land have an archaeological permit. As such, I obtained a State of Oregon Archaeological Permit (Archaeological Excavation Permit No. AP-2613) for the fieldwork.

The fieldwork component of my thesis project took nearly 40 hours to set up; this included coordination with the landowner, field equipment organization, and solicitation and organization of field volunteers. A total of 13 volunteers (all who work as professional archaeologists), one representative from the Confederated Tribes of Grand Ronde, and Ms. Luscher (the landowner) accompanied me for the archaeological surveys on April 4 and 5, 2019. I knew all the volunteers through prior professional relations. When I spoke about my project to colleagues and fellow graduate students, they offered to help with the field survey. This eliminated training time for the archaeological survey component of my project, as all the volunteers had prior archaeological survey experience. A coordination email with a Doodle poll link asking availability for planned survey dates went out to everyone who expressed interest in volunteering for the fieldwork. The Doodle poll gave me a clear snapshot of the interested volunteers availability. I compiled all the responses and sent a follow-up email with the fieldwork schedule, who was volunteering for which day, and gear needed to help with the archaeological survey. I also emailed the research design to all the volunteers and conducted a tailgate meeting on the archaeological survey days to give context about the project, while establishing expectations for the day.

Chapter 4 offers a summary of the coordination efforts for the archaeological survey and a brief description of the fieldwork results. Refer to the technical report

(Appendix B) for further discussion and analysis of the field and collection findings. I discuss the coordination efforts with professionals as volunteers for the fieldwork component in Chapter 5.

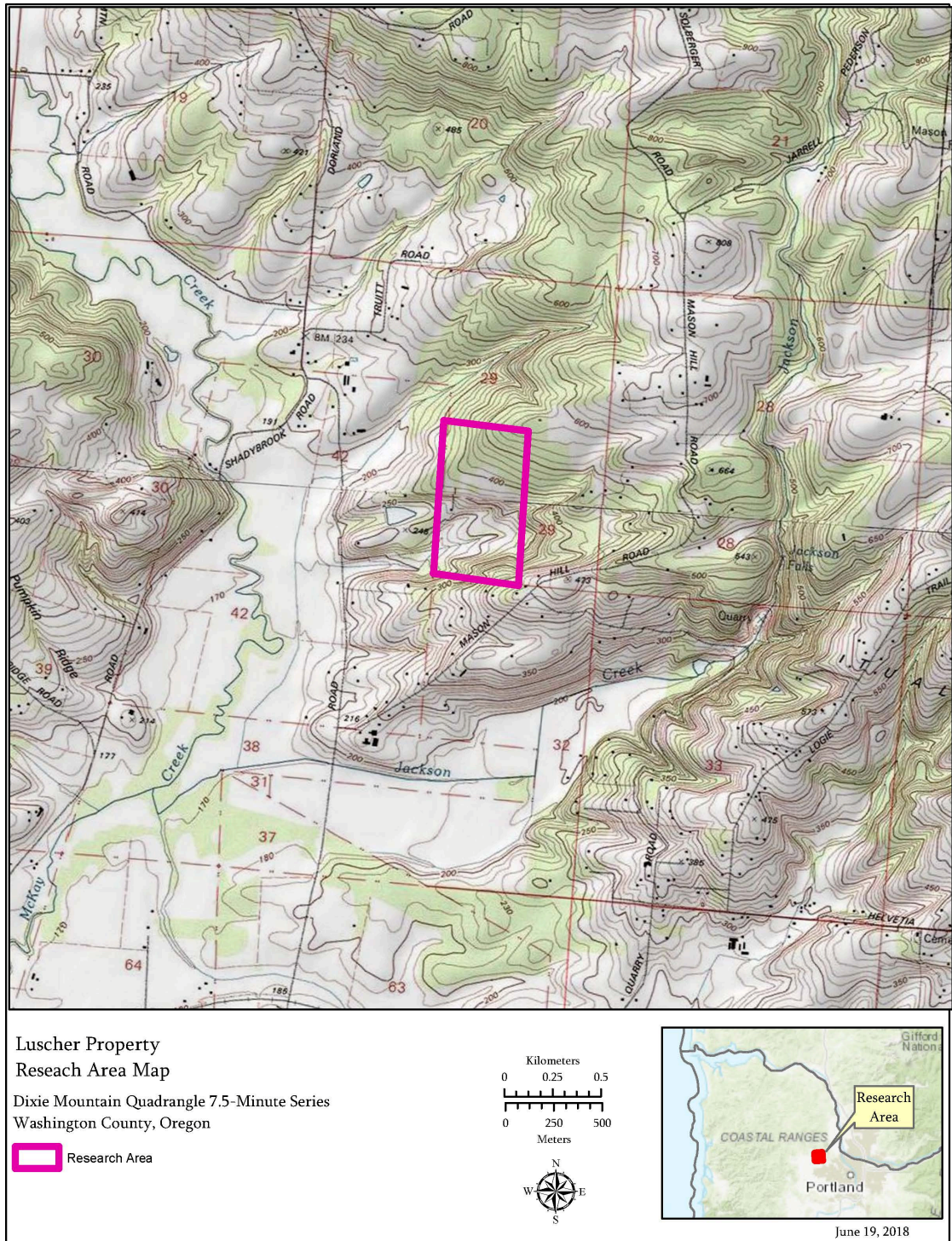


Figure 8. Research Area Location (Luscher Property) Dixie Mountain USGS Quadrangle 7.5-Minute Map.

Chapter 4. Results

This chapter describes the results of my project, including database entries and archive research. The chapter also presents the outcomes of the public outreach efforts and findings from the formal archaeological survey of the Luscher Property.

Database and Archival Research Results

After creating the database in Excel, I had a total of 17 initial entries to enter into the database: 12 OARRA entries, four reported collections, and one potential archaeological site reported on private property (Figure 9).

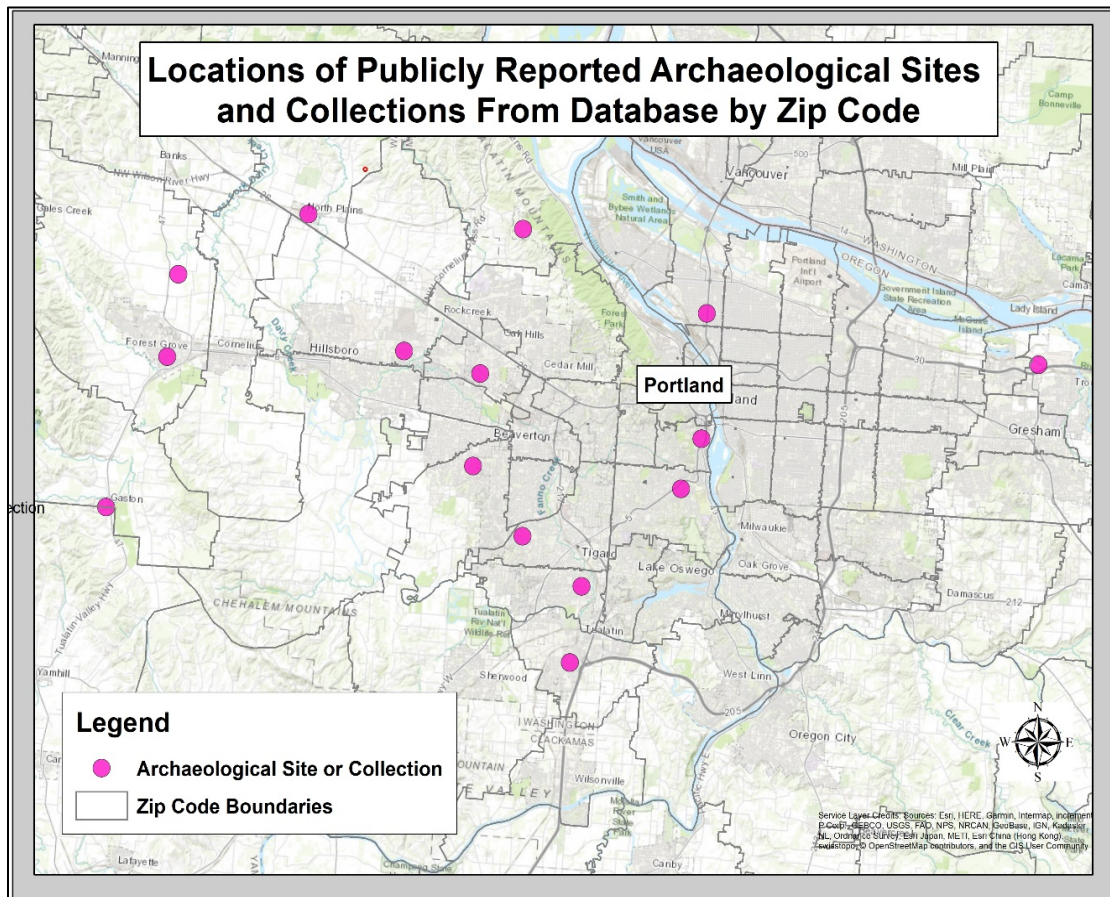


Figure 9. Map showing approximate locations of publicly reported archaeological sites and private collections entered in the database.

Of the four collections that I entered in the database, three were identified by my initial short public survey and one collection was identified through personal communication with a collector. Personal communication was established with several other collectors prior to the IRB approval process, however, all declined to respond to the Google short survey once I received IRB approval of the survey. I did not enter pre-IRB approval information into the database, as the pre-IRB data collection method did not meet the parameters of the approved IRB research design.

Public Outreach

I attended a total of seven events including four public events, two archaeological conferences, and one historical society meeting to promote my project (Table 2). For the purposes of this project, I chose to count responses as either people who followed-up with me after the event, and/or individuals who took my short survey, and/or individuals who provided me with contact cards. Since I did not have IRB approval for my project until December 2018, I was unable to hand out short surveys or collect information about potential collections or archaeological sites from the public at several events I attended, including the Washington County Museum Historical Society Roundtable, the 2018 PSU Archaeology Roadshow, and the 2018 Harney County Archaeology Roadshow.

In the summer of 2018, I presented at the Washington County Museum Historical Society Roundtable. I initially learned about the Roundtable through making an informal visit to the Museum. The Museum Director suggested I join a Historical Society Roundtable where the Museum brings together many of the historical societies in Washington County. At the Roundtable, I discussed the premise of the database I was

creating and asked attendees if they would be interested in participating in the project. I also asked if the representatives had records on-file about possible collectors or collections in Washington County.

The Roundtable event occurred prior to my project receiving IRB approval. The Roundtable event had representatives in attendance from eight historical societies: Friends of Historic Forest Grove, Garden Home History, Helvetia Community Association, North Plains Historical Society, Hillsboro Historical Society, Genealogy Society of Washington County, Cedar Mill Museum, and An American Songline. After the Roundtable meeting, I sent a follow-up email to all the representatives who were in attendance, asking them if they would like to further participate in my project once I received IRB approval. I received three responses from the follow-up emails, one from Garden Home History, one from the Helvetia Community Association, and one from Cedar Mill Museum. No short surveys or interviews were conducted with these representatives; instead, the individuals wanted to provide information about objects and cultural resources they, or their communities, were working to protect.

The Garden Home History representative requested that I investigate searching for a mammoth tooth observed in southwest Portland, which now resides with an unidentified collector. Unfortunately, this request was not in the scope of my project and I forwarded relevant information to the Garden Home History representative about the Oregon State Historic Preservation Office and contact information for the Museum of Natural and Cultural History at the University of Oregon. The Cedar Mill Museum representative offered information about other events occurring in the Cedar Mill area

and offered a potential research idea of excavating the spot of the old Cedar Mill. Finally, the representative from the Helvetia Community Association provided more sources about collections in the Tualatin Mountain area and that the Association is currently trying to preserve a Methodist Meeting House in Hillsboro, Oregon.

Out of the seven events I attended, I had the most interactions, as well as, the most informational materials taken at the 2018 and 2019 PSU Archaeology Roadshows with a total of 199 interactions at these two events. A total of 25 individuals took informational material and I received four responses. These responses came both during and after the 2018 and 2019 PSU Archaeology Roadshows. I had paper copies of the short public survey available at the 2019 PSU Archaeology Roadshow. One individual completed a short public survey at this event. No other short public surveys were completed during the 2019 PSU Archaeology Roadshow event. Also, little interaction occurred beyond the face-to-face interactions from the public events. I mostly provided ways of getting in contact with me, through the email I provided them, or website listed on the calling card. Many of the individuals who took informational materials from the public events did not follow-up after the initial interaction. The three responses I received through my presentation at the Washington County Museum Historical Society Roundtable came after I had sent out follow-up emails to members who were present at the meeting. Correspondence continued through email with the three respondents. Little interaction occurred beyond the face-to-face discussion. The success of the interactions are further discussed in Chapter 5.

Table 2. Summary of outreach efforts

Event	Season/ Year	Total Individuals Interacted	Individual Took Informational Material	Number of Surveys Handed Out	Responses
PSU Archaeology Roadshow	Summer 2018	99	15	0	3
Harney County Archaeology Roadshow	Summer 2018	45	9	0	0
Washington County Museum Historical Society Roundtable	Summer 2018	10	3	0	3
Northwest Anthropological Conference	Spring 2019	70	3	0	2
Society for American Archaeology Conference	Spring 2019	65	2	0	1
PSU Archaeology Roadshow	Summer 2019	100	10	1	1
Sauvie Island Jubilee	Summer 2019	85	0	0	0
Total		474	42	1	10

As another form of outreach, I created a website (archdatabasepdx.wordpress.com/) where members of the public or interested professionals may learn about my project. The site was viewed a total of 361 times and had a total of 117 unique visitors (Table 3) between May 2018 and January 2020. A view is a visit to a page of website and an actual visit/visitor is counted as a sequence of consecutive page views without a 30-minute break (Network Solutions 2014). A total of 90 views came through referrers, which is URL data from a web link used to direct people to a website. This website was posted on various media platforms including

Facebook, Twitter, search engines (e.g. Google, Yahoo), Firstfortvancouver.com, and Sound Cloud. No responses were received through the Contact link on the website.

As another form of outreach, I created a website (archdatabasepdx.wordpress.com/) where members of the public or interested professionals may learn about my project. The website home page had several postings in relation to the project, including links to other websites with related content. The website also has three sub-pages: *About the Project*, *Portland Archaeology*, and *Contact*. The *About the Project* tab allowed the website visitor to learn more about my thesis and the main objectives of the project. Links to more information about archaeology in the Portland area and in the state of Oregon were located under the *Portland Archaeology* tab. I also uploaded Oregon State Laws for Archaeological Sites FAQ sheets for website visitors to quickly learn about laws surrounding archaeology. Finally, the *Contact* tab provided an easy way to get in touch with me and to learn more about my thesis or provide input about archaeology in the Portland area.

Since the creation of my website in May 2018, the site was viewed a total of 361 times and had a total of 117 unique visitors (Table 3). A view is a visit to a page of website and an actual visit/visitor is counted as a sequence of consecutive page views without a 30-minute break (Network Solutions 2014). A total of 90 views came through referrers, which is URL data from a web link used to direct people to a website. This website was posted on various media platforms including Facebook, Twitter, search engines (e.g. Google, Yahoo), Firstfortvancouver.com, and Sound Cloud. No responses were received through the Contact link on the website.

Table 3. Website statistics (Archdatabasepdx.wordpress.com)

Website	2018	2019	Totals
Views	205	156	361
Visitors	73	43	117
Followers	2	0	2
Referrers	64	36	100
Responses through website	0	0	0

I was invited as a guest on the *Go-Dig-A-Hole* Podcast (Episode 57) in February 2019. *Go-Dig-A-Hole (GDAH)* is a podcast that explores all things related to archaeology with a mission to make better archaeologists and build a more inclusive archaeology (GDAH 2019). I discussed with the GDAH hosts the premise of my project and announced ways to contact me and learn more about the project. The GDAH host posted the podcast episode to SoundCloud and the episode was listened to over 600 times. A link to my website (archdatabasepdx.wordpress.com) was provided in the podcast link on SoundCloud. One website view stemmed from this outreach. This number is tallied in the referrer’s column of Table 3.

I emailed a total of nine interest groups and asked if I could make an announcement at one of their group meetings with information about my project. I contacted the Oregon Archaeological Society (OAS), the Beaver State Coin Shooters, Millennium Diggers Club, Oregon Treasure Trail Society, Travel Oregon, Friends of Family Farmers, the Geological Society of the Oregon County (GSOC), the Association of Environmental and Engineering Geologists (AEG), the Oregon Association of

Environmental Professionals, and the American Heritage Research & Preservation Society (AHRPS).

A total of four groups opened the email and two responded. GSOC positively responded to the email campaign. However, due to scheduling conflicts, I was not able to make an announcement at a monthly meeting for the interest group. No digital short surveys were given out to the interest groups because I did not receive permission from the organizational leaders to provide the short survey to members.

I initially received a positive response from the OAS about my project, specifically from the current OAS president (David Minick). As discussed in Chapter 2, the OAS has an established collections program. Several members of OAS felt that my project fits well with their efforts to assist OAS member's families and the general public in possession of archaeological collections or cultural material to identify established curation facilities for these collections. I conducted several meetings and discussions with the OAS president about where and how my project may be useful for their endeavors with private collections. I proposed establishing a booth at one of the monthly OAS General Meetings to allow members and attendees to approach me on their terms and, if they potentially have a collection, take the short survey to solicit more information for my database and project. The president presented this idea to the OAS committee, but they did not feel that it was appropriate for me to solicit information from OAS members or members of the public that may be attending the General Meetings. This concern stems from the desire to show the community that OAS does not endorse collecting in any way, shape, or form. Although I was not able to discuss my thesis project at an OAS

event, I remain on good terms with members of the OAS and still correspond with the president (David Minick) about private collections and collaborating with the public.

Public Survey Results

After establishing personal communications through public events (Table 2), and through word of mouth; I emailed a total of eight individuals with a link to take the Google form short survey and I had paper copies of the short survey available at the 2019 PSU Archaeology Roadshow. Six individuals opened the email and two clicked the link to fill the digital short public survey. One paper short survey was filled out at the 2019 PSU Archaeology Roadshow. Table 4 shows the number of short surveys filed and number of follow-up interviews conducted in accordance with the IRB.

I received a total of three short public surveys, two digital and one paper. A total of three collections were reported through the survey. The digital short surveys identified two collections: one historic and one precontact. The first historic collection was identified in North Portland. The historic collection is comprised of less than nine objects including clear milk jugs, a white marble, glass jars, and old records all found in the basement of their home. The participant heard about the project through the 2018 PSU Archaeology Roadshow and was interested in being contacted in the future about the archaeological objects. The second collection identified through the digital short public survey consists of over 50 objects related to the Meier Site (35CO5), the Sunken Village site (35MU4), and material identified on their own property. The participant heard about the project through volunteering with me on other archaeologically related projects and was interested in being contacted in the future about the archaeological objects.

The paper short public survey identified one historical collection. The historical material ranges between 31 and 50 objects, mostly of kitchenware identified from the participants backyard. The participant heard about the project after interviewing me for the *Go Dig a Hole* podcast and are interested in being contacted in the future about the objects.

Due to time constraints, I was only able to conduct two follow-up interviews. The first interview was conducted with the participant who had possible historical kitchenware in from their backyard in north Portland. I was able to tape the interview and learn more about the objects they were finding. The second follow-up interview did not come from any of the participants who filled out the short public survey. The second interview stemmed from personal communication with Carol Luscher, the landowner I collaborated with for the archaeological survey component of my project. With permission from the participant, I conducted a taped interview to use for future reference and learned about their current collection and overall knowledge about their life.

Chapter 5 further discusses the efforts needed for capturing more short public survey results for my project and future projects.

Table 4. Summary of short public survey and interviews

Surveys	Electronic	Paper
Short Public Survey	2	1
Follow-up Interviews	0	2

Luscher Site Archaeological Survey

The following provides a summary of results from the archaeological survey of the Luscher Property in this section. Please refer to the technical report (Appendix B) for further discussion and analysis for the findings of the fieldwork component of my project. Under the supervision of Dr. Shelby Anderson, I conducted a study of the research area, including background research, coordination of volunteers, and field investigations. A full record search and literature review was conducted as part of developing the research design. This included a thorough review and analysis of site inventory forms, historical maps, and literature pertaining to archaeological research conducted in the vicinity of the Luscher Property (see Appendix B - Prior Research and Previously Recorded Sites). Please refer to the report in Appendix B for an in-depth description of my field methods and results.

The archaeological survey identified three isolates in addition to the collection previously identified by the landowner. Two historical isolates were identified during the pedestrian survey (one porcelain sherd and one car bumper). One precontact isolate, a low-density lithic scatter (n=6) was identified during the subsurface testing in the southern portion of the Luscher Property.

A total of 24 shovel test probes (STPs) were excavated in the southern half of the Luscher Property, where the property owner and her husband found all archaeological material in their current collection. Of the 24 STPs, six were positive for archaeological material, including five pieces of lithic debitage and one fire modified cobble with possible use wear. Three seeds/pits were identified in one of the STPs between 60 and 70

centimeters below surface. These seeds/pits were noted due to their depth; however, no other associated archaeological material was identified in this STP.

Two successive field visits occurred on April 20, 2019 and June 16, 2019 to conduct a reconnaissance survey of the northern portion of the Luscher Property and finalize the surface recording of the two historic artifacts identified during the April 4, 2019 pedestrian survey. No archaeological material was identified during the subsequent field visits on April 20, 2019 and June 16, 2019.

After the completion of the archaeological survey, artifacts collected by Ms. Carol Luscher in the southern portion of the property were analyzed as part of the technical report. All 89 artifacts were analyzed from Mrs. Luscher's collection (summary of analysis in Appendix B).

In Chapter 5, I further discuss the results of my project including a consideration of more and less successful forms of outreach and data collection. I also discuss barriers and possible solutions to carrying out my project, and explore best practices for sustaining professional-public collaborations.



Figure 10. Luscher property site visit, August 2017. Virginia Butler, Jessica Curteman, Mrs. Carol Luscher, and family member in area where artifacts have been observed. Photo by Shelby Anderson



Figure 11. Overview of volunteers on Luscher Property. Photo by Katherine Tipton



Figure 12. Overview of the northern portion of the Luscher Property. Photo by Katherine Tipton



Figure 13. General overview of the southern portion of the Luscher Property, natural spring located to the right and possible site location to the left. Photo by Katherine Tipton

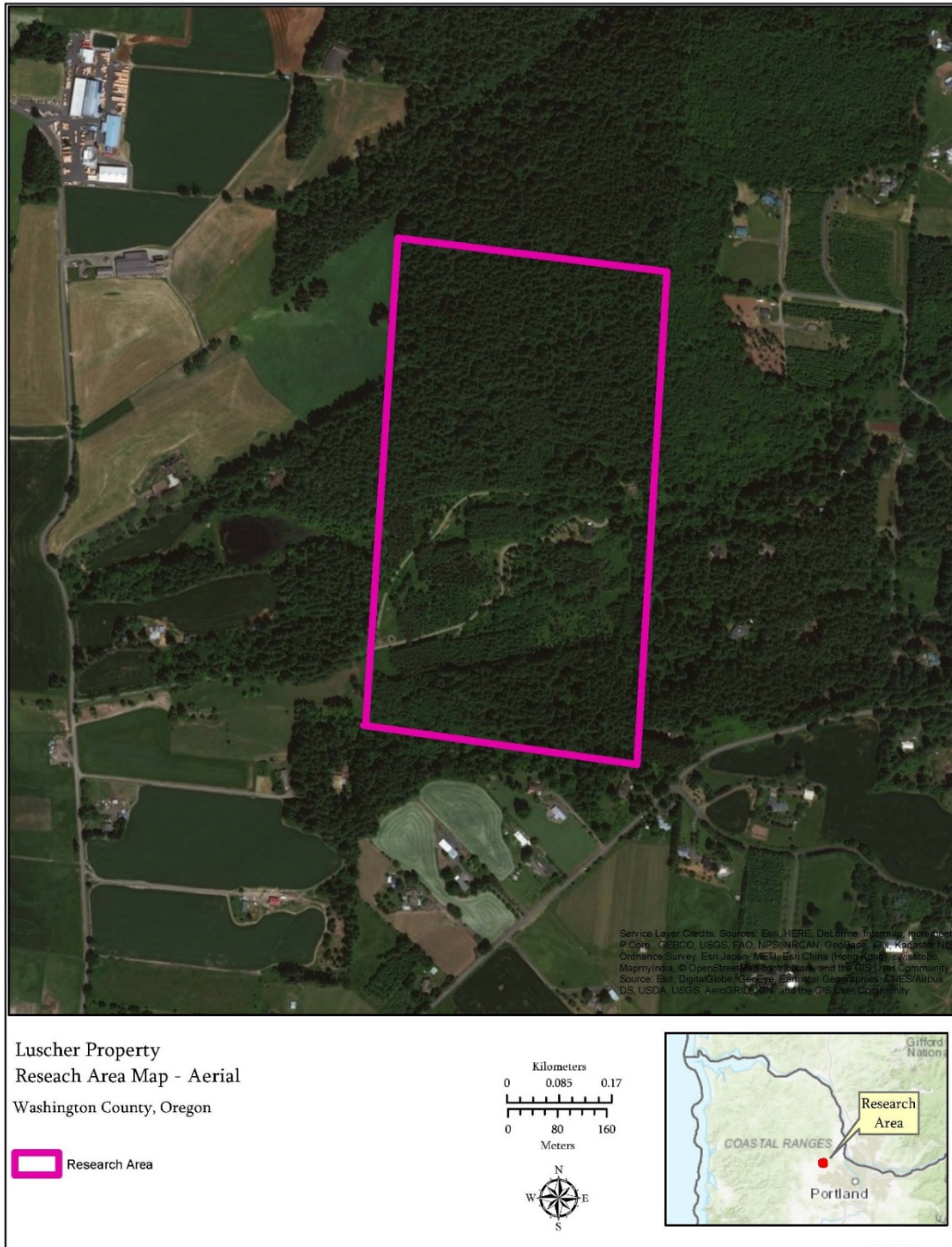


Figure 14. Aerial map of Luscher Property

Chapter 5. Discussion and Conclusion

In this chapter, I discuss the outcomes of my database development efforts, and efforts to conduct archival research for private collections. I also consider various informative interactions with professionals and the public during the outreach component of my project. I reflect on how the interactions influenced my approach to capturing information for the database and the importance of developing relationships for the success of future projects. Additionally, I consider the broader implications, topics, and observations from the results presented in Chapter 4. From my observations and interactions, I provide suggestions for improving the database and outreach process to aid future research efforts.

Populating the Database, Archival Research, and Public Outreach

I obtained 12 initial entries in the database from OARRA “ticklers”. However, it took a considerable amount of time to read through the OARRA tickler entries and consolidate them into the database. The OARRA tickler files lacked information about subsequent follow-up with informants or field verification of the potential sites. There is a need for the Oregon SHPO to revise aspects of the OARRA database to collect more information from informants from the public and track any subsequent follow-up work. Alternatively, we could pursue sharing the database with the state in the future.

I had limited success in engaging with the collector community with only three short public survey responses for the database. The low number of entries received from the public demonstrates the challenges of connecting with the public and soliciting specific information. I noticed through my conversations that collectors are wary of

working with archaeologists and vice-versa. Several instances of, “is this ethical?” and “that is a tough nut to crack” all came up in the conversations with professionals, while responses from the public and collectors included “what will happen to my property?” and “where will the collection go?”. I found that clear communication and transparency with collectors and general members of the public about the possible impact of recording a site on their property was effective at building trust. I also had low participation/limited results when reaching out to people or interest groups via email. I had the most success with face-to-face interactions and noted that it usually took multiple interactions to engage people in my project. Face-to-face interactions happened more than once, and the relationships took at least a year to form or were long-standing relationships formed through previous archaeological work in other capacities. Therefore, making time a limiting factor for the success of my project. Throughout this process, I observed that time is needed to form trusting relationships. This need for on-going interaction to form productive collaborations aligns with the practice of other successful outreach programs in the U.S. (e.g. FPAN and OKPAN).

I also discussed my project on an archaeology podcast, which was listened to over 600 times. This is a large number of individuals to have potentially learned about my project. I only received one website view through the podcast, but I found it a valuable outreach tool to use. People can listen to the podcast from the comforts of their own home, when walking, or pretty much anywhere else. The podcast was free to download and listen, and it also optimized my time by reaching out to a larger audience. However, I

still had the most success through face-to-face interactions that helped established trust for better relationships for this project.

I had several experiences over the course of the project that illustrate the importance of face-to-face interactions for establishing trust. Preliminary outreach transpired with two individuals, who I had positive initial phone calls and face-to-face interactions about their collections. Unfortunately, these individuals are not listed in the database because the interactions happened prior to IRB approval, and they did not respond in future communications for taking the digital short public survey. I can generally discuss my interactions and how it builds on the topics of trust and time related to the public surveys. Identifiers such as their names and gender will not be published to retain their anonymity. Preliminary interactions occurred with two collectors, referred to as Collector A and Collector B.

Collector A no longer resides in the Portland area; but, their three collections originate from The Dalles, Oregon, the Washington shores of the Columbia River next to the Glen Jackson Bridge (Interstate 205), and Sauvie Island. The overall collection has been handed down by their father; however, they also went out and collected these objects as a child during the 1950s and 1960s (Collector A, personal communication 2018). Knowing that selling artifacts is illegal and not wanting to have the objects sit in the attic for their children to try to sell, Collector A attempted to donate the collections to a museum. Specifically, Collector A tried to donate their collections to the Maryhill Museum in Klickitat County, Washington. The museum declined to accept the collections because they do not meet the museum's criteria for taking in the objects

(Collector A, personal communication 2018). Collector A recognizes that the objects in their possession need to go somewhere, yet after their Maryhill Museum experience, they did not know who to approach. I learned about this interaction between Collector A and Maryhill during our initial phone conversation. Wanting to learn more about their collection and wanting to help guide Collector A towards other resources, after IRB approval, I reached out to Collector A with an email. The email contained the link to the short public survey I created, along with a follow-up email with suggested contacts. I did not receive a response from Collector A after sending a follow-up email.

A second collector came forward during preliminary outreach (Collector B), who has an extensive collection of objects from the Vancouver Lake area. They also have connections to other collectors throughout the region who meet annually to share their objects. I met Collector B face-to-face to discuss the intentions of my project and show that I was a real person. At the time of our initial interaction, I did not have IRB approval or available paper copies of the short public survey. Collector B also invited me to attend an annual event that they participate in during the summer. I made it clear that I was only observing the event and that no names, photos, or questions would be asked, unless given permission. Unfortunately, at the last minute, my invitation was withdrawn. I followed up with Collector B, via telephone, after the event occurred. During that conversation, I asked Collector B if I may send them the digital short public survey to fill out. They responded positively to the idea on the phone, however, I did not receive a response to the short survey nor the follow-up email.

The interactions with Collector A and Collector B solidified that initial calls and face-to-face interactions are vital to forming trust and a positive relationship when commencing collaboration between professionals and collectors. Also, if I had IRB approval and paper copies of the short public survey available, I believe I would have been able to formally capture their collection information.

Like Collector A and Collector B, many individuals wanted to share their archaeological stories with me. Some provided oral histories where they grew up in or would share anecdotes about past people and events. Several conversations led to more questions about archaeology including what would happen if they had an archaeological site on their property. The face-to-face interactions and phone calls allowed me to immediately address questions individuals had about finding archaeological material on their property and other related questions.

Also, in-person interactions made a difference with coordinating the archaeological survey for my project. Ms. Luscher did not use email and no longer drives. I met Ms. Luscher several times in-person at her home and I would call her regularly. During these meetings, I walked through all possible survey and research options, including the curation of her collection. Transparency around curation options and other research design issues further built my relationship with Ms. Luscher.

Furthermore, I observed two time frames for the public surveys: pre-IRB approval and post-IRB approval. Also, there was a difference between using digital and paper copies of the short public survey. Firstly, my interactions changed based on whether I had IRB approval to capture information from the public for my project. An additional

challenge is that I made some initial contacts before I had IRB approval for my project. Before IRB approval, I was not able to formally hand out or capture information through the short public survey. I could exchange contact information for future follow-up. Going through the IRB approval process established a system and protocol, which allowed me to build trust over time with an individual from initial contact and not defer conversations. I initially had positive interactions with several individuals, but I did not have IRB approval or paper copies of the short surveys on-hand. I later sent digital short surveys to interested individuals; however, many did not respond to the emails with the short survey link imbedded. The public outreach component of my project shows the effort it takes for helpful and positive results when collecting information about sites on private property and collections in private hands.

Luscher Site Archaeological Survey

The archeological survey was a success, including what we learned about local archaeology and through positive relationship building with professional archaeologists volunteering for the project. The formal recordation of the Luscher Property proves that time and trust contribute to successful collaboration with private landowners and collections in private hands. The fieldwork component benefited from the active engagement from professionals in the discipline. With limited funding and time to coordinate, having an established professional network allowed for an extensive archaeological survey to be carried out with minimal costs. The two days of fieldwork with professional volunteers created a unique situation for training and fostering future collaboration.

Working with a private landowner with a collection can make a significant contribution to the archaeological record in the Portland, Oregon area. This project was able to identify a potential site dating to the early part of the Late Holocene or Merrybell Phase (3,000 to 1,500 years BP). The archaeological survey and lithic analysis are detailed in Appendix B. Collaboration with a landowner who is also a collector provides an example of a successful and meaningful way to engage professional-public collaboration in recording potential archaeological sites on private property. It further shows that meaningful engagement is possible between different invested stakeholders and will lead to better preservation of the archaeological materials, both on the property and in the Luscher Collection (Wright 2015). By including the landowner as part of the research process we were able to connect their knowledge of the land and take a step towards fostering a stewardship ethic to better ensure future protection of the site. This framework of meaningful engagement in public archaeology echoes the work conducted by Alice Wright (2015). My work provides another example of how to consciously engage with a resident community and that it is a viable avenue for public archaeology. Long after an archaeologist leaves a site, the residents are the ones responsible for its protection and preservation (Wright 2015).

The subsurface portion of the archaeological survey identified lithic material in the same area the landowner found objects in their current archaeological collection. In accordance with Oregon SHPO guidelines (SHPO 2015; updated 2016), the subsurface results considered an isolated find. By combining the knowledge from the landowner, their collection, and identifying lithic materials in the same part of the property provides

more information for the archaeological record. The collaborative field survey including the private landowner, tribal representatives, and volunteers helped create an official record for the artifacts. The archaeological survey also shows the benefits of this hands-on and active approach in public archaeology and makes a significant contribution to the archaeological record for the region.

Observations on Topics Emerging from Public Outreach

My interactions with project participants generated several topics for professional-public collaboration and collecting archaeological data in the Portland area. I feel it is important to note these topics for future research. Individuals repeatedly used the following words: ethical, trust, family relationships, reluctance, alienation, possession, doubt, challenging, and time. I believe these words relate to the topics of ethics, trust, heritage, polarization, perception, ownership, and time. Although other topics came up through my many informal conversations, these were the most prevalent. These topics echoes in other similar professional-public collaboration case studies I reviewed for my own project; including Bartoy (2012), Colwell-Chanthaphonh (2004); Hart and Chilton (2015); Hofman (1987); LaBelle (2003); Proulx (2013); Rizvi (2006); Richardson and Almansa-Sanchez (2015); Shott and Pitblado (2015), Smith (2014); Wallen (2016); Wright (2015). These professional-public collaborations cited ethical concerns, the importance of trust, establishing relationships, and the time it takes to continue collaboration efforts.

The noted topics predominately stem from my interactions with the professional community. Professional-public collaborations can go right, and they can also go very

wrong (Pitblado 2014; Wilson 2012), but I believe that the benefit of professional -public collaboration, especially with collectors, outweighed the risks. My project received hesitant reactions with regards to exploring ways of collaborating with the public, and more specifically, collectors. Many of my conversations emphasized the ethical concerns that exists within the discipline for working with collectors. It became apparent that internal dialogue, case studies, and further assessment of collaboration guidelines are needed when it comes to actively reaching out to the public and collectors.

Ethical Issues/Concerns

Ethical concerns consistently came up surrounding the creation of this type of database and led to conversations about the legal aspects of sharing archaeological site information and who had access to the database. Professionals, individual members of the public, and collectors expressed interest in the database but also raised concerns about sharing of the information and how it could propagate more collecting.

The concern of visually showing publicly reported archaeological sites continually surfaced through discussions with several entities. Including the Oregon SHPO, the Confederated Tribes of Grand Ronde, the OAS, and other professionals. Many worried that by sharing this information with the public, it would further propagate collecting in the area. Causing more harm to the already finite resources. As noted in Chapter 2, state and federal laws protect archaeological site location information (ORS 97.740-97.760; ORS 358.905-358.961; Antiquities Act of 1906; AHPA 1974; NHPA 1966). Also, I did not obtain approval through the PSU IRB process and was not given consent from the participants to share the archaeological information with the Oregon

SHPO. Requesting approval to share this kind of information with other professional entities should be considered for future collaboration projects.

Future Work

Future research should include furthering the development of the database functions and expanding outreach efforts to carry out more interviews with the public and with professionals. This will lead to more database entries and more opportunities for future collaboration

The database framework is a useful tool for consolidating information about publicly reported archaeological sites on private property and collections in private hands. Many of the OARRA “ticklers” I entered in my database did not have follow-up contact information or notations about who reported the potential archaeological site or area of historical significance. This lack of information made it difficult to possibly conduct future follow-up about the reported find. I hope that future research will consider working at the state level for a systematic and formalized way of better capturing this information.

The database would benefit from outreach activities like the archaeological survey on the Luscher Property. Conducting similar archaeological surveys and more outreach to collectors listed in the database would increase the viability of this type of database. Currently, information from the digital short surveys needs to be manually entered into the database. Future work on the database would also include creating a user-friendly interface for the public to easily input information that would go directly into the

database. This interface would have the capability to turn into an application that is able to simply capture information from the public at future outreach events.

More outreach is needed to solicit additional information for the database. Specifically, additional outreach and follow-up is needed with several interest groups identified through the project. I established a rapport with the OAS president but was not able to present the premise of my project at an OAS general meeting from my outreach efforts. As noted earlier, collecting occurred early in OAS's past, which they no longer condone. The OAS committee did not give me permission a booth at a general meeting out of fear that it would further perpetuate the idea of collecting to meeting attendees. Future presentations with the OAS committee and sharing the results of current research would help continue the relationship with OAS. Also, the project would benefit from exploring future ways to collaborate with OAS's Collections Program. Other outreach efforts would include more presentations about the results of this project. This includes presenting at meetings including the Washington County Historical Museum Roundtable. Presenting the results provides the opportunity to build upon current relationships gained through this project and continue to expand collecting information for the database.

Additional outreach is needed to conduct in-person interviews about public views, more importantly collectors' views, on archaeology and preservation. These interviews can be formal or informal if a consent form is on hand to use the answers for research purposes. Exploring collector's views through interviews may provide useful insight to different aspects of archaeology, which in turn, could help future research. Questions about what interests' collectors and the public have about archaeology and if they think

archaeology is important may establish commonalities leading to the improvement of relationships. I found simply asking to learn more about what someone has found in the past led to positive conversations and offered the opportunity to constructively talk about archaeology laws and best practices.

This is best shown from the many conversations and formal interview with the private landowner (Ms. Luscher) I collaborated with for the archaeological survey for my project. Ms. Luscher was excited to share her knowledge of her property and had many stories from growing up in the Portland area. My hope is to pass her knowledge on to the Washington County Museum to conduct an in-depth interview to learn more about the history of the area and Ms. Luscher's life. Future discussions and individuals with individuals like Ms. Luscher could pave the way for better collaboration with protecting archeological sites on private property and learning more about collections in private hands. Interviews should not be limited to just collectors and learning their views about archaeology. Conducting interviews with professionals in the discipline would also be beneficial. By looking inward and asking the same questions, we would be able to assess perceptions in professional-public collaboration better and establish a baseline for creating effective collaboration and outreach approaches, while recognizing what is needed to grow as a discipline.

Successful and sustained collaboration for my project stemmed from regular face-to-face meetings, continuous interactions at outreach events, and regular phone calls with interested participants. Outreach that fosters in-person interaction is vital to further engaging the public and allowing for effective collaboration with collectors and other

interest groups. Future successful collaborations require effective follow-through and the integration of a network involving both professionals and the public to conduct active outreach. Through regular active outreach and continuing interview efforts, we may begin to find common ground with the public and collectors alike about their interests in the past. In turn, leading to better professional-public collaborations.

Project Significance

My thesis demonstrates a systematic process for collecting and investigating information from the public about archaeological sites on private land and collections in private hands in the Portland, Oregon area. There is high interest and support for archaeology established through efforts by the PSU Archaeology Roadshow, Fort Vancouver Historic Site, and local avocational groups, such as the OAS. My project built upon the community interests established by the previously noted groups and organizations.

The database created by my project is a space to consolidate archaeological data reported by the public and can be used by other organizations in future research. The various outreach methods used for this project provides a framework for systematically collecting this information. Future successful and consistent implementation of the outreach methods includes broader collaborations between the public, Oregon SHPO, Tribal affiliations, and local avocational affiliations. The standardized outreach process and tools my project created encouraged active public engagement in the protection of archaeological sites, while increasing awareness of how archaeology applies to the concerns of collectors and the public at large. Formal archaeological investigations at the

Luscher Site provided the opportunity to put into action another form of outreach for professional-public collaboration. This effort ensured trust with a private landowner and allowed other professionals and organizations to actively engage in the outreach process.

The topics emerging from my results require more attention in future research. While the concept of professional-public collaboration is nothing new, as many are tackling the topic in various ways, the subject remains uncomfortable to talk about. As noted in the public outreach discussion, uncomfortable conversations occurred with both professionals and the public. It is apparent more conversations, no matter how uncomfortable they are, need to happen between archaeologists and collectors in the Portland area. There are many ways to approach difficult conversations, but I found it best having them face-to-face and acknowledge that many individuals engaged in conversation with good intentions. Where possible, public education, outreach, and uncomfortable conversations need to continue both at public events and professional conferences. Continually engaging in these difficult conversations will provide education not only for the public but also for professionals and students in the discipline of archaeology.

Several topics needing further discussion in future research emerged from my project including ethics, trust, heritage, polarization, perception, ownership, and time. Through my reflection on these topics, we can begin to narrow down best practices for professional-public collaboration here in the Portland area. Time establishes trust, which transforms into better ethical practices. The ambiguity lessens by eliminating polarization and altering perceptions through open dialogue about ownership and heritage.

My project shows that fostering collaboration between different entities, including collectors, can make a significant contribution to the archaeological record in the Portland, Oregon area. As I began to have varying interactions with professionals and the public, my perception and outwardly approach in the field began to change. This project has identified the efforts it takes to establish trust before collaboration may begin and that a continuously active organization is needed to maintain and improve the relationships between professionals and the public.

Collecting is nothing new in the field of archaeology and is something that has been around before the profession itself (Pitblado 2014; Shott and Pitblado 2015). My project lays the foundation for a standardized practice to actively engage the public, more specifically collectors, in archaeological research. Building from this framework will help raise the visibility of archaeology and further understanding of how it applies to the concerns of individuals, local communities, and the public at large.

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Appendix A. Surveys and Outreach Materials

Survey Informed Consent

I am Katie Tipton, a graduate student at Portland State University (PSU). I am working with Principal Investigator Dr. Shelby Anderson of PSU on an archaeology project in the Portland, Oregon area as part of the requirements for my Master of Science degree in Anthropology.

Thank you for taking time to complete this short survey. The survey will only take 5 to 10 minutes to complete. Please fill out any or all the question for the survey. Answers from this survey will be used as a portion of my thesis research. For my project, I am establishing a regional database of archaeological sites on private property and private collections with a process for professional-public archaeological research in the Portland, Oregon area. This survey will help me understand if members of the public would be willing to share location knowledge about potential archaeological sites on their property or collections in their possession. Information from this survey will be used as data for the database portion of my thesis project and will be published in a thesis research document.

Potentially having an archaeological site on your property **does not mean that your property will be taken away from you.** Having a potential archaeological site only means that future development work on your property may require cultural resources review, which could lead to state required archaeological work and permitting for your project.

You will receive no penalty or reward for choosing to participate or not in the survey. Participation is **voluntary**, and you may choose to refuse to answer any questions or withdraw at any time. For the purpose of this project, your identity and contact information will remain confidential **unless you select “yes” for being contacted in the future. If you select “yes”,** you may be contacted within a month for a follow-up interview about your answers. The researcher may also ask for permission to take photos of objects in your archaeological collection after the completion of the survey. To protect your privacy, **no** photos will be taken of you. The photos will be used for future reference of archaeological items that have been reported on from the survey.

Please select the following:

- Yes, I agree to have my objects photographed
 No, I do not agree to have my objects photographed

By filling out the survey you are agreeing to participate in this research. A copy of this consent form will be provided to you for your records. Thank you.

If you have any questions or comments about this project, please feel free to contact me at 425-343-5405 or archdatabasepdx@gmail.com. You may also contact PSU's Office of Research Integrity at hsrrc@pdx.edu or 503-725-2227 with any questions or complaints.

Copies of this consent statement are available to take for your records.

Please continue to the **Statement of Consent**

STATEMENT OF CONSENT

I have had the opportunity to read and consider the information in this form. I have asked any questions necessary to decide about my participation. I understand that I can ask additional questions throughout my participation.

I understand that by signing below, I volunteer to participate in this research. I understand that I am not waiving any legal rights. I have been provided with a copy of this consent form.

I consent to participate in this study.

_____	_____
Name of Adult Participant	Signature of Adult Participant
Date	

Researcher Signature (to be completed at time of informed consent)

I have explained the research to the participant and answered all his/her questions. I believe that he/she understands the information described in this consent form and freely consents to participate.

_____	_____
Name of Research Team Member	Signature of Research Team Member
Date	

Short Survey Formatted by Google Forms

Email address *

Your email

Name

Your answer

Phone Number

Your answer

How did you hear about the project?

Your answer

Would you be interested in being contacted in the future about your archaeological objects?

Yes

No

Archaeological Site/Collection Information

Please provide location information where items were found. (i.e. City, County and Address if applicable)

Location

Your answer

Number of Objects Found

Less than 9

10-30

31-50

Greater than 50

Description of Objects

Please provide any details that you feel best describe the objects. (i.e. Object size, color, material, and/or any other details)

A copy of your responses will be emailed to the address you provided.

Follow-Up Interview Informed Consent

You are being asked to be interviewed for this project that is being done by Katie Tipton, a graduate student at Portland State University (PSU). I am working with Principal Investigator, Dr. Shelby Anderson of PSU, on an archaeology project in the Portland, Oregon area as part of the requirements for my Master of Science degree in Anthropology.

You are being asked to participate in a follow-up interview because you selected “yes” about being contacted in the future about your archaeological objects.

This form will explain the research project and time it will take for the follow-up interview. If you have any questions before taking part in the interview, please ask me.

Participation in this follow-up interview will take between a half hour to an hour. I will ask you questions about where you currently live and where you have previously lived in the Portland, Oregon area. I will ask you questions about your archaeological objects, including size, color, type, and where you observed the object. I will also ask you about your interest in archaeology and whether you feel archaeology is important.

For my project, I am establishing a regional database of archaeological sites on private property and private collections with a process for professional-public archaeological research in the Portland, Oregon area. This interview will help me understand and follow-up on questions you answered in a previous survey. This interview will allow me to understand if members of the public would be willing to share location knowledge about potential archaeological sites on their property or collections in their possession. Information from this interview will be used as data for the database and analysis portion of my thesis project. This data will be published in a thesis research document.

Potentially having an archaeological site on your property or archaeological objects in your possession **does not mean that your property or the objects will be taken away from you.** Having a potential archaeological site only means that future development work on your property may require cultural resources review, which could lead to state required archaeological work and permitting for your project.

You will receive no penalty or reward for choosing to participate or not in the survey. Participation is **voluntary**, and you may choose to refuse to answer any questions or withdraw at any time. The researcher may also ask for permission to take photos of objects in your archaeological collection after the completion of the follow-up interview.

To protect your privacy, **no** photos will be taken of you. The photos will be used for future reference of archaeological items that have been reported on from the interview.

Please initial:

Yes, I agree to have my objects photographed

No, I do not agree to have my objects photographed

By answering questions during the follow-up interview, you are agreeing to participate in this research. A copy of this consent form will be provided to you for your records.

Thank you.

If you have any questions or comments about this project, please feel free to contact me at 425-343-5405 or archdatabasepdx@gmail.com. You may also contact PSU's Office of Research Integrity at hsrrc@pdx.edu or 503-725-2227 with any questions or complaints.

Copies of this consent statement are available to take for your records.

Please continue to the **Statement of Consent**

STATEMENT OF CONSENT

I have had the opportunity to read and consider the information in this form. I have asked any questions necessary to decide about my participation. I understand that I can ask additional questions throughout my participation.

I understand that by signing below, I volunteer to participate in this research. I understand that I am not waiving any legal rights. I have been provided with a copy of this consent form.

I consent to participate in this study.

Name of Adult Participant

Signature of Adult Participant

Date

Researcher Signature (to be completed at time of informed consent)

I have explained the research to the participant and answered all his/her questions. I believe that he/she understands the information described in this consent form and freely consents to participate.

Name of Research Team Member

Signature of Research Team Member

Date

Secondary Interview Follow-up Questions

Identifying questions:

Email, Name, Phone Number

How long have you lived at your present address?

Do you currently live in Multnomah or Washington County, Oregon?

If not, when did you live in Multnomah or Washington County?

Are there any other parts of Oregon that you have lived in?

How did you hear about the project?

Archaeological Site/Collection Information

Location – short answer

Number of objects found

Less than 9

10 to 30

31 to 50

Greater than 50

Description of objects (please provide any details that you feel best describe the objects (i.e. Object size, color, material, and/or any other details)

Please tell me about any artifacts that you or your family have discovered on your property or in the Portland area.

Do you have any artifacts and/or photos related to archaeology that you would like to share with me?

How would you feel about the possibility of having an archaeological site on your property?

What interests you about archaeology?

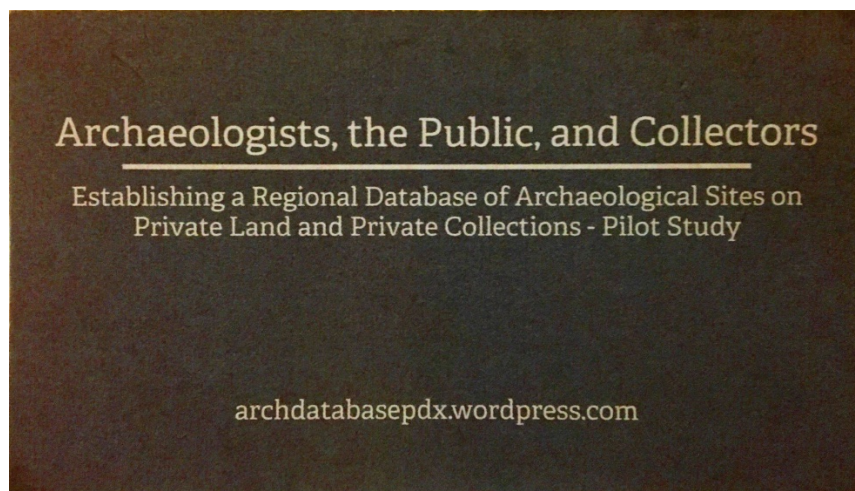
Do you think archaeology is important?

Would you be interested in being contacted in the future about your archaeological objects?

Calling Card



Front of Calling Card



Back of Calling Card

Email Template

Hello,

My name is Katie Tipton and I am a M.S. candidate at Portland University who is developing a thesis project centered around public archaeology and working with private collectors along with individuals who may have archaeological sites on private land.

Just a little about my project: I am developing a database and process that will collect and organize publicly reported site information, including private artifact collections in and from the Portland area. The database would serve as another place for the public to report archaeological information and in the future the data would be shared with other entities. In the long term, we hope to expand our shared understanding of the Portland area's archaeological record and working together to preserve local heritage. Our goal is to collect information about sites and collections on private land/in private hands, to build professional-public relationships when it comes to archaeology, and to also further collaboration with the public about protecting local heritage.

I would appreciate the opportunity to hear more about your collection and send you a quick survey to learn more about the objects. This is a great chance to work with the public about archaeology and I am excited to hear about your experiences!

Looking forward to hearing from you soon.

Thank you!

Katie

Announcement Script for Presentations

Hello,

My name is Katie Tipton and I am a M.S. candidate at Portland State University who is developing a thesis project centered around public archaeology and working with private collectors along with individuals who may have archaeological sites on private land.

The title of my project is: Archaeologists, the Public, and Collectors: Establishing a Regional Database of Archaeological Sites on Private Land and Collections with a Process for Professional-Public Archaeological Research in the Portland Area

Just a little about my project:

I am developing a database and process that will collect and organize publicly reported site information, including private artifact collections in and from the Portland area. The database would serve as another place for the public to report archaeological information and in the future the data would be shared with other entities. In the long term, we hope to expand our shared understanding of the Portland area's archaeological record and working together to preserve local heritage. Our goal is to collect information about sites and collections on private land/in private hands, to build professional-public relationships when it comes to archaeology, and to also further collaboration with the public about protecting local heritage.

I would appreciate the opportunity to hear more about any of your collections and/or potential archaeological sites.

Please let me know if you are interested in participating in the project. I have calling cards with information to contact me about the project. This is a great chance to work with you all about archaeology and I am excited to hear about your experiences!

**Appendix B. Archaeological Survey of the Luscher Property Washington County,
Oregon**

**ARCHAEOLOGICAL SURVEY OF THE LUSCHER PROPERTY
WASHINGTON COUNTY, OREGON**

Prepared by

Katherine L. Tipton, B.A. (M.S. Cand)
Portland State University

Principal Investigator: Shelby Anderson, PhD
Associate Professor
Portland State University

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Introduction

A component of the public outreach and engagement portion of Katherine L. Tipton's Portland State University (PSU) thesis project includes the investigation of the Luscher Property, located near North Plains in Washington County, Oregon (Figures 1 and 2). Tipton, and project PI, Shelby Anderson (PSU Archaeology Faculty) developed a plan to work with the property owner to conduct a systematic archaeological survey, including an intensive pedestrian survey and subsurface testing on the property. The project is an inventory survey meant to identify the presence or absence of archaeological resources on the property and formally delineate the reported archaeological site.

This report details the effort to identify archaeological material and the results of fieldwork on the Luscher Property as defined under Oregon Archeological Permit No. 2613.

Regulatory Context

Under Oregon State Law (ORS 97.740, ORS 358.905-358.961, ORS 390.235, OAR 736-051-0090) significant archaeological sites on all non-federal public (state, county, city) and on private lands are protected. Archaeological sites located on private land are owned by the landowner and the land cannot be taken away from the owner. Artifacts identified from a site on private property are also the property of the landowner, with the exemption of Native American human remains, burials, funerary objects, sacred objects, and objects of cultural patrimony (ORS 97.740).

For items covered under ORS 97.740, prior to delivering the artifacts to the museum or landowner, if the collection is of Native American origin the tribes retain the right to review the collection within a 30-day review period. This period begins upon the receipt of the final report.

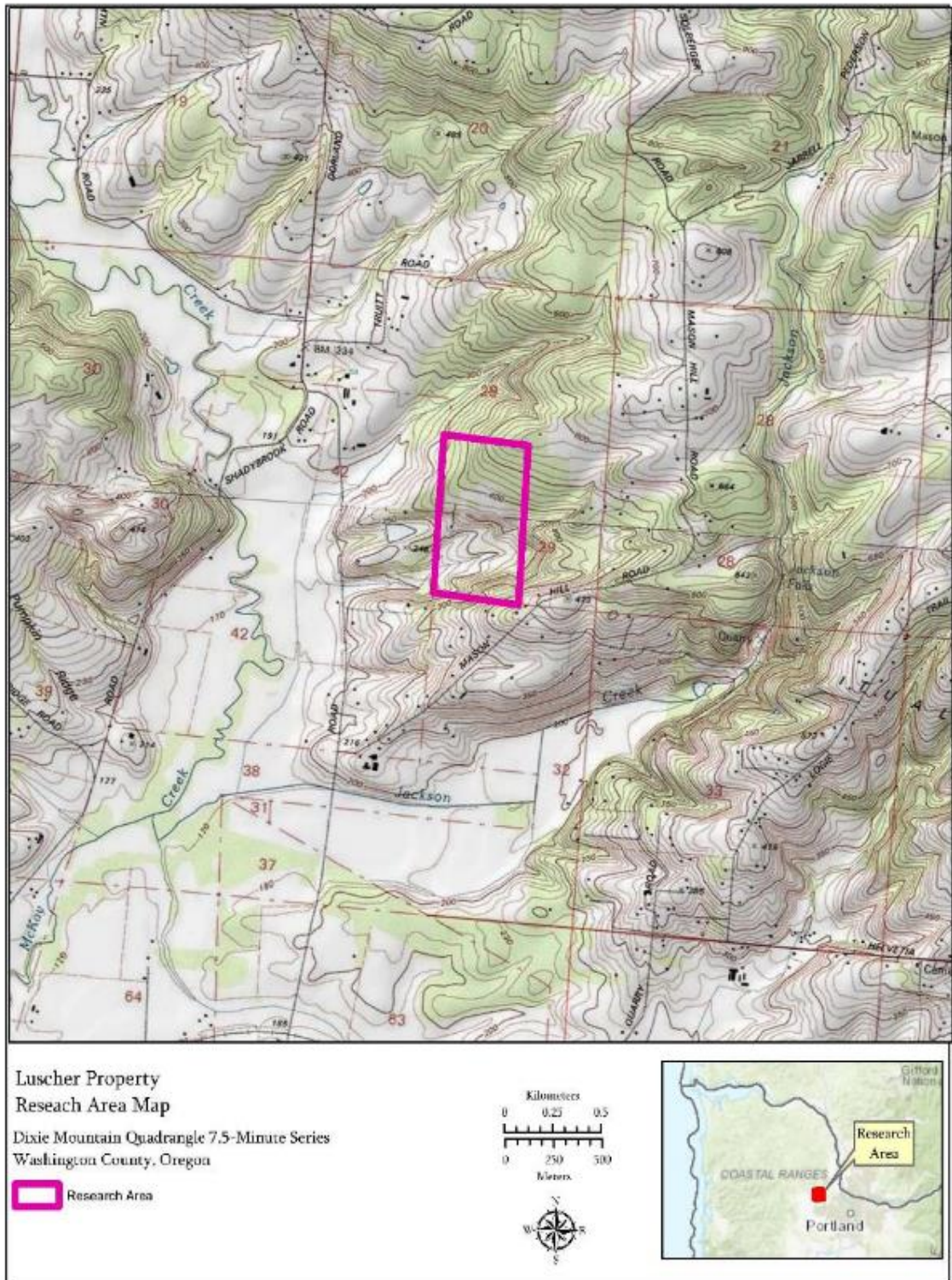


Figure 15: Research Area Map (Luscher Property) Dixie Mountain USGS 7.5 Minute Quadrangle.

Survey Area (Luscher Property)

The survey area is in the southwest quadrant of Section 29, Township 02 North, Range 02 West, of the Dixie Mountain USGS 7.5' Quadrangle Map, Willamette Meridian (Figures 1 and 2). The research area consists of a small drainage with a terrace in the southern portion that is situated to the south of an unnamed creek, which is a tributary of McKay Creek.

Ms. Luscher brought the site to the attention of Dr. Virginia Butler at the 2017 Archaeology Roadshow. The Luscher family was interested in having the site documented before the property is sold in the coming years. Investigation of the Luscher site is an excellent opportunity to develop a process for professional-public collaboration regarding archaeological site recordation on private property. Also, the Luscher site presented the opportunity to formally document a potential multi-component site in an under-investigated area in Washington County, Oregon (Figure 3).



Figure 17: Meeting with Ms. Luscher (far right) and family member about potential archaeological site in Summer 2017. Photo by Shelby Anderson

Environmental Setting

The project area lies within the northeastern portion of the Tualatin Basin, generally defined as the drainage basin of the Tualatin River (Figure 1). The Tualatin River begins in the Tillamook State Forest of Washington County and flows eastward to its confluence with the Willamette River near West Linn in Clackamas County. The Tualatin Basin is bound to the north and east by the Tualatin Mountains, to the west by the Coast Range, and to the south by the Chehalem Mountains (Baldwin 1981; Tisdale and Held 2011).

The Tualatin Basin is in the northern portion of the Willamette Valley physiographic province. The Willamette Valley province is characterized by long alluvial plains with rolling hills. The Willamette Valley extends approximately 124 miles (199.5 km) north to south and 19 to 31 miles (30.5 to 49.8 km) east to west. The Coast Range bounds the valley to the west and the Cascade Mountains to the east. The elevation in the valley floor increases gradually from north to south; the northern end is nearly at sea level and the southern end at 720 feet (219.4 meters) (Franklin and Dyrness 1988). Formed as part of the underwater continental shelf, the Willamette Valley floor became exposed when sea levels dropped. The Missoula (Bretz) Floods shaped the current morphology of the Willamette Valley. The Missoula Floods were a series of large-scale Pleistocene floods that occurred when a large ice dam holding back a glacial lake broke, located in what is now western Montana. The floods occurred for an unknown number of intervals from approximately 15,500 years ago until 2,500 years ago (Baldwin 1981; Franklin and Dyrness 1988).

The immediate vicinity of the project area consists of rolling hills, which are the foothills of the Tualatin Mountains. These mountains separate the Tualatin Basin from the Columbia River Valley to the northeast. The geology of the area consists of two different major assemblages. The older of these assemblages is a complex of sediments and basalt lava flows that formed on the Pacific Ocean floor. The younger assemblage is comprised of large basalt lava flows. According to Alt and Hyndman (1998:74) these basalt flows may be western extent of the Columbia lava plateau. The basalt identified in the Tualatin Basin are the same age as the basalt flows located at the Oregon coast. The basalt lava flows erupted during the late Miocene when Oregon had a wet, tropical climate.

The National Resource Conservation Service (NRCS) identifies Saum series soil within the project area. These are well-drained soils that formed in mixed eolian material, old alluvium, and residuum from basalt uplands (Green 1982). A representative profile of this soil contains a surface layer that is dark reddish-brown silt loam and silty clay loam to approximately 14-inches (35.5 centimeters). The subsoil consists of a dark reddish-brown and reddish-brown silty clay loam that is about 18-inches (46 centimeters) thick. The substratum is usually a yellowish-red silty clay loam around 18-inches (46 centimeters) thick and a basalt bedrock is at a depth of 50-inches (127 centimeters) (Green 1982).

Regional vegetation is characterized by the Western hemlock (*Tsuga heterohpylia*) zone, with a wet, mild, maritime climate. Species dominating the Western hemlock zone include Douglas-fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*), and western redcedar (*Thuja plicata*). The understory includes salal (*Gaultheria shallon*), Oregon grape (*Mahonia aquifolium*), vine maple (*Acer circinatum*), and various ferns (Franklin and Dyrness 1973). Common Willamette Valley faunal species that may also be seen in the project area include Roosevelt elk (*Cervus elaphus roosevelti*), Columbian black-tailed deer (*Odocoileus hemionus*), Oregon white-tailed deer (*Odocoileus virginianus leucurus*), American black bear (*Urus americanus*), coyote (*Canis latrans*), beaver (*Castor Canadensis*), various fox species (*Vulpes* sp.), rabbit (Leporidae), gopher (*Geomysidae*), and squirrel (*Sciuridae*) (Alden and Paulson 1998). Native fish species in the waterways include salmonid species (Salmonidae), Pacific lamprey (*Lampetra tridentate*), sucker (Catostomidae), and various types of minnows (Cyprinidae) (Alden and Paulson 1998).

The project area is located on an unnamed tributary in the northern part of the Tualatin Basin. The unnamed tributary is part of the Dairy-MacKay Watershed (Tualatin Soil and Water Conservation District 2020). The Dairy-McKay Watershed is the largest watershed contributing to the Tualatin River. Previously, the watershed was comprised of dense strands of forest interspersed with prairies. Today, forestry and agricultural activities accounts for nearly 40 percent of the watershed area (Tualatin Soil and Water Conservation District 2020).

Cultural Setting

Archaeological Overview

The Tualatin Basin is at the northern extent of the Willamette Valley culture area, which shares its borders with each of the other major archaeological regions of Oregon (Figure 4) (Aikens 2011). The Tualatin Basin shares its northern border with the Portland Basin, which is part of the larger Coast and Lower Columbia Culture area. The Portland Basin is located approximately five miles (9 kilometers) north-northeast of the current project area. Richard M. Pettigrew (1981) initially established the precontact culture sequence of the Portland Basin; Pettigrew's work was further developed by Kenneth Ames in the *Archaeological Context Statement: Portland Basin* (Ames 1992). For the purposes of this report, the archaeological overview centers on cultural developments in the Willamette Valley while keeping in mind the proximity of the project area to the Portland Basin.

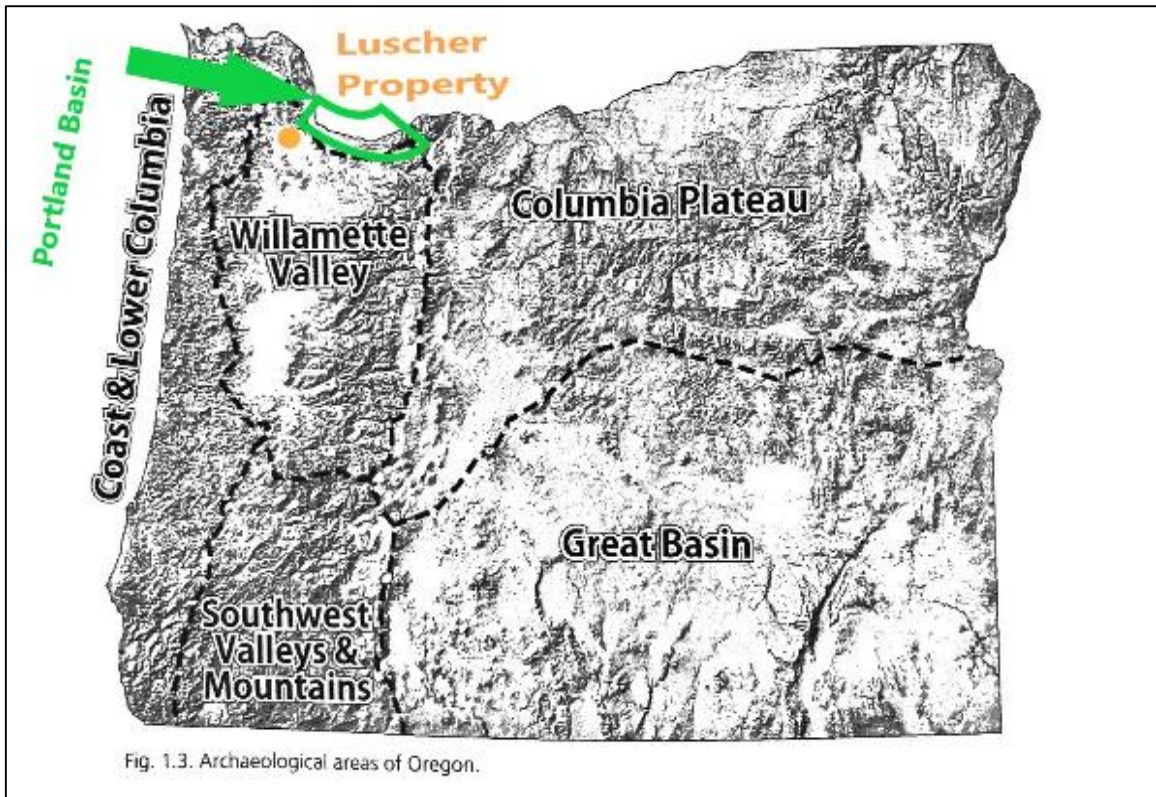


Figure 18: Map showing location of Luscher Property in relevance to the archaeological areas of Oregon. Redrawn from Fig. 1.3 *Oregon Archaeology* (Aikens 2011:24).

The archaeology of the Willamette Valley is typically divided into five phases: Terminal Pleistocene/Early Holocene (approximately 13,000 to 7,500 years Before Present [BP]), Middle Holocene (7,500 to 3,000 years BP), Late Holocene (3,000 to 250 years BP) (Aikens et al. 2011), the Contact Period (250 years BP), and Historic Period (250 to 50 years BP). The *Ethnographic Background* section further discusses Contact (250 years BP) and Historic Period (250 to 50 years BP) (Figure 5).

AGE (YEARS B.P.)	AMES (1991) NORTHWEST	PETTIGREW (1990) PORTLAND BASIN
0	MODERN	MULTNOMAH 3
500	LATE PACIFIC	MULTNOMAH 2
1000		MULTNOMAH
1500		1
2000	MIDDLE PACIFIC	MERRYBELL
2500		
3000		
3500	EARLY PACIFIC	
4000		
4500		
5000		
5500		
6000		
6500		
7000		
7500		
8000		
8500		
9000		
9500		
10000		
10500	PALEO-INDIAN	
11000		
11500		

Figure 19: Regional Chronologies. Reproduced from Figure 4 in *Archaeological Context Statement Portland Basin* (Ames 1992).

Terminal Pleistocene/Early Holocene (13,000 to 7,500 BP)

Several Willamette Valley sites have produced post-11,000 BP radiocarbon dates, dating to the Early Holocene, or Archaic, period. Early Holocene sites include Cascadia Cave (35LIN11), a rockshelter located on the north bank of the South Santiam River, and several sites along the Long Tom River basin. The higher portions of Sauvie Island contained artifacts that may date to the Early Holocene; however, they currently reside in private collections (Ames 1992).

Archaeological information for the Willamette Valley is relatively sparse, with no firmly dated sites predating 10,000 to 11,000 BP (Aikens et al. 2011). However, two lanceolate

points observed with mammoth bones in the wall of a drainage slough near the Calapooia River suggest that the region was occupied prior to 10,000-11,000 BP (Aikens et al. 2011; Laughlin 1941). The Willamette Valley and surrounding areas have a long history of flooding that may have buried early archaeological sites at depths greater than five feet (1.5 meters) (Aikens et al. 2011: 290), making detection of deeply buried Terminal Pleistocene sites difficult.

Diagnostic artifacts from this period include lanceolate points (Windust), leaf shaped, lanceolate points (Cascade), and broad necked side and corner notched points. Two sites dating to the Early Holocene in the Portland Basin (35CL96 and 35MU59) have produced stemmed and shoulder points. Higher elevated parts of Sauvie Island contained materials which may date from this time however, they currently reside in private collections (Ames 1992).

The Western Stemmed Tradition (WST) is one of the earliest well dated and widespread technologies in the Willamette Valley (Ames 2000; Beck and Jones 2010; Brown 2016). Analysis of WST sites by Gilmour et al. (2016) gives a conservative estimate of WST starting as early 12,750 to 11,000 calibrated years Before Present (cal BP) (Brown 2016). Other diagnostic artifacts from this period include lanceolate points (Windust), leaf shaped lanceolate points (Cascade), and broad necked side and corner notched points. Two sites dating to the Early Holocene in the Portland Basin (35CL96 and 35MU59) have produced stemmed and shoulder points.

Work at Cascadia Cave produces a large artifact assemblage of over a hundred Cascade type projectile points, which are willow-leaf shaped points made on large flakes that often retain the flake's original striking platform at the point base (Aikens et al. 2011: 293). Scrapers, large ovate knives, drills, and groundstone tools suggests hide processing and woodworking tasks were taking place at this site during the Early Holocene. Other similar sites with comparable assemblages, including Cascade points, are known from the uplands of the Western Cascades including the Geertz (35CL1), Ripple (35CL55), and Blitz (35LIN147) sites. Plant grinding artifacts and camas oven sites in the Willamette Valley provides evidence of the reliance on plants and plant processing around 11,000 BP (Aikens et al. 2011).

Middle Holocene (7,500 to 3,000 years BP)

The archaeology of the Middle Holocene in the central and upper Willamette Valley is known from excavations along Mill Creek and on the Long Tom River (Aikens et al. 2011). Early radiocarbon dates for the southern (Oregon) portion of the Portland Basin are from charcoal samples at 35MU9 (Merrybell) on Sauvie Island. Sites dating to the Middle Holocene in the Willamette Valley include Benjamin (35LA41,-42), Calapooia Midden (35LIN468), Chalker (35LA420), Hurd (35LA44), Lingo (35LA29), Lynch (35LIN36), Flanagan (35LA218), and Mill Creek (35MA7, -9, -64, -65) (Aikens et al. 2011).

Semi to full sedentism developed during the Middle Holocene Pacific Period in the Pacific Northwest, including in the Portland Basin. Mobility decreased, and there is evidence of substantial winter residences and storage facilities throughout the Pacific Northwest emerges in the Middle Holocene (Aikens et al. 2011; Ames 1992). These residential sites were separated by considerable distances and the residential sites have evidence a wide variety of procurement and processing of foods and other resources (Aikens et al. 2011).

Although Willamette Valley sites representing this time show no confirmed indications of storage pits, the scale of food processing during this time is consistent with broader regional patterns.

In other parts of the Pacific Northwest, Middle Holocene evidence includes food processing oven features with an abundance of charred camas bulbs and occasionally charred hazelnuts and acorns. These features suggest the importance of baking camas and drying nuts during this time (Aikens et al. 2011). Low frequencies of lithic debitage and groundstone tools are present. Lithic artifacts associated with this phase include moderately heavy, stemmed projectile points and fewer heavy stemless projectile points. Specifically, projectile points identified during this phase tend to be larger, leaf-shaped points, along with large stemmed and sporadic occurrences of side-notched points. Side-notched points indicate the possible use of atlatl tip darts (Aikens et al. 2011).

Late Holocene (3,000 to 250 years BP)

The number and distribution of sites dated to the Late Holocene (3,000 to 250 years BP) indicate a higher density of established residential settlements. Mound sites in the Willamette Valley reflects an increased residential pattern (Aikens et al. 2011). Western Cascade sites (eastern edge of the Willamette Valley), show continued use of higher elevation and upland areas of the valley. Central activities in upland areas included hunting, the procurement and processing of tool stone material, and harvesting and processing huckleberries among other vegetal resources. Higher elevation sites between 3,600 and 5,200 feet are associated with productive upland meadows and huckleberry patches (Aikens et al. 2011).

Increase in intensive land management accompanies increasing sedentism in the Willamette Valley. Charcoal amounts increase around 3,500 years BP in the archaeological record and suggests higher fire frequency and lower fire intensity (Aikens et al. 2011; Walsh 2008). Identified as primarily grass and herbaceous plants, the charcoal indicates a pattern of low intensity controlled burning which reflects a system of fire management across the landscape. In addition, controlled burns maintained and expanded higher elevation meadows and huckleberry patches.

The Late Holocene sees a relatively greater number of projectile points, consistent with a broader pattern seen throughout the Willamette Valley (Aikens et al. 2011; Pettigrew 1981). Pettigrew (1980) suggests an increase in obsidian use at later sites corresponding

with the introduction of the bow and arrow approximately 1,500 to 2,000 years BP (Aikens et al. 2011). Obsidian available in the Willamette Valley occurs as pebble-size nodules in the Willamette River, causing limited use for producing dart tips. Assemblages representing the Late Holocene includes knives scrapers, graters, drills, cobble choppers, hammerstones, anvils, mortars, and pestles. According to the Portland Basin Chronology, major diagnostic features of the Late Pacific/Multnomah Phase include smaller, narrow-necked point types, end scrapers, Mule-ear knives, self-handled heavy percussors, clay figurines, and incised clay tablets.

Ethnography

The Willamette Valley Kalapuyan populations are poorly represented in the ethnographic record, especially central and southern groups (Aikens et al. 2011). Epidemics prior to Euro-American settlement in the early to mid-1800s caused a catastrophic decline in population (Zenk 1990), with an estimated 80 to 90-percent of Kalapuyans perishing between 1770 and 1840. Formal ethnographic information was not collected until after most Kalapuyan peoples were moved to the Grand Ronde Reservation and those interviewed were Tualatin Kalapuyan, traditionally a northern Kalapuyan group (Mackey 1974; Zenk 1990).

Approximately 250 years ago, at the time of contact the Kalapuya (Zenk 1990) occupied the Willamette Valley and as far north in the Tualatin Hills. The research area is situated on lands used by the Tualatin band of the Kalapuya and it is suggested that dialect communities were associated with tributary drainages of the Willamette River and several river names reflect these community identities, such as the Tualatin, Yamhill, Santiam, Luckiamute, and Calapooia.

The Kalapuya were predominately an inland people, occupying an area extending from Willamette Falls to Row River and from the Cascade Range westward towards the crest of the Coast Range (Cole 1968, Juntunen et al. 2005; Zenk 1990:547). Speakers of the Kalapuyan languages comprise a family within the putative Penutian language spoken throughout the Northwest. This language family includes the Chinook, Klamath, Nez Perce, Siuslaw, and Alsea, among many others (Zenk 1990). Roughly thirteen Kalapuyan divisions or “tribes” existed in the area, each of which was dialectally distinct, although the exact number is not known. The dialects fell into three languages that were mutually unintelligible (Zenk 1990).

The largest known groupings of these dialects in the nineteenth century were the Tillamook-Yamhill in the north, which consisted of two dialects, Tualatin and Yamhill. A central Willamette Valley group, the Santiam, consisted of up to ten variant dialects, while the Yancalla living in the southern portion of the valley potentially consisted of more than one dialect (Juntunen et al. 2005; Mackey 1974; Zenk 1990:547).

A Calapooia band is noted in the southern reaches of the Willamette Valley and is listed on the 1856 Grand Ronde Census as the “Calapooia Tribe” recorded as a main heading. On the same census, the Atfalati are recorded as the Tualatin Band under the Calapooia Tribe (Mapes 2017). The project area falls within the traditional use area of the Tualatin Kalapuya. The Tualatins called themselves Arfalati and several primary accounts note interactions with the Atfalati people.

Tualatin [Atfalati] is spoken along the Tualatin River, Lake Wapato, and the lower Willamette River in the northern Willamette Valley. This language pattern is labeled and classified by linguists as Northern Kalapuya. According to Henry B. Zenk’s thesis (1976):

“...the name ‘Kalapuya,’ which is of foreign origin, seldom appearing in the textual and ethnographic material.” (Zenk 1976)

Often grouped together with other tribes in the Willamette Valley, generalizations from those noted groups are often applied to the Atfalati/Tualatin (Mapes 2017). Scattered primary and secondary sources such as text, maps, drawings, and photos provide some insight to the lifeways of the Atfalati/Tualatin people (Tualatin and Atfalati will be used interchangeably throughout this section).

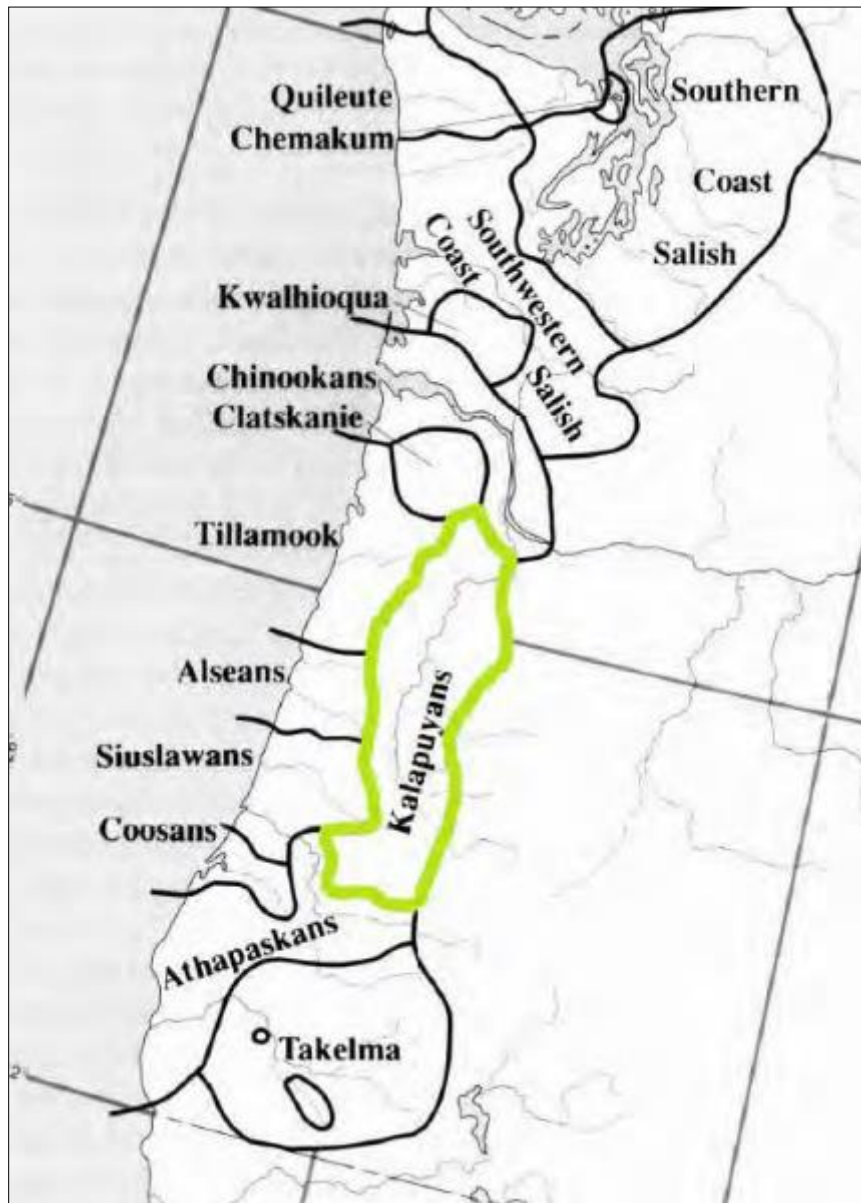


Figure 20: Map outlining ethnographic territory of the Kalapuya and other nearby tribes. Redrawn from the Handbook of North Americans, Volume 9 (1990: ix).

Keeping in mind the limitations of ethnographic information, there are some broad generalizations one can make about early nineteenth century lifeways (Aikens et al. 2011; Zenk 1990). The Kalapuyans, including the Tualatins, had clearly defined and defended territories defended (Aikens et al. 2011). During the ethnographic period, the Tualatin lived in settlements or villages. Oral traditions indicate roughly 24 to 30 permanent winter villages resembling other villages in the Willamette Valley and Lower Columbia. Many bands were tied to more distant tribes through trading, intermarrying, and slavery (Mapes 2017). Movement throughout the region consisted of canoe or by foot to seasonal camps for harvesting foods or gathering raw materials.

Several paths and trails were used near the project area to cross the Tualatin Mountains towards Sauvie Island and other parts of the upper Willamette and Lower Columbia. Located approximately one mile (1.61 kilometer) to the east of the project area, the “Logie Trail” is the closest recorded trail historic trail. The Logie Trail trends approximately eight miles (12.8 kilometers) north-northeast over the Tualatin Mountains and ends near Holbrook, Oregon, situated on the west bank of the Multnomah Channel, across from Sauvie Island. *The Tualatin Indians of Washington County, Oregon* map by Robert L. Benson notes another unnamed trail trending north from McKay Creek towards Scappoose, Oregon (Mapes 2017). The approximate starting location for this trail is four miles (6.75 kilometers) to the southwest of the current project area. When following the trajectory of the trail, it is possible the trail comes very close to the Luscher Property.

The Tualatins traveled between rivers and open plains in pursuit of game, fish, roots seeds, acorns, and various types of berries. Marsh areas provided rushes and cattails, while meadows contained camas and grass (Mapes 2017). Abundant Western Red Cedar in the forests were used for clothing and shelter. Game such as elk, deer, bear, cougar, rabbits along with other edible plants could be found in woodland areas and utilized for medications and weaving materials.

Each part of the plant had a useful purpose and was a staple in the Tualatin diet. Berries and fruits were gathered in the summertime; acorns, hazelnuts, and seeds were collected in autumn. Huckleberries ripened in the month of September. These berries were primarily eaten fresh and while some were dried for winter storage. The Tualatin collected Wapato corms (bulbs) and other fresh roots during the winter. Wapato is a staple food in the area and was usually collected in the fall then roasted on coals. The dried Wapato corms could be pounded into a meal then mixed with meat, fish, or berries. The mixture was compressed into cakes then stored for the winter or traded (Mapes 2017).

Tualatin/Atfalati winter camps centered around regional lakes and other bodies of water fed from larger rivers and creeks such as the Tualatin River, Dairy and McKay Creeks. The use of “*Cha*” meant “place of...” when noting Tualatin encampments (Mapes 2017). As mentioned before, approximately 24 to 30 permanent winter communities existed in the area. The following are mentioned by early ethnographers Robert L. Benson and Albert S. Gatschet, later compiled in *The Tualatin* by Ginny Mapes (2017):

- *Chahachiif* (crawfish place) [*geographic name*, Gaston] Wapato Lake is nearby, which is important for Wapato and crawfish.
- *Chachimahiyuk* “Place of Aromatic Herbs” [*geographic name*, Tigard, “located near an area known as Progress, wild mint grew in this area. The campsite was in the shelter of a rocky knoll. There is also a spring from which water flowed.”] Benson [*Village had the same chief as Chakeipi.*]
- *Chaginduefti* [band living between McKay Creek and Sauvie Island.]
- *Chakeipi* (Tch’`akéipi) “Place of the Beaver” before the treaty of 1855. *Gaschet* [*geographic name*, Beaverton, with the greatest concentration of artifacts found on

the dry land just north of the swamps or “beaverdams” near area known as Marlene Village.]

- *Chapanaghtin* [geographic name, Glencoe] now North Plains.
- *Chatakuin* (*atakuin* refers to a tree) “Place of the Big Trees” [geographic name, Five Oaks, now located off Sunset Highway.]

Other Tualatin settlements are reproduced in Maps 2017 book shown in Figure 7.

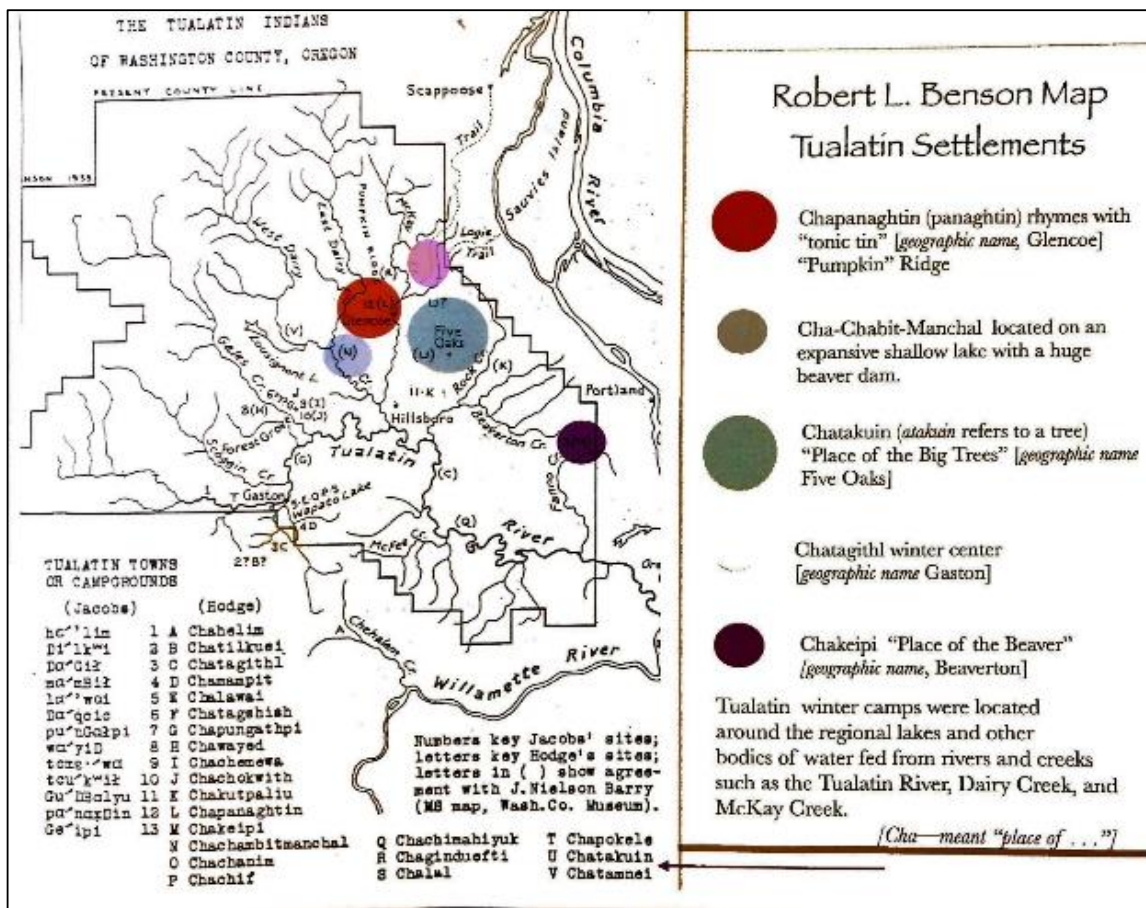


Figure 21: Robert L. Benson Map of Tualatin Settlements reproduced from *The Tualatins* by Ginny Maps. The pink dot indicates the approximate location of the project area.

The first definitively recorded contact between the Kalapuya and Euro-Americans occurred in 1812, when fur traders from the Pacific Fur Company entered the Willamette Valley. From 1812 to the 1840s, Kalapuyans primarily encountered fur traders and by the 1830s, the first settlers and missionaries became established in the valley (Zenk 1990). Few references and observations about the Kalapuya were recorded during this time. Following the epidemics and movement of Euro-American settlers into the area, several treaties were

ratified between 1854 and 1855, causing the removal of a majority of Kalapuyan peoples to the Grand Ronde, the Siletz, and Warm Springs Reservations (Zenk 1990).

Historical Background

Before the Oregon Trail, Euro-American activity in the Willamette Valley, and in the Pacific Northwest, centered on Fort Vancouver. Established by the Hudson's Bay Company (HBC) in 1824, Fort Vancouver is situated in the northern portion of the Willamette Valley, where the current city of Vancouver, Washington resides. Many French-Canadian and Metis (French Canadian-Native American) fur trappers employed by HBC retired and established farms throughout the Willamette Valley (Aikens et al. 2011).

Government support of western expansion spurred Euro-American migration into Oregon Territory in the 1840s. Legislative acts such as the Donation Land Claim Act of 1850, recognized past claims under the provisional government, established the Office of Surveyor General-Surveyor of Public Lands, and made land grants to new settlers (Riddle 2010). By 1843, Euro-American settlers in the Willamette Valley drafted a constitution to establish a provisional government. As the population in Oregon Territory increased, the United States and Britain established a borderline at the 49th parallel in 1846, giving the U.S. claim to Oregon Territory.

Joseph L. Meek (1810-1875), David Lenox (1807-1873), and Charles McKay (1808-1873), are some of the earliest settlers in the north Tualatin Basin. McKay founded the town of Glencoe in 1842, which is now incorporated into the town of North Plains and located near McKay Creek. David Lenox formed the first Baptist church west of the Rocky Mountains in 1844. The West Union congregation gathered in Lenox's log cabin until 1853, when the West Union Baptist Church was built. The church is one of the earliest surviving examples of a pioneer-era church in the state of Oregon (Carter 2019). Meek was a former fur trapper in the Rocky Mountains and settled in the area in the late 1830s. Meek also went on to help organize the Champeog meeting, which established the first provisional government in Oregon Territory.

In 1843, the Provisional Legislator for Oregon Territory originally established Washington County as the Tuality District and was one of the four original counties in Oregon created during the Champeog meetings (Oregon.gov). In 1844, the Provisional Government designated the Columbia River as the northern boundary for Tuality County and created Clatsop County from Tuality's western half. The Territorial Legislature decided in 1849 to change the name of Tuality County to Washington County, to honor President George Washington. The current boundaries of Washington County were established in 1854, with the formation of Columbia county located to the north and Multnomah County in the east (Oregon.gov). In 1850, the town of Hillsborough, later modified to Hillsboro in 1858, was selected as the county seat for Washington County.

In 1859, Oregon entered statehood, making it the 35th state to join the Union. As the counties entered statehood, residents needed a better way to transport goods to market in Portland. Plank roads at the time followed old trails and became muddy in rainy weather, proving difficult for wagons to navigate. Early ferries operated by Perter School and John Taylor ferried people across the Tualatin River. Jesse Boone built and operated a ferry across the Willamette near modern day Wilsonville (Five Oaks Museum 2020).

In 1877, the O & C Railroad came to Hillsboro, which opened the Tualatin Valley to transportation for agriculture, logging, and lumbering industries. Passengers did not get rail transport until 1905, when the Oregon Electric came through the county (Five Oaks Museum 2020). By 1910, Washington County became the hub for agricultural production ranging from hops, to orchards, berries, wheat, and dairy. The Oregon Nursery Company (Orengo, Oregon) became a large producer of fruit trees and berries for local farmers. The company went out of business during the 1929 stock market crash, and land from the company was sold and urbanized (Five Oaks Museum 2020).

World War I and II impacted the region economically, as government contracts called for Spruce and Doug Fir lumber production. During the wars, Latino migrant laborers tended to the agricultural fields as many soldiers went out to fight. In the 1950s, with the rise of the frozen food industry, many companies such as Reser Foods, met the demand and have become large employers for the area (Five Oaks Museum 2020).

Since the early 1950s, the modern technology industry has influenced the development of Washington County. Tektronics was founded in 1951 and other tech companies followed suit, including Intel in 1974. In 1990, Nike World Headquarters came to Beaverton, located in the northeastern portion of the Tualatin Valley (Five Oaks Museum 2020).

Literature Review

An examination of records on file on the Oregon Archaeological Records Remote Access (OARRA) database was conducted to identify previous archaeological investigations performed in or near the research area. A total of five archaeological investigations were conducted within a two-mile (3.2 kilometers) radius of the survey area (Table 1), and four previously recorded archaeological sites are located within two-mile (3.1 kilometers) radius (Table 2). According to the OARRA database, no previously recorded archaeological resources exist within the boundaries of the Luscher Property.

The most recent archaeological investigation was conducted in 1998 by John Caruso as part of a timber sale for the Tillamook Resource Area Salem, owned by the Bureau of Land Management, at three separate locations to the northwest of the current project area. No cultural materials were identified during the 1998 survey.

Archaeological site 35WN7 is the closest recorded site to the Luscher Property (Figure 11). Site 35WN7 is an unevaluated multicomponent site recorded in 1973 by M. Pionkowski.

The site consists of several collapsed buildings, including a small house and an associated barn. According to the site form, no precontact components were observed on the surface. Site 35WN007 remains unevaluated for listing in the National Register of Historic Places.

Cowanahs' Battlefield (#25221) is located 1.25 miles (2.01 kilometers) southeast of the project area. Cowanahs' Battlefield was noted as a secondhand account in 1969 by R.L. Benson for the Washington County Historical Society. The account states that in the late 1850s or 1860s, raids by the Klickitat occurred in the Willamette Valley, with many Klickitat entering the region through the Logie Trail, or McKay-Jason Lee Trail, or roughly in the vicinity of the present Rocky Point-Logie Trail area. According to the site form, Cowniah is noted as a Chief who lived among the settlers and rallied his neighbors to repel the Klickitat. Cowniah's horse was reportedly shot beneath him during this battle. The location of the site has not been field verified and remains unevaluated (Benson 1969).

Archaeological site 35WN34 is an unevaluated precontact lithic scatter recorded in 1988 for the South Mist Feeder Pipeline Route Cultural Resources Evaluation. Located in a plowed field, the site consists of approximately 20 to 30 cobble tools, two point fragments, three drills, edge-ground quartzite cobbles, whole cobbles, FCR, and flakes, cores, and debitage. The assemblage includes obsidian, red chert, petrified wood, black and green chert, basalt, and quartzite. According to the site form, based on the lithic assemblage, the site may have been a seasonal encampment associated with hunting or food processing. Some lithic reduction is also observed at the site.

Known as the Duyck Site, 35WN61 is an unevaluated historic site recorded in 1987. The site is recorded as a possible 19th century residence with domestic items including ceramics, bottle glass, milk glass, window glass, and brick. Temporarily diagnostic artifacts include 1840's earthenware, transfer decorated earthenware dating between 1840 to 1870, molded white ironstone from approximately 1880, and stoneware dating between 1850 and 1880 stoneware.

Historic Map Review

A review of places on General Land Office (GLO) maps identified several historic developments near the research area. The 1856 GLO map shows the construction of a county road in the southeastern portion of Section 29 from Hillsborough (now Hillsboro) to St. Helens (GLO 1856) (Figure 8). A Donation Land Claim (DLC 42) belonging to Eli Davise ("Davis") for 640.83 acres appears on both the 1856 and 1862 GLO maps in the northwestern portion of Section 34 (GLO 1856) and extends into the southwestern portion of Section 29 (GLO 1862). However, the DLC for Davise does not overlap with the research area and there are no developments shown immediately within the proposed research area.

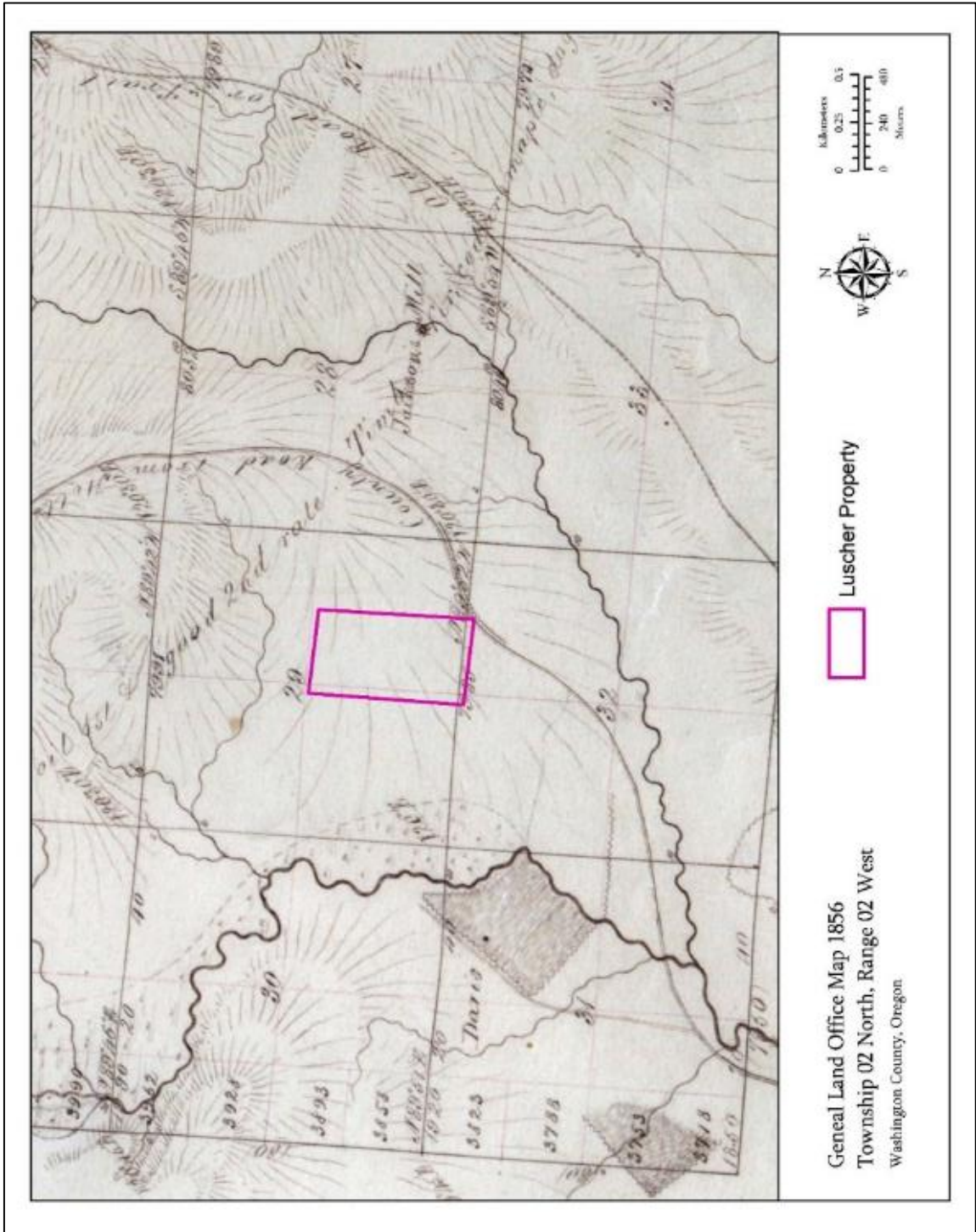


Figure 22: BLM GLO Map 1856 with Location of Luscher Property.

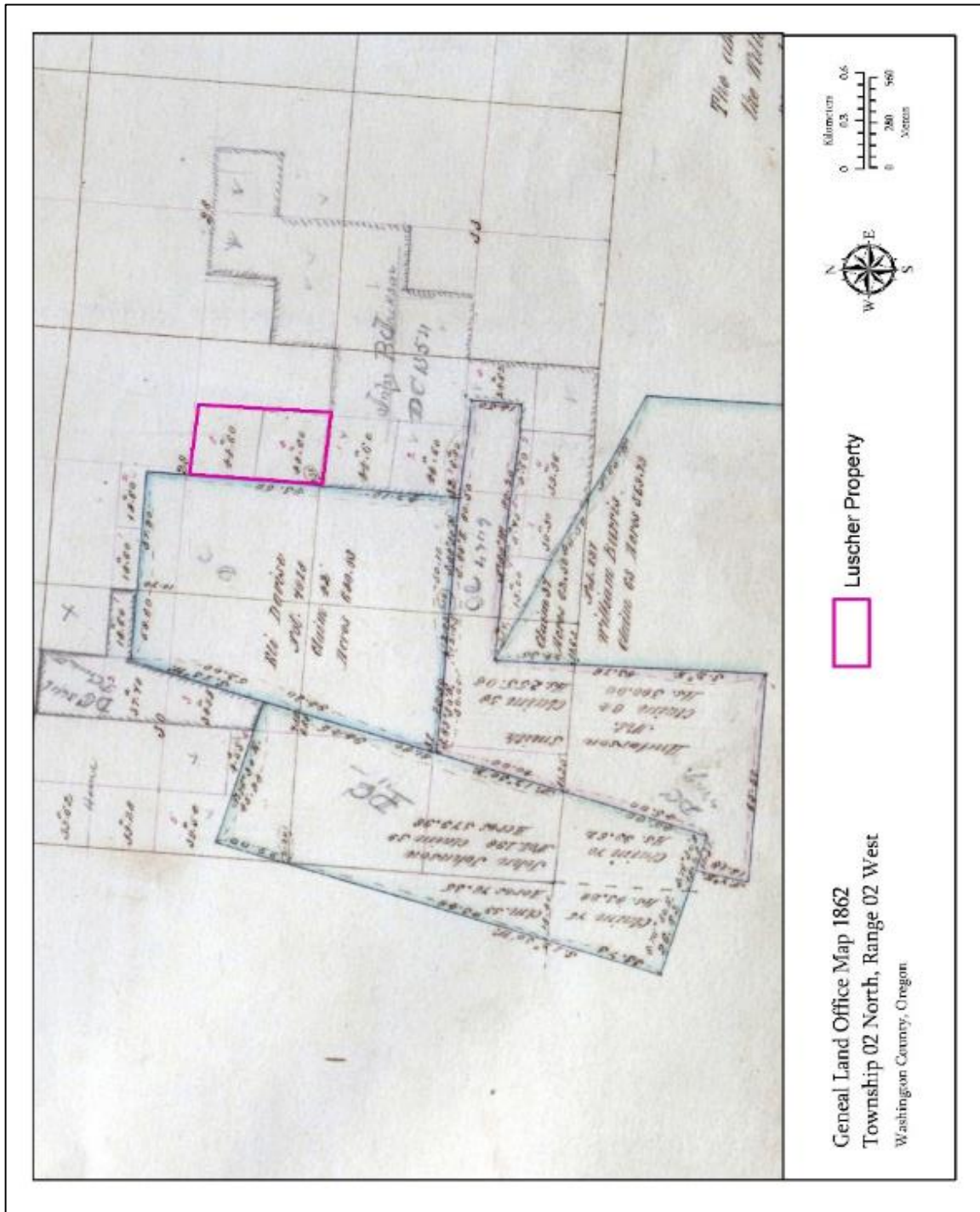


Figure 23: BLM GLO Map 1856 with Location of Luscher Property.

Landowner Interviews

Ms. Carol Luscher has lived on, and has found artifacts on her property, since the mid-1940s (Carol Luscher, personal communication 2018). Ms. Luscher and her late husband have found various precontact projectile points within the southern portion of her property near a natural spring; prior to fieldwork the size of the site was unknown. We undertook several pre-field site visits in 2017 and in 2018, to meet with Ms. Luscher and have her identify where artifacts were found on her property.

Projectile points, bifaces, and modified flakes comprised of basalt, chert, CCS, and obsidian were noted in Ms. Luscher's collection (Figure 10). The wide range in lithic material preliminarily indicated persistent human presence and regular use of the area for a broad range of time.



Figure 24 Various artifacts observed by Ms. Luscher on the Luscher Property. Photo by Shelby Anderson

Omitted from document

Figure 25: SHPO Aerial Map of Research Area (Luscher Property) with Previously Recorded Sites and Cultural Resource Surveys

Table 5. Previous investigations conducted within two miles of survey area.

Year	Author	Title	Results	Distance (miles)
1988	Hibbs, Charles and David Ellis	An Inventory of Cultural Resources and an Evaluation of the Effects of the Proposed South Mist Feeder Gas Pipeline, Located Between the Upper Nehalem River Valley and the Tualatin Valley in Northwestern Oregon, Part I: Cultural Resource Inventory	35WN0034; 35WN0061	2.0
1988	Hibbs, Charles and David Ellis	South Mist Feeder Pipeline Route Cultural Resources Evaluation Part II Effects and Mitigation CONFIDENTIAL	35WN0034	2.0
1998	Caruso, John	Cultural Resource Inventory Report Solberg (Section 15) Timber Sales Pre-Project Survey	Negative	1.9
1998	Caruso, John	Cultural Resource Inventory Report Solberg (Section 21) Timber Sales Pre-Project Survey	Negative	1.0
1998	Caruso, John	Cultural Resource Inventory Report Solberg (Section 17) Timber Sales Pre-Project Survey	Negative	1.75

Table 6. Previously recorded archaeological sites within two miles of the survey area.

Site No.	Site Type	Year	Distance (miles)
35WN007	Historic – buildings	1973	2.0
35WN0034	Precontact – Lithic materials	1988	2.0
35WN0061	Historic – Duyke Site, historic debris scatter	1988	2.0
25221	Historic – Cowanah's Battlefield	1969	1.25

Research Design

The following section describes the methods for identifying archaeological material in the project area. The background research described in the previous sections influenced the archaeological survey methods described in this section. While it is always possible to encounter archaeological material where it is not expected, the background research provided a framework for what to anticipate in the project area.

Previous research indicates that we know little about precontact human occupation of the foothills of the Tualatin Mountains. Although the current project is modest in scope; it does shed light on new data on to previously limited studies and contributes to further investigation of human occupation at the foothills of the Tualatin Mountains, adjacent to the Willamette Valley and the Lower Columbia River. Our inventory of the Luscher Property further contributes information for future research. This data adds to our knowledge of regional settlement patterns and chronology in the Tualatin Hills and the greater Willamette Valley. The following will be kept in mind when conducting the archaeological survey on the Luscher Property:

- 1) Land Use– What is the geologic history of the landform? What is the pre-colonial and historical use of the Luscher property? Identify post-depositional processes (natural and human-induced). How have these processes affected artifact preservation and distribution?
- 2) Content/Extent of Site– What types of lithic debitage reduction are represented in the on-site (if identified)? Are tools present? Are features present? What is the vertical/horizontal extent of the site?
- 3) Age – Are temporally diagnostic artifacts present in context at the site?
- 4) Site Function – Is it possible to identify specific tasks or activities which occurred at the site?

Expectations Regarding Archaeological Material in the Project Area

Previously recorded archaeological sites in the vicinity of the project area are both precontact and historic. Precontact sites include villages, FCR scatters, and lithic scatters. The majority of artifacts identified at these sites consist of cryptocrystalline silicate (CCS), although basalt, obsidian, and quartzite artifacts are also present at these sites. The information available from these sites, coupled with the knowledge of previously identified archaeological material by the landowner in the project area, suggests there may be associated precontact subsurface features and artifacts.

With a review of the archaeological patterns in the northern Willamette Valley and Portland Basin, archaeological sites are a result of repeated short-term occupation. In contrast, other sites exhibit continuous or near-continuous occupation, which would leave large surface and subsurface artifact scatters.

Based on the above information, it is expected that archaeological material in the project area would consist of Native American lithic scatters. Historic archaeological sites, if identified, may be associated with subsequent Euro-American settlement, including historic trash dump and agricultural or logging activities.

Archaeological Survey Methods

Under the supervision of Dr. Shelby Anderson, Katherine L. Tipton (M.S. Candidate) and 12 volunteers conducted an archaeological survey of the proposed research area (Table 3), between April 6 and 7, 2019. The goal of the survey was to identify the presence or absence of archaeological material. The entire Luscher Property was surveyed to provide a holistic picture of the overall use of the property and identify processes that may have shaped the current landscape.

For the archaeological survey, the Luscher Property was sectioned into three separate survey areas (Area A, B, and C) (Figure 12).

Area A was comprised of a reconnaissance survey in the northern half of the property (about 44.5 acres). Area B consisted of two activities: an intensive pedestrian survey and the proposed excavation of up to 75 cylindrical shovel test probes (STPs). Area B was where the landowner has found concentrations of artifacts. The pedestrian survey in Area B was meant to initially establish the presence or absence of an archaeological site. Subsurface testing would further determine the possible vertical extent of the publicly reported archaeological site. Like Area A, Area C consisted of a reconnaissance survey in the southern portion of the Luscher Property (about 40 acres) (Figure 12).

Archaeological surveys occurred on April 6, April 7, April 20, and June 16, 2019.

Table 7: List of all volunteers present during archaeological survey.

Dr. Shelby Anderson, Principle Investigator	Katherine Tipton, Field Director
Christopher Bailey, Grand Ronde	Patrick Reed
Michelle North	Matthew Sisneros
Tia Cody	Donald Craig
Sam Crockett	Daniel Costa
Celia Moret-Crockett	Michella Rossi
Stella Crockett	Anna Neuzil
Emily Taber	Keith Emmons

Surface Survey Methods

The surface survey consisted of both reconnaissance and intensive pedestrian transects. Reconnaissance surveys were conducted in Areas A, which were comprised of slopes at approximately 5 to 10 percent. Where possible, these areas were contoured surveyed at intervals of 30-meters.

Area B has been identified as a high probability area based on accounts from the property owner. In Area B, pedestrian transects were spaced at intervals no greater than 20 meters in distance. In addition to surveying the ground surface, the surveyors paid special attention to areas with visibility to subsurface deposits (i.e. rodent mounds, exposed root wads from fallen trees, etc.). Surveyors focuses on identifying artifacts and features that may be visible on the ground surface. If artifacts were observed during the pedestrian survey, transects were spaced at 10 meters and walked until the absence of additional artifacts had been established.

A global position system (GPS) was used to collect Universal Transverse Mercator (UTM) data for the survey, as well as to record site information. After the fieldwork was completed GPS data were corrected and exported to a GIS program for final editing and formatting. No artifacts were collected during the pedestrian survey.

Subsurface Testing Methods

Excavation of the STPs provided representative coverage of the area with a focus on high probability areas (HPAs) or areas of archaeological interest identified during the literature search and from the intensive pedestrian survey. The STPs were placed no more than 30 meters apart. Radial STPs were excavated for positive STPs for archaeological material and excavated in no fewer than four directions, spaced at 30 meters.

The STPs measured minimally 45 centimeters in diameter and excavated in 20 centimeters or thinner, arbitrary levels, to a minimum of 50 cm below surface (cmbs), and until two culturally sterile layers were reached. A select number of STPs were excavated below 50 centimeters (up to 100 centimeters) to collect information on soil stratification and to document the nature typology of the soils in the research area.

All soil material was screened through a 1/8-inch hardware mesh. Information from each excavation level was recorded on individual STP forms. Information recorded includes the provenience, depth range, excavation technique, a description of the sediment context, and an inventory of artifacts from the STP. The STPs are numbered consecutively, and their locations noted with GPS technology.

The horizontal provenience of STPs, site boundaries and collected surface artifacts were logged using GPS technology capable of submeter accuracy, and digital photographs were taken of a representative sample of STPs.

Only stylistically and temporally diagnostic artifacts were collected from subsurface excavations.

All non-diagnostic artifacts identified during the subsurface testing were measured and counted in the field, and digitally photographed. One Fire modified rock (FMR) and six pieces of non-diagnostic lithic debitage were not collected during this archaeological investigation. FMR was counted in the field then redeposited in its associated STP. The lithic debitage was identified to the extent possible using Andrefsky (1998) flaked lithic definitions. This included identifying flake attributes and material type. All debitage was counted and redeposited in its associated STP.

If cultural features were discovered during STP excavations, the STP was excavated to the extent needed to identify the subsurface integrity of the feature; once that is established, excavation of the STP would stop. STP excavations were given site-specific consecutive numbers and thoroughly documented by photography and written descriptions.

24 shovel test probes (STPs) were dug for the purpose of this archaeological survey. The STPs were placed in areas with poor ground surface visibility and where the landowner observed concentrations of cultural material during land-use activities located in Area B. The subsequent paragraphs describe the field activities for each of the project areas (Area A, B, and C).

Area A

We conducted a reconnaissance survey in the northern half of the property (Area A) (about 44.5 acres). Area A is steep with slopes at approximately 5 to 10-percent.

Vegetation in the northern portion of the Luscher Property includes sword fern (*Polystichum munitum*), poison oak (*Toxicodendron diversilobum*), thimbleberry (*Rubus parviflorus*), white trillium (*Trillium grandiflorum*), salal berry (*Gaultheria shallon*), hemlock (*Conium maculatum*), Western redcedar (*Thuja plicata*), and Douglas fir (*Pseudotsuga menziesii*). The area was surveyed for the possibility of culturally modified trees and other surface anomalies. No shovel testing was conducted in this area due to the steep slopes and moderate ground surface visibility ranging between 40 and 70-percent. During the reconnaissance survey a wooden sign marked a memorial forest in the northern portion of the property. Ms. Luscher's neighbor established the *Jeanie Holm Memorial Forest* in 2006 in memorandum of their late wife (Ms. Luscher, personal communication 2019). No other material was identified in the vicinity of the memorial forest sign.

No other cultural material was identified in Area A.



Figure 26: Overview of northern portion of Luscher Property (Area A). Facing north-northwest.
Photo by Katherine Tipton



Figure 27: Overview of Area A in northern half of property with *Jeanie Holm Memorial Forest* sign. Facing east. Photo by Katherine Tipton



Figure 28: Overview of Area A in northern portion of the Luscher Property. Facing north-northeast. Photo by Katherine Tipton



Figure 29: Overview of Area A in northern portion of the Luscher Property. View to the north-northeast. Photo by Katherine Tipton

Area B

We conducted two survey activities in Area B: an intensive pedestrian survey and the excavation of shovel test probes (STPs). Area B is a relatively low-lying knoll with slopes to the north, west, and south. The western extent of Area B is flat and increase in steepness towards the northern and eastern portion of this identified area.

This area had fair to good ground visibility ranging between 30 and 80-percent. Vegetation in Area B consisted of various native and non-native grasses, Himalayan blackberry (*Rubus armeniacus*), Oregon White Oak (*Quercus garryana*), and hemlock (*Conium maculatum*), and sword fern (*Polystichum munitum*).

Field surveys began with an intensive pedestrian survey of Area B of the Luscher Property. Through several discussions and preliminary visits, this area is where the landowner identified finding all artifacts in their current collection. A natural spring noted by the landowner was identified in the north-northwestern portion of Area B. The landowner currently uses the natural spring as their water source (Figure 20)

In Area B, pedestrian transects consisted of a maximum spacing of 20 meters. Isolate 2, consisting of a historic car bumper, was identified during the intensive pedestrian survey, and is further discussed in the results section.

No other cultural material was encountered during the intensive pedestrian survey of Area B.

Following the intensive pedestrian survey of Area B, we excavated 24 STPs to investigate the presence or absence of subsurface archaeological materials in the reported site area. Area B is where concentrations of artifacts were observed by the landowner through agricultural activities. STPs were gridded out beginning in the eastern portion of Area B near an intermittent creek and spaced at 30 meters. After plotting STP 12, the STPs were focused near the natural spring located in the northwestern portion of Area B in an area where the landowner noted seeing several points in the past. A total of six STPs were positive for cultural material and identified Isolate 01 (discussed in the results section) (Table 7).



Figure 30: Overview of Area B. Facing north-northwest.
Photo by Katherine Tipton



Figure 31: STP 3 with water table present. Plan view. Photo by Katherine Tipton



Figure 32: Overview of Area B. Facing southwest.
Photo by Katherine Tipton



Figure 33: STP 17. Plan view. Photo by Katherine Tipton.



Figure 34: Overview from STP 20 towards STP 17 in Area B. Natural spring located to the right. Facing west. Photo by Katherine Tipton



Figure 35: STP 20. Plan view. Photo by Katherine Tipton



Figure 36: Overview from STP 20 upslope towards landowner's house in Area B. Facing northeast. Photo by Katherine Tipton

Area C

We conducted a reconnaissance survey in Area C, located in the southern portion of the Luscher Property (about 40 acres). Area C is located within a previous tree farm area and is bound to the south by an unnamed creek. The main access road for the property bisects the northern and southern portion of Area C (Figures 24-26).

An intensive pedestrian survey occurred in the western portion of Area C with transects spaced at 30-meter intervals. No STPs were conducted within Area C due to good ground surface visibility and steep slopes in the southern portion of Area C towards the unnamed creek. The intensive pedestrian survey identified Isolate 03, a single porcelain sherd (Figures 61 and 62).



Figure 37: Overview of pedestrian survey in Area C within tree farm growing area near Isolate 03. Photo by Emily Taber



Figure 38: Overview of western edge of Area C. Facing south. Photo by Emily Taber



Figure 39: Overview of road bisecting Area C. Facing west-southwest. Photo by Katherine Tipton

Artifact Analysis

Diagnostic artifacts identified in the STPs, and any artifacts collected from the surface and by the landowner were transported to Dr. Shelby Anderson's laboratory at Portland State University in Portland, Oregon, where they were cleaned, catalogued, analyzed, and prepared for curation for the landowner to donate in the future. The processing of materials followed the Secretary of Interiors' guidelines for archaeological curation.

To the extent possible, artifacts were identified by material, probable function, age, and cultural association. When appropriate, precontact cultural materials were analyzed with the following objectives: 1) identification of artifacts recognized as diagnostic of specific cultures or time periods; 2) identification of lithic debitage 3) identification of tools and/or retouched debitage; 4) identification of heat treatment; and 5) identification of raw materials represented among the artifacts identified.

The identification of diagnostic artifacts was made by consulting existing comparative collections and available literature regarding artifact types. Due to the proximity to the Portland Basin and Lower Columbia culture area, *A Prehistoric Culture Sequence in the Portland Basin of the Lower Columbia Valley* by Richard M. Pettigrew (1981) was the primary reference for artifact description and establishing the chronology of the collection.

Lithic reduction sequences were studied by examining specific attributes of the individual pieces of debitage. Raw materials identified through the survey were identified and compared to the existing material type in the Luscher Collection and were also compared to literature regarding available raw materials in the region.

As part of the artifact analysis for the Luscher Collection, each artifact was washed, bagged and tagged. To the extent possible, artifacts were identified by basic material, probable function, age, and cultural association.

The analysis of historical material (e.g. ceramic, glass, and nails) included standard typological methods for chronological reconstruction; historic artifacts were identified by material, probable function, age, and cultural association.

Diagnostic historical material included: ceramics with makers marks, complete glass vessels, glass vessel bases with an Owens scar or value mark, and glass bottles with a shoulder, neck, and finish that can be used for dating (1970).

Non-diagnostic historic-era artifacts identified in the field survey included, fragments from the bodies of colorless glass bottles, flat window glass, brick fragments, pieces of unidentifiable ceramic sherds, or pieces of unidentifiable rusted metal, wire nails, and concrete, the samples were noted and not collected during the field survey. The non-diagnostic historical material was quantified, measured, and photographed during the archaeological survey.

Curation

Artifacts identified from a site on private property are considered the property of the landowner, with the exemption of Native American human remains, burials, funerary objects, and objects of cultural patrimony (ORS 97.740). At the conclusion of any archaeological research or excavation on private property, all artifacts remain the property of the landowner; however, the Oregon SHPO strongly encourages the property owner to donate artifacts to the Oregon Museum of Natural and Cultural History (UOMNCH) in Eugene or a local museum.

For the purposes of this project, artifacts identified during the subsurface survey of the Luscher Property were reburied in their respective STP. The artifacts found on the surface by the landowner during private land-use practices remain in the possession of the landowner. However, they have been prepared as though they will be curated at UOMNCH or a local museum. Discussions continue between the landowner and Confederated Tribes of Grand Ronde for donating the identified artifacts to the Chachalu Museum and Cultural Center in Grand Ronde, Oregon.

Inadvertent Discovery of Human Remains

An Inadvertent Discovery of Human Remains protocol was in place for this research.

Results

As a result of the archaeological survey, three isolates were identified. Isolate 01 was identified during the subsurface portion of the archaeological survey for Area B and Isolate 02 was identified during the intensive pedestrian survey for Area B. Isolate 03 was identified during the intensive pedestrian survey for Area C. The materials identified in the field were not collected and the 89 pieces of cultural material were analyzed as part of the site. Isolate 01 and the collection are discussed further below as the “Luscher Site”.

Appendix A includes a table summarizing the lithic analysis for the Luscher Collection.

Appendix B includes a copy of the Oregon SHPO isolate and site record form, which has been uploaded to the Oregon Archaeological Sites Database.

Luscher Site (Isolate 01 and Luscher Collection)

Based on the Guidelines for Conducting Field Archaeology in Oregon (SHPO 2013, Revised 2016) and under ORS 358.905 to 358.961, the Luscher site is designated from the presence of Isolate 01, identified during the archaeological survey, and the objects identified and collected by the landowner through private land use practices (Luscher Collection).

Isolate 01 is located on a small knoll approximately 84 meters north of an unnamed creek and approximately 15 meters south-southeast of a natural spring. The knoll slopes west-southwest towards a generally flat area with less than a one to two-percent grade. Soils in the STPs generally consisted of dark brown to reddish brown silty clay underlain with either a reddish-brown silty clay or brown silt, which became compact with depth. Minimal gravel was present in all the STPs excavated. The area has been previously disturbed by tree farming and private land maintenance activities.

Of the 24 subsurface shovel probes conducted for the archaeological survey, six of the STPs yielded positive results, which identified Isolate 01 (summarized in Table 7). Archaeological resources were sparse and typically identified within 10 to 60 cmbs in the STPs. Total artifacts (n= 6) identified include three proximal CCS flakes, one CCS flake shatter, one utilized flake, and one fine grained basalt fire modified (FMR) cobble groundstone. Three seeds observed in STP 4 were also noted during the subsurface portion of the archaeological survey.

The lithic material and potential cobble groundstone were identified in STPs 2, 3, 10, 15, 16, and 17 (Table 7). Equating to one artifact per STP. Non-diagnostic brick and metal fragments were also identified in the first 30 cm of STP 15, the same STP as the cobble groundstone.

Soils present in the STPs had less than one-percent gravel and no large cobbles were present. Possible seeds were identified in STP 4 between 50 and 60 cmbs (Figure 42).

See below for description, measurements, and photographs of lithic material observed during subsurface testing:

1. Flake 1 – reddish orange cryptocrystalline silicate (CCS) proximal flake with an intact platform and snapped termination. Measurements: 19 x 12 x 3 millimeters (mm).



Figure 40: Flake 1 dorsal side. Plan view.



Figure 41: Flake 1 ventral side. Plan view.

2. Flake 2 – Greyish CCS utilized flake with use wear along margin. Heat treated with color change on dorsal side of flake. Measurements: 15 x 23 x 4 mm.



Figure 42: Flake 2 dorsal side. Plan view.



Figure 43: Flake 2 ventral side. Plan view.

3. Flake 3 – Reddish orange CCS proximal flake with intact platform and snapped termination. Two dorsal scars. Measurements: 26 x 20 x 2.5 mm.



Figure 44: Flake 3 dorsal side. Plan view.



Figure 45: Flake 3 ventral side. Plan view.

4. Ground Stone (Fire modified rock) – Basalt cobble FMR with possible use wear on one end (distal). Two potlid markings identified on the sides of the cobble. Measurements: 80 x 50 x 50 mm.



Figure 46: Basalt cobble FMR. Plan view.



Figure 47: Basalt cobble FMR. Plan view.



Figure 48: Basalt cobble FMR. Plan view.



Figure 49: Basalt cobble FMR. Plan view.

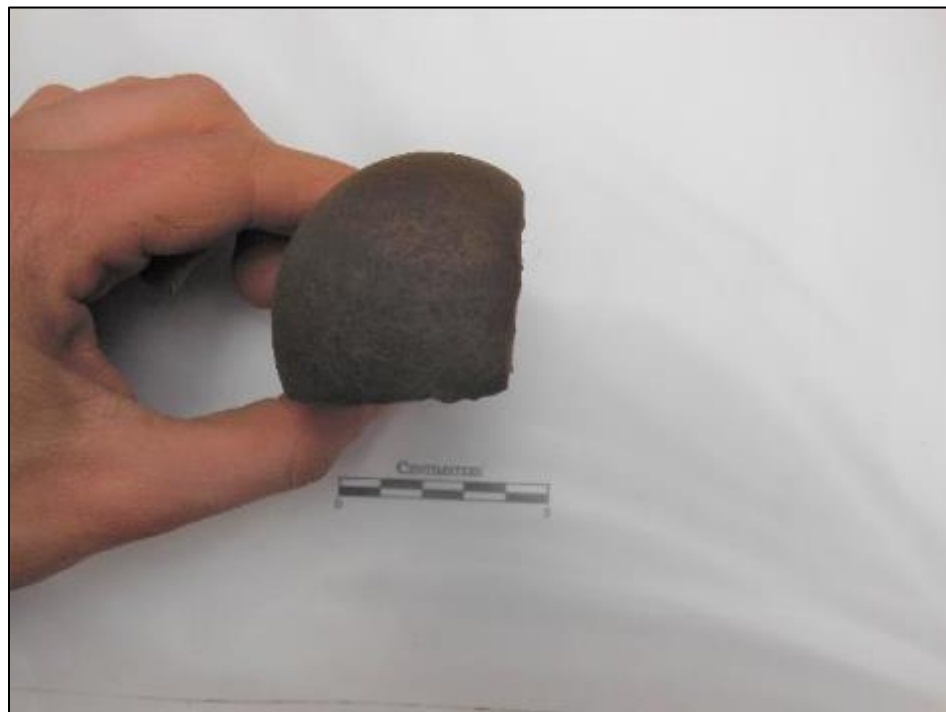


Figure 50: Basalt cobble FMR, distal end with evidence of possible use wear. Plan view.

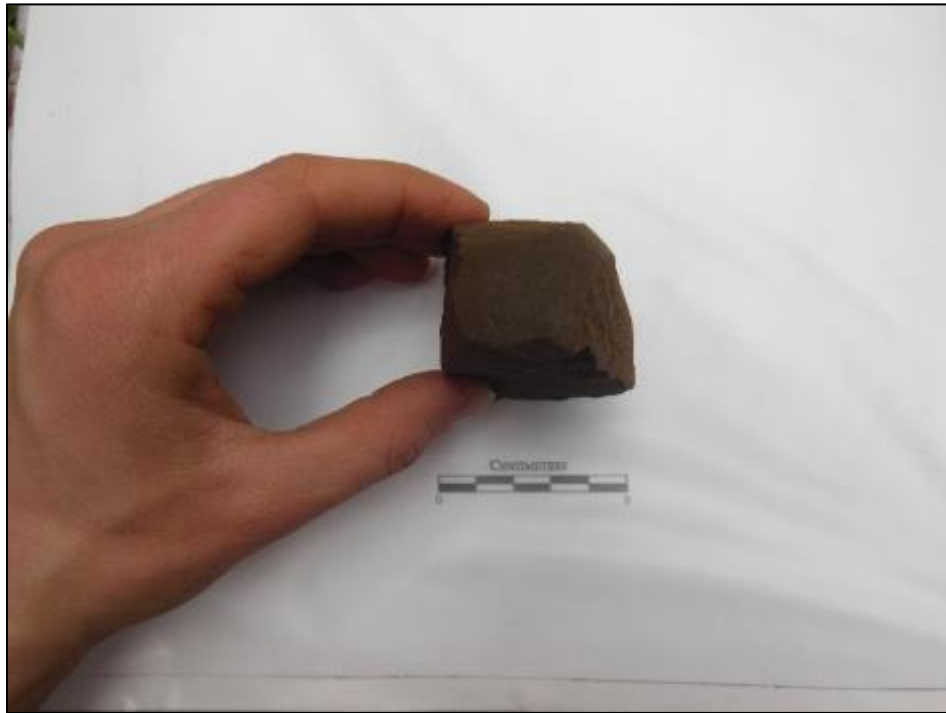


Figure 51: Basalt cobble FMR. Plan view.

5. Flake 4 – Red CCS proximal flake with intact platform and feathered termination. One dorsal scar. Measurements: 15 x 15 x 4 mm.



Figure 52: Flake 4 ventral side. Plan view.



Figure 53: Flake 4 dorsal side. Plan view.

6. Flake 5 – Greyish brown CCS flake shatter. Measurements: 20 x 9 x3 mm.



Figure 54: Flake 5 shatter. Plan view.



Figure 55: Flake 5 shatter. Plan view.



Figure 56: Seeds identified in STP 4 between 50 and 60 cmbs. Plan view.

Luscher Collection Lithic Analysis

As part of the research design and with permission from the landowner, Katherine L. Tipton conducted an analysis of artifacts in the Luscher Collection.

The Luscher Collection is comprised of 89 pieces of lithic material, which are summarized and measured in detail in Appendix A. A list of all the objects present in the collection are shown in Table 4 and cultural debris in the Luscher Collection are summarized in Table 5.

Table 8: Summary Table of Objects Represented in the Luscher Collection.

Object	Total
Biface	24
Biface/Scraper	2
Debitage	1
Flake, Tool	4
Projectile Point	46
Projectile Point - Base	7
Projectile Point - Distal	2
Scraper	1
Undetermined	1
Uniface	1
All Objects	89

The Luscher Collection assemblage ranges from small to large points (1.3-5.5 cm in length) to small-large sized bifaces (1.3-8.0 cm in length). Four flake tools including a unifacially flaked crescent and a drill are represented. Materials that are present in the assemblage include chert, CCS, chalcedony, basalt, and obsidian. Chert is the main material type, making up 54-percent of the collection. A total of ten artifacts are made from obsidian, comprising 11-percent of the assemblage. The obsidian artifacts include nine projectile points and/or possible projectile fragments, and one scraper.

Table 9: Summary of Material Types in the Luscher Assemblage.

Material Type	Total	Percentage of Assemblage
Basalt	1	1%
Basalt (fine grained)	8	9%
CCS	11	12%
CCS (quartz crystal)	2	2%
Chalcedony	5	6%
Chert	48	54%
Obsidian	10	11%
Silicified Sediment	1	1%
Undetermined Volcanic	1	1%
Unidentified Sedimentary Rock	1	1%
Unknown	1	1%

A total of 55 projectile points or possible projectile point fragments were identified in the collection. Of the identified points, 15 are complete, while 27 are incomplete but still measurable and I was able to identify point type.

A total of eight distal-tips, six midsections, and seven bases were also identified in the collection. There are three basalt points, nine CCS, five chalcedony, 29 chert, and eight obsidian. Table 5 summarizes point types present and Figure 44 shows the frequency and percentage of projectile point types, while Figure 45 presents neck width frequency in the Luscher Collection.

Table 10: Summary of point types identified in the Luscher Collection (Pettigrew 1981).

Pettigrew (1981) Point Type	Description	Number Present
Type 1	Broad-necked, barbed with a diverging stem	10
Type 2	Broad-necked	0
Type 3	Broad-necked, with an incurvate stem base	1
Type 4	Broad-necked, barbed, with a non-diverging stem	6
Type 5	Broad-necked, shouldered, with a non-diverting stem	3
Type 6	Ovate or bipointed in outline, unnotched and unstemmed.	8
Type 7	Narrow-necked, barbed, with a diverging stem	0
Type 8	Narrow-necked, shouldered, with diverging stem	0
Type 9	Narrow-necked, barbed, with a non-diverging stem	10

Type 10	Narrow-necked, shouldered, with a non-diverging stem	5
Type 11	Ovate in outline, side-notched and unstemmed	1
Type 12	Triangular blade, and side-notched and unstemmed	0
Type 13	Unnotched and unstemmed, with an incurvate base	0
Type 14	Triangular blade with base that is not incurvate and is unnotched and unstemmed	0
Type 15	Both side -notched and stemmed	0
Type 16	Unstemmed with an unmodified or only slightly retouched base	0
Incomplete		27
Complete		15
Total Measurable Projectile Points		42

Type 1 and Type 9 projectile points appear have the highest frequency in the Luscher Collection at 23-percent respectively, followed by Type 6 at 18-percent, then Type 4 at 14-percent (Figure 43).

Patterning and ages of point types include the following: Type 1 through 6 tend to appear in sites older than 1,750 years BP. However, Type 5 Is identified in sites through at least 1,250 years BP. Point Types 1 through 6 tend to be absent in sites dating later than 700 years BP. While Type 9 is noted as a major point type but its frequency in Portland Basin sites increases around 700 years BP and reaching its apex at the time of contact 250 years BP (Pettigrew 1981:109). Type 10 is also common but appears to occur most frequently between 1,700 to 700 years BP.

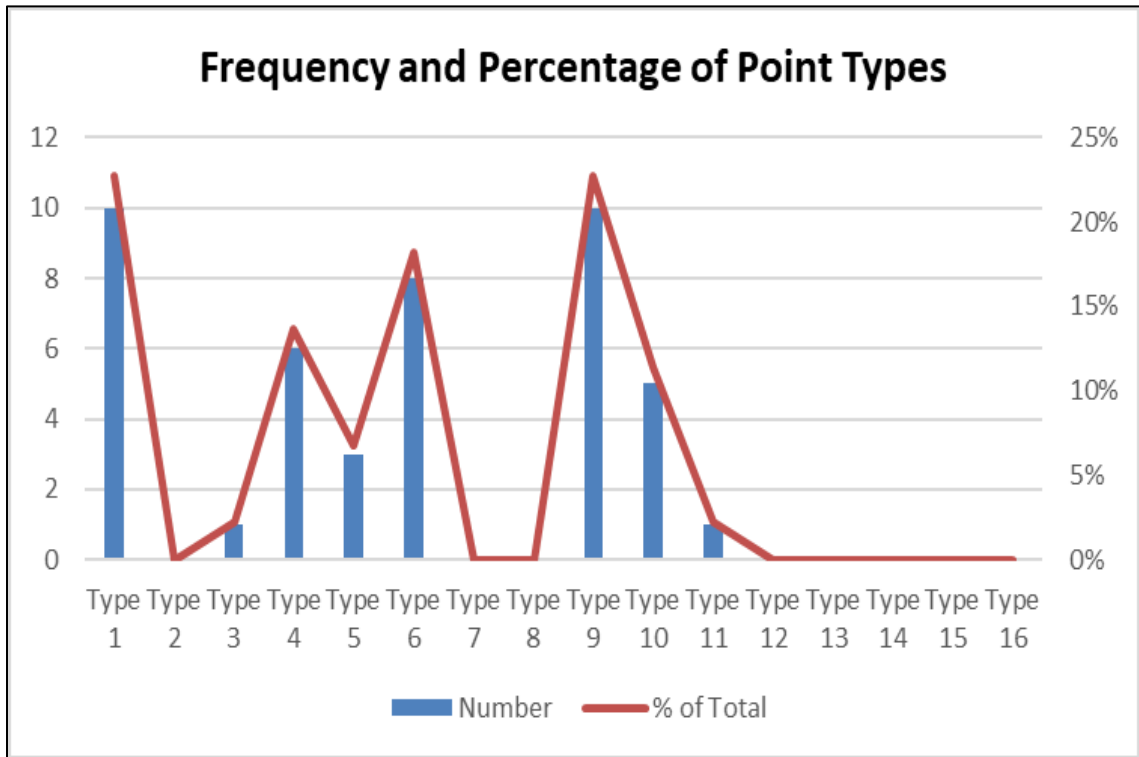


Figure 57: Frequency and Percentage of Point Types.

Pettigrew 1981 uses neck widths as a distinguishing dimension for points, where narrow-neck points are under 0.7 cm and broad-neck points are over 0.8 cm. In general, broad-necked points tend to be larger in their dimensions compared to narrow-neck points. According to Pettigrew 1981, neck width varies significantly with time (Pettigrew 1981:105). Two major modes are distinguishable in Pettigrew's analysis for comparable site 35MU0009 (Merrybell Site), one at 0.5 cm and one at 1.0 cm, with some overlap between them.

Like the Merrybell site, this pattern is noticeable in the Luscher Collection, where narrow-neck points spike at 0.5 cm, dominating the collection. However, broader-necked points are also present peaking in frequency at 1.0 cm in width size and gradually diminishing in occurrence until 1.75 cm (Figure 44). There are three lanceolate points identified in the Luscher Collection; these point types are typically used for hunting in the foothills (Aikens et al. 2011).

The *Discussion* section further examines the chronology and occupational use of the Luscher Site.

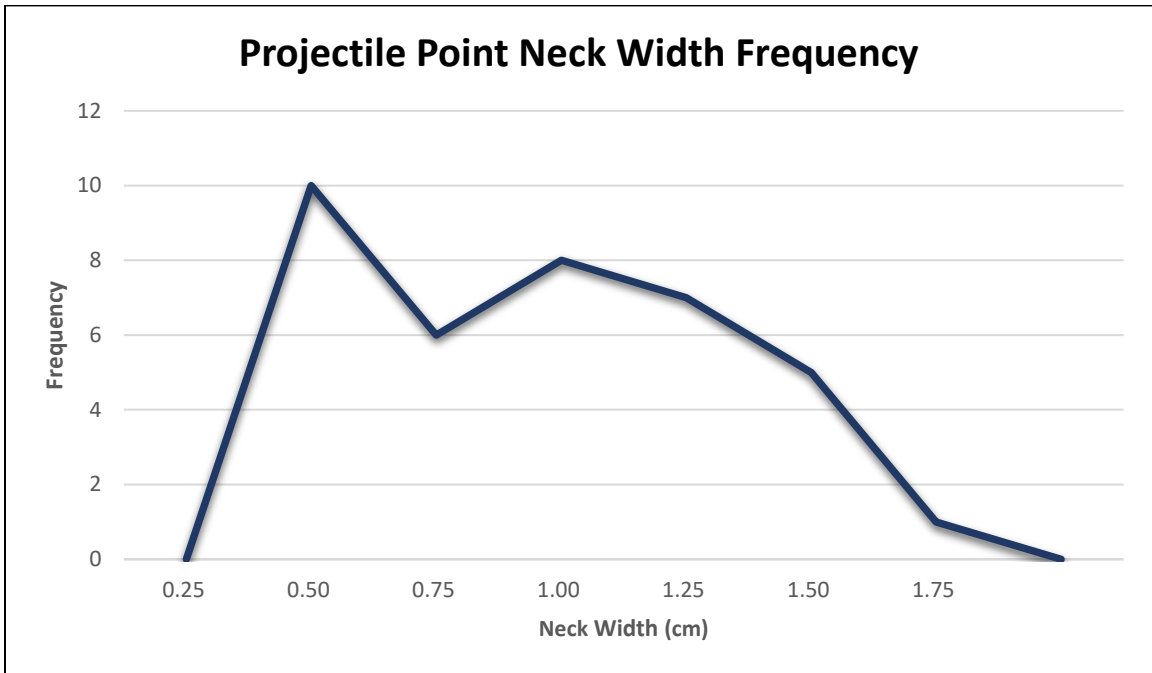


Figure 58: Projectile Point Neck Width Frequency in the Luscher Collection.



Figure 59: Type 1 Projectile Point – LSCH-010.



Figure 60: Type 3 Projectile Point – LSCH-035



Figure 61: Type 4 Projectile Point – LSCH-012



Figure 62: Type 5 Projectile Point – LSCH-015.



Figure 63: Type 6 Projectile Point – LSCH-025



Figure 64: Type 9 Projectile Point – LSCH-031.



Figure 65: Type 10 Projectile Point – LSCH-033



Figure 66: Drill – LSCH-051.



Figure 67: Obsidian Point Tip – LSCH-067.



Figure 68: Scraper – LSCH-022.



Figure 69: Flaked crescent, Late Holocene (Late Pacific/Merrybell Phase) – LSCH-046.



Figure 70: Obsidian scaper – LSCH-053

Isolate 02

Identified during the intensive pedestrian survey for Area B, Isolate 02 is situated on the west bank terrace of an unnamed creek. The unnamed creek trends east to west and is a tributary to Jackson Creek, which eventually merges with McKay Creek approximately four miles to the southwest. McKay Creek is part of the Dairy-McKay Watershed, which drains nearly 231 square miles in the northern part of the Tualatin River Watershed. McKay Creek drains from the north into the Tualatin River and originates in the Tualatin Mountains. Vegetation surrounding Isolate 02 includes various sword ferns, salal berry, Himalayan blackberries, Oregon rose, moss, maple trees, and cedar. Disturbances in the area includes vegetation clearing through tree farming practices. The car parts appear to be the front fenders of a possible Ford truck dating between the late 1940s to the mid-1950s. See Figure 60 for possible examples.

Isolate 02 is comprised of two metal car parts, which appear to be the front panels of a car bumper. Car part measurements:

- 1) 68 ½ inches long by 7 inches wide.
 - a. Crimped portion of Car part 1 measures 24 inches by 16.5 inches wide.
- 2) 39 inches long by 15 inches wide.



Figure 71: Car part 1 (front panel) located next to unnamed creek.



Figure 72: Car part 1 (front panel) located next to unnamed creek.



Figure 73: Mid-section of car part 1 (side of front panel) and car part 2 located next to unnamed creek.

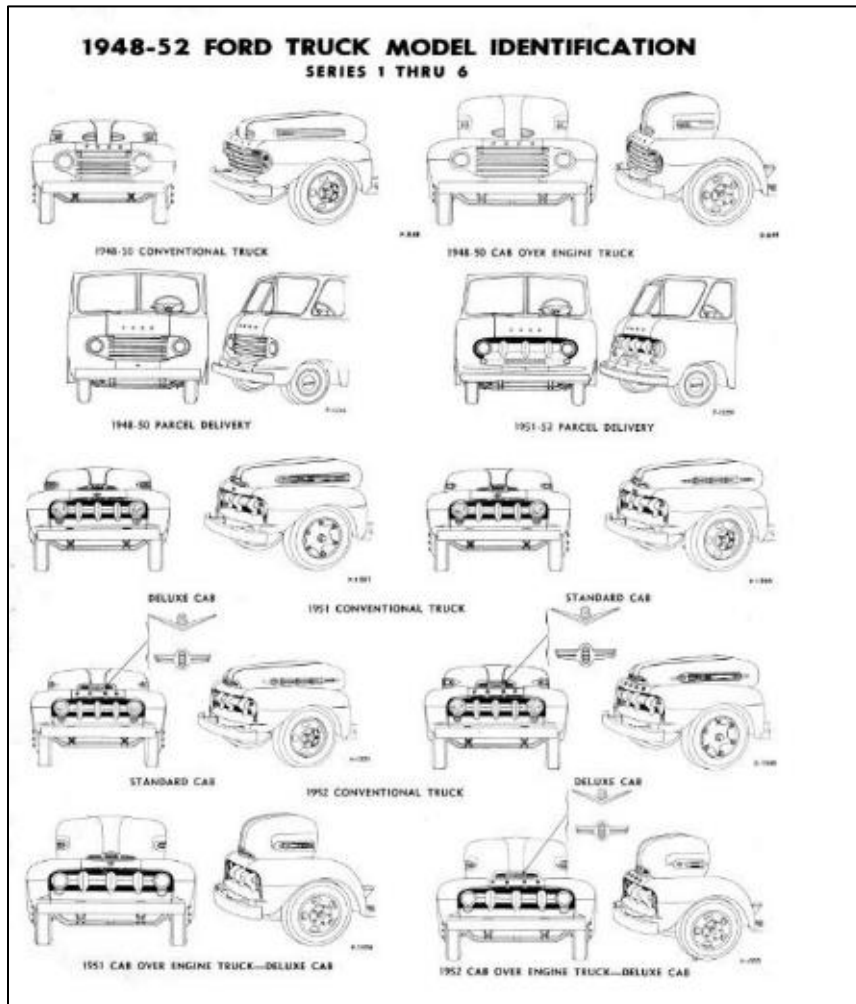


Figure 74: Ford truck model identification examples reproduced from Ford-trucks.com/forums

Isolate 03

Isolate 03 was identified on the surface during the intensive pedestrian survey in the western portion of Area C. The isolate is located a flat area, once part of a tree farm and is approximately 50 meters (164 feet) west of Area B. Evergreen trees are planted in neat rows with a dense blackberry undergrowth.

Isolate 03 is a single non-diagnostic white porcelain sherd, possible body of an unknown vessel type. The sherd measures 1 inch by 3/4 inch (Figures 61-62). The porcelain sherd is hard, compact and is comprised of a somewhat vitrified paste with a semi-gloss, transparent glaze. No motif is evident on the sherd. Possible vessel forms include bowl, cup, pitcher, plate, platter, saucer, or tea pot (Maryland Archaeological Conservation Lab 2016)

The porcelain sherd observed in Area C does not exhibit any distinguishing characteristics of a historic vessel. However, there are no diagnostic features such as a printed or impressed mark i.e. the manufacturer's trademark.



Figure 75: Isolate 03, porcelain sherd. Plan view.



Figure 76: Isolate 03, porcelain sherd. Plan view.

Discussion

Land Use and Context/Extent of Site

The Luscher Site is situated within the northeastern portion of the Tualatin Basin. The Tualatin Basin is in the northern portion of the Willamette Valley and is characterized by rolling hills and long alluvial plains that was affected by large scale flooding until 12,500 years ago.

Since the 1940s, the southern portion of the property has been continuously utilized and managed as a tree farm by the Luscher family. The southern portion of the property was heavily managed until the late 1990s to early 2000s (Carol Luscher, personal communication 2019). Many of the artifacts in the Luscher Collection were found during agricultural activities related to the tree farm on the property and predominately in the vicinity of a natural spring (Carol Luscher, personal communication 2019).

Today, the northern portion of the property (Area A), which extends north into the foothills of the Tualatin Mountains, has remained relatively intact with older growth cedar and oak trees interspersed with what appear to be younger hemlocks and maple trees. The understory and floor are covered by sword ferns, salal berry, and poison oak. According to the landowner, no artifacts have been found in the northern portion of the property.

Possible site disturbances include natural erosion from a spring on the property and through private land use activities. These activities include the construction and maintenance of a gravel road on the property and sediments may have been regularly reworked and obscured traces of the larger features or other persistent use practices related to the Luscher Site. There is also a natural spring adjacent to Isolate 01 and is currently used as a water source for the landowner. Over the years, it is possible that the discharge or flow of the spring could have affected the surrounding landscape from flooding the lowland areas near the knoll where the site was identified. The area immediately to the west of the natural spring was saturated at the time of the survey. Also, there was areas of mounded soil surrounding the natural spring and ponding has occurred on-site. The landowner has maintained use of the natural spring since moving onto the property.

The proximity of the gravel road and natural spring to Isolate 01 and location of the Luscher Collection may have altered the extent of the site. Additional research should include whether the lithic material both in Isolate 01 and the Luscher Collection either represents material that has been merged as a result of agricultural activities, such as plowing or the construction and maintenance of a gravel road, and/or other processes unrelated to their original formation, or is it a single, archaeological resource.

The Luscher Site itself includes Isolate 01 and the Luscher Collection, was identified on a knoll bound to the north by a natural spring and to the south by an unnamed creek that is a minor tributary of McKay Creek. The knoll is 254 feet (77.5 meters) above sea level and

is situated in the southwest foothills of the Tualatin Mountains. Materials identified at Isolate 01 were sparse (n=6) and typically identified within 10 to 60 cmbs on the knoll adjacent to the natural spring. No associated tools or features were identified during the archaeological survey. However, tools were identified in the Luscher Collection. The Luscher Collection consists of 89 artifacts found by the landowners on the same knoll where Isolate 01 was identified from the archaeological survey. The collection is comprised of projectile points or possible projectile point fragments, scrapers, unifacially flaked stone tools, and lithic debitage of similar material identified at Isolate 01.

The debitage from Isolate 01, coupled with the artifact assemblage from the Luscher Collection, are like other assemblages found in the area, including archaeological site 35WN34 identified during the literature review. With all this in mind, the Luscher site appears to be a relatively shallow site with a flake identified at a maximum depth of 60 cmbs. The Luscher Collection was identified primarily through plowing activities, which generally does not exceed 40 cmbs. The extent of the site appears to keep to the knoll located south of the natural spring on the property.

Age of Luscher Site

The various point types and range of material represented in the Luscher Collection suggests multiple occupation times and regular use of the area for an extensive range of time, starting towards the end of the Middle Holocene (~3,000 years BP) and/or the beginning of the Late Holocene (3,000 to 250 years BP); this period includes the Middle and Late Pacific Phases for the Northwest and the Merrybell Phase (3,000 to 1,500 years BP) and Multnomah Phases (1,500 to 250 years BP) for the Portland Basin.

According to Pettigrew diagnostic markers of the Merrybell Phase include the following artifact classes: stemmed drills, flaked cylindrical bipoints, flaked crescents, graphite, and perforated groundstone pendants (Pettigrew 1981:119). Sites belonging to the Merrybell Phase are characterized by a proportion of broad-necked projectile points, Types 1-5, of at least 35-percent (Pettigrew 1981:119). Pettigrew also mentions that Types 12-16 are completely absent during this phase.

The Luscher Collection has a higher number of Type 1, larger broad-necked points, and Type 9, smaller narrow-necked points. A flaked crescent is also present in the Luscher Collection (Figure 55), which is noted as diagnostic marker of the Merrybell Phase in the Portland Basin (Pettigrew 1981:119). A crescent flake was noted by Pettigrew (1981) at the Merrybell Site (35MU9); which dates to the Late Holocene (3,000 to 1,500 years BP). Pettigrew also mentions that the specimens in the category of flaked crescent are distinct from crescents identified in the Great Basin (Pettigrew 1981:19). Using Pettigrew's flaked crescent sub-class, these specimens are small measuring roughly 4 centimeters in length and tend to be thin and narrow. Edges are dulled and polished with the faces also polished with the flake scar ridges worn down. It is possible that flaked crescents were ornaments rather than tools (Pettigrew 1981). Of the ten sites analyzed by Pettigrew, this kind of tool

only occurs at 35MU9 and has been noted at the Kersting and Lady Island Sites in the Lower Columbia.

In comparison, crescents identified in the Great Basin are associated with other diagnostic lithic tools, generally with stemmed points (Jones et al 2003; Smith 2008:13; Tadlock 1966). Crescents from the Great Basin are typically bilaterally symmetrical and are bifacially pressure flaked with the wing portion sharpened (Tadlock 1966). Crescents in the Great Basin have been identified in assemblages dating to the Early Holocene (12,900 to 9,000 years ago) (Aikens et al. 2011:61).

Currently, the identified flaked crescent in the Luscher Collection measures 4.89 centimeters with a maximum width of 1.78 cm and one face appears to be polished. Generally matching the description Pettigrew provides for flaked crescents represented in the Portland Basin. However, it is possible that the object may relate to an earlier phase in the Lower Columbia and Portland Basin based on its association several stemmed and lanceolate points identified in the collection.

Luscher Site: Potential On-Site Activities

With Sauvie Island located 8.0 miles (12.8 kilometers) to the east-northeast of the Luscher Site, on the eastern side of the Tualatin Mountains and was possibly accessible by the Logie Trail, which is noted as a trail on the Robert L. Benson Map reproduced in Mapes 2017. Other trails are noted in the vicinity of the Luscher Site, many leading to the northeastern side of the Tualatin Mountains. The natural spring adjacent to the site offers easy access to fresh water and the knoll provides a good area for setting up camp when moving along the trails between the different sides of the Tualatin Mountains.

Although the Luscher Collection was removed from its original context through private land use practices, we know the general area in which it was found and based on the items in the Luscher Collection, we can also make a few hypotheses about the activities that took place at the site.

The Luscher Site assemblage (predominately from the Luscher Collection) suggests that this was a short-term activity site used for hunting and food processing. As noted earlier, the site is situated on a knoll that leads into the foothills of the Tualatin Mountains, suggesting that the site may represent a local adaptation where multi-activity sites were located on higher terraces and may represent hunting and/or berry gathering activities by people who wintered in the floodplain or riverine areas (Silvermoon 1990).

Based on the representation of various sized projectile points and several identified scrapers in the Luscher Collection, this suggests that different fauna may have been hunted in the area and processed on-site. Also, the associated lithic debitage identified in Isolate 01 corresponds with materials present in the Luscher Collection, including several reddish CCS flakes. This corresponding debitage suggests that tool manufacture and lithic

reduction may have taken place at the site. Along with various point types and tools represented in the Luscher Collection, several material types have been noted as well, including obsidian. Pettigrew (1981) notes that obsidian use appeared to increase in later sites and may relate to the introduction of the bow and arrow. With obsidian representing 11-percent of the material, this suggests possible extra-local trade relations occurring in the Tualatin Basin and that the site may have been occupied during periods of technological transition (Silvermoon 1990).

Other identified artifacts from the archaeological survey include an FMR cobble with possible use wear. The presence of this artifact further suggests that the site may have been used for food processing. Ms. Luscher also found a part of basalt bowl in Area B, which she showed surveyors during the archaeological survey. The presence of the basalt bowl suggests intensive food processing in the vicinity of the site. Notable sites in the vicinity including 35CO3, Merrybell, Cholick, and Pumphouse, also have evidence of intensive food processing with basalt bowls present in their assemblages.

Table 11: Summary of shovel test probe (STP) soils and results.

STP	Description	Reason for Termination	Findings
1	<p><u>0-20 cmbs:</u> Reddish brown silty clay with less than 5% roots. Less than 1% pebble and sparse charcoal fleck at 15 cmbs.</p> <p><u>20-30 cmbs:</u> Dark red clay with increase in subangular gravel with depth.</p> <p><u>30-60 cmbs:</u> Yellow red clay with decomposing bed rock inclusions. Subangular gravel and cobbles at 5% increase with depth.</p>	At Depth	Negative
2	<p><u>0-13 cmbs:</u> brown silty clay with many angular basalt gravels.</p> <p><u>13-70 cmbs:</u> Reddish brown clay increasing in clay with depth. Little to no subround pebbles. Charcoal lens between 26 and 35 cmbs in northeast profile. Large root extends from 38 to 60 cmbs in the northeast profile.</p> <p>Chalcedony flake at 17 cmbs</p>	At Depth	Positive - Chalcedony flake at 17 cmbs
3	<p><u>0-10 cmbs:</u> Greyish brown silt with duff. Topsoil. CCS flake at 10 cmbs.</p> <p><u>10-38 cmbs:</u> Reddish brown silt with many rootlets. Medium to loose compaction.</p> <p><u>38-60 cmbs:</u> Reddish brown silt with subangular gravel in matrix, less than 5%. More compact with depth.</p> <p><u>60-90 cmbs:</u> Reddish brown silt with dark grey peds (soil concretions). Peds increase with depth.</p> <p>Water table at 88 cmbs.</p> <p><u>90-93 cmbs:</u> Yellowish grey silt.</p>	At Depth - Water Table	Positive - CCS flake at 10 cmbs
4	<p><u>0-12 cmbs:</u> Grey/tan silty sand with angular gravel, import fill, compact.</p> <p><u>12-100 cmbs:</u> Dark reddish-brown clayey silt/fine sand with charcoal flecks and decomposing bedrock, less than 5%. Iron concretions, moist.</p> <p>Seeds noted between 50 and 60 cmbs.</p>	At Depth	Negative
5	<p><u>0-30 cmbs:</u> Dark brown silty clay with few roots, flecks of charcoal. Few round gravels.</p> <p><u>30-60 cmbs:</u> Reddish brown silty clay with flecks of charcoal. Small round gravel.</p>	At Depth	Negative

6	<p><u>0-4 cmbs:</u> Duff</p> <p><u>4-10 cmbs:</u> Greyish brown silt loam, no gravels. Loose and friable with peds. Less than 10% organics and roots.</p> <p><u>10-34 cmbs:</u> Greyish brown silt loam with less organics. Impassable tree root at 34 cmbs.</p>	Impenetrable Roots	Negative
7	<p><u>0-25 cmbs:</u> Dark brown silty clay with very few subround pebbles. Two large roots extending from 13 to 25 cmbs.</p>	Impenetrable Roots	Negative
8	<p><u>0-100 cmbs:</u> Dark brown clayey silt with many roots and rootlets. No gravel and few charcoal flecks. Loose to moderately compact, moist.</p>	At Depth	Negative
9	<p><u>0-30 cmbs:</u> Brown silty clay with many fine-medium roots. Less than 2% subround to subangular pebbles.</p> <p><u>30-40 cmbs:</u> Olive brown clay mottling.</p> <p><u>40-70 cmbs:</u> Dark greyish brown clay with less than 1% subround pebbles. Few fine roots.</p>	At Depth	Negative
10	<p><u>0-90 cmbs:</u> Brown silt loam with sparse charcoal flecks and few organics.</p> <p><u>90 cmbs:</u> Grey silt with no gravel. Possible C-horizon.</p>	At Depth	Positive - CCS flake at 50 cmbs
11	<p><u>0-6 cmbs:</u> Duff/turf</p> <p><u>6-60 cmbs:</u> Brown silty clay with few subround to subangular gravel. Few small roots and pieces of charcoal, moist.</p>	At Depth	Negative
12	<p><u>0-6 cmbs:</u> Duff/turf</p> <p><u>6-60 cmbs:</u> Brown silty clay with few subround to subangular gravel. Few small roots and pieces of charcoal, moist.</p>	At Depth	Negative
13	<p><u>0-50 cmbs:</u> medium brown silty clay with less than 5% gravel, iron concretions moderately abundant, charcoal and decomposing organic material present.</p>	Water Table; Inundated	Negative
14	<p><u>0-33 cmbs:</u> medium grey brown silt with angular to subangular gravel (20-30%). Gravel decreases with depth. Charcoal fleck throughout and medium to loose compaction.</p> <p><u>33-42 cmbs:</u> medium grey silt mottled with orange. Less than 5% gravel. Medium compaction, moist.</p>	Water table	Negative

15	<p><u>0-30 cmbs:</u> dark brown silty clay with few roots, few small brick and metal fragments. Flaked cobble - possible groundstone at 30 cmbs.</p> <p><u>30-60 cmbs:</u> Dark brown mottled with reddish brown silty clay with few brick and metal fragments.</p> <p>C-Horizon at 60 cmbs.</p>	At Depth	Positive - Flaked cobble, possible groundstone at 30 cmbs
16	<p><u>0-30 cmbs:</u> Reddish brown clay with less than 5% gravel, minimal iron concretions. Red CCS flake at 30 cmbs.</p> <p><u>30-100 cmbs:</u> Greyish brown clayey silt, becomes blocky with depth. Reddish mottling throughout.</p>	At Depth	Positive - Red CCS flake at 30 cmbs
17	<p><u>0-65 cmbs:</u> orangish brown silt with less than 5% subangular gravel, fine-medium roots present.</p> <p><u>65-100 cmbs:</u> Grey silt with orange/brown mottling. No gravel present. Large root in west wall.</p>	At Depth	Positive - CCS flake shatter at 60 cmbs
18	<p><u>0-38 cmbs:</u> Dark brown silty clay with few roots.</p> <p><u>38-57 cmbs:</u> Brownish grey mottled with brown clay, unconsolidated and moist.</p>	At Depth	Negative
19	<p><u>0-27 cmbs:</u> Dark brown silty clay with few roots.</p> <p><u>27-40 cmbs:</u> Dark brown mottle with brown decomposing rock.</p> <p><u>40-50 cmbs:</u> C-Horizon, substratum</p>	At Depth	Negative
20	<p><u>0-1 cmbs:</u> Duff</p> <p><u>1-18 cmbs:</u> medium brown silt loam with minimal subround gravel, loose. Some fine roots.</p> <p><u>18-63 cmbs:</u> Light brown friable silt loam. No gravel present. Redox observed throughout level.</p> <p><u>63-70 cmbs:</u> Greyish brown mottled compacted silt loam.</p>	At Depth	Negative
21	<p><u>0-3 cmbs:</u> Organic duff</p> <p><u>3-50 cmbs:</u> Dark reddish-brown clayey silt, compact. Large wood debris with less than 5% gravel. Charcoal flakes throughout, moist.</p> <p><u>50-98 cmbs:</u> Dark greyish brown silty clay with charcoal flecks, moist.</p>	At Depth - Water Table	Negative
22	<p><u>0-30 cmbs:</u> Dark brown silty clay with small pebbles and redox.</p> <p><u>30-45 cmbs:</u> Dark brown mottled with brown clay.</p>	Water Table	Negative

23	<u>0-19 cmbs:</u> Brownish silt loam with many fine roots and no gravel, moist. <u>19-65 cmbs:</u> Reddish brown silty clay. Becomes more compact with depth.	At Depth	Negative
24	<u>0-2 cmbs:</u> Duff <u>2-92 cmbs:</u> Dark reddish-brown silty clay with less than 5% gravel.	At Depth - Water Table	Negative

Summary and Recommendations

This report described the results of an archaeological survey by Katherine L. Tipton and Dr. Shelby Anderson of the Luscher Property, a component of Katherine Tipton's Master's Thesis Project.

Background research conducted prior to the field survey indicated that no previous archaeological surveys have been performed on the property and that no previously recorded historical or archaeological resources were in the Luscher Property project area.

In summary, the archaeological field survey consisted of a pedestrian survey, both reconnaissance and intensive, and subsurface testing of the entire 89-acres. A total of three isolates were identified during the field efforts. Isolate 01 was identified during the subsurface portion of the archaeological survey in the vicinity of where the landowner reported finding artifacts. Because Isolate 01 was identified in the area where other artifacts have been found, Isolate 01 and the Luscher Collection has been noted as the Luscher Site.

The most surprising factor with the Luscher Site is the low density of debitage identified during the April 2019 field efforts. While the area may have been used regularly for seasonal task specific activities such as hunting, resource gathering and processing

Possible dates for the Luscher Site reflect multiple occupations starting as early as 3,000 years B.P., with potentially multiple components associated with the site. Relatively few sites of this age in the Tualatin Basin have been carefully documented and/or are underrepresented in the archaeological record. More surveys on properties in the vicinity are also warranted as only limited archaeological investigations have been carried out in the area.

A low density of lithic material is present on the Luscher Property. Additional testing is needed to further assess the integrity of the identified cultural deposits. Future testing should include test excavation units around STPs 15, 16, 17, which are located near the natural spring on the Luscher Property. These units have the potential to further reveal archaeological features and better establish the subsurface integrity of the site.

Currently, the site remains unevaluated for eligibility to the National Register of Historic Places (NRHP) until further testing.

Although the current project was modest in scope; it does shed light on new data including the identification of archaeological material present on the Luscher Property and has the potential to further connect how people living in the Tualatin Basin were influenced by adjacent regions, including the Portland Basin and Lower Columbia. This includes starting to better assess archaeological site distributions in the Tualatin Basin, further researching

broader settlement patterns, and looking into environmental processes affecting archaeological sites before and after they were occupied in the area.

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