

SKÖL!: ALCOHOL CONSUMPTION AND SWEDISH IMMIGRANT IDENTITY IN THE
PROHIBITION ERA AT APEX LOGGING CAMP

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ABSTRACT

SKÖL!: ALCOHOL CONSUMPTION AND SWEDISH IMMIGRANT IDENTITY IN THE PROHIBITION ERA AT APEX LOGGING CAMP

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The Saginaw and Manistee Lumber Company operated the Apex logging camp from 1928 to 1936. Nestled within what is now the Kaibab National Forest, Apex was home to around 150 residents, many of whom were Scandinavian immigrants and workers fleeing the Dust Bowl. While the majority of Apex's habitation overlapped with both state and federal Prohibitions, archaeological evidence shows alcohol consumption was a key element to the camp's culture both during and after Prohibition. Assemblages of alcohol-related materials suggest drinking was a group activity for the camp's Swedish community, with residents gathering together to consume beer and liquor. Using GIS mapping of assemblage concentrations alongside archival evidence, this thesis will examine Apex's culture of alcohol despite the legal limitations of the Prohibition era and the typical restrictions found in contemporary company labor towns. This thesis will examine how alcohol consumption was pivotal in the development of shared identity among the camp's population, both as members of a unified working class, and as a means of community building for the Swedish immigrant residents.

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Chapter 1: An Introduction

From 1928 to 1936, the Saginaw and Manistee Lumber Company operated the Apex logging camp on what is now the Kaibab National Forest. Nestled within Northern Arizona's ponderosa pine forest, the camp is about six miles south of Grand Canyon Village on the Grand Canyon's South Rim. The site today is bisected by Forest Service Road 2607 near the Grand Canyon Airport and leased National Forest farmland. In its heyday, Apex was home to around 200 men, women, and children.

Apex contains a wealth of knowledge both archaeologically and historically. Previous scholarship on the site has discussed the scope of archaeological data and how it can be used to investigate different facets of life at a Depression-era logging camp, such as hygiene, toys, gender, childhood, and industry (e.g., Dale and Hagan 2022; Dale and Maddock 2023; Levesque 2024; Maddock 2024; Martell 2025; Richmond 2017; Stein 2006). However, no research has specifically focused on the camp's overlaps with the American Prohibition Era (1920 – 1933, henceforth referred to as “Prohibition”) or the social significance of alcohol consumption at Apex. Despite Prohibition lasting for five of the camp's eight years in operation, alcohol was still consumed by the workers both during and after Prohibition. Understanding rates of consumption, where at the camp that consumption was happening, and how the workers obtained alcohol even when it was illegal, allows for interpretations into how workers valued alcohol, how workers socialized with each other, and how national identity played a role in that socialization.

Introducing Apex.

The 1930 census (U.S. Bureau of the Census 1930) recorded around 200 people at what it dubbed the “Saginaw Lumber Camp.” This included 18 families with 41 children (Martell 2025). While the Swedish workers at Apex are a focus of this paper and will be discussed in detail in Chapter 5: Interpretations, they were far from the only immigrants living and working at the camp. Apex included workers from Mexico, Yugoslavia, Russia, Canada, Poland, Norway, and the United States (Maddock 2024:57; U.S. Bureau of the Census 1930).

Structures at the site were inherently temporary, consisting of small collapsible houses and slightly refurbished train cars. The larger houses broke down into two large pieces for transport and usually contained a living room, small kitchen, and one bedroom (Richmond 1988:78; Figure 1.1). These houses acted as modest but private quarters for workers living on-site with their wives and children. Most of the structures at Apex had small, wood-burning stoves for cooking and heat. Both the schoolhouse and men’s bunkhouse were constructed from modified train cars. Commissary, gas, and water cars remained on the spur tracks so they could be easily moved between residential, work, and reloading areas. Fresh water was supplied to the camp through a gravity-feed system; there was no running water at Apex aside from this (Richmond 2017:84). Other camp structures were a timber sales office and several sheds or garages. The exact number of structures at Apex is unknown, as buildings were hauled away to the next campsite after the logging contract was fulfilled. While the remains of wooden foundations indicate where buildings once were, it is difficult to identify exactly where each structure was located. The only camp maps found thus far were created by researchers decades after the camp was disassembled. After the logging contract ended in 1936, work crews from the Saginaw and Manistee Lumber Company packed up the camp’s structures, pulled up the rail lines, and salvaged the remaining locomotives for scrap metal (Richmond 1988:87).



Figure 1.1: Housing for the Saginaw and Manistee's logging camp no. 17 being transported via train near Williams, Arizona, 1922 (Williams Historic Photo Collection Project).

The Apex site is divided by the logging spur into two distinct sides: the side to the west of the spur had the majority of the family housing and site administration, while the east side of the spur housed single laborers in a communal setting (Figure 1.2). Administrative structures, like the schoolhouse and timber sales office, were on what has been dubbed by the Apex, Arizona Archaeology Project as the “management side,” while the camp kitchen was on the “laborer side.” These monikers do not perfectly reflect how the camp population was split, as will be discussed later in Chapter 5: Interpretations, but they do reflect the functions of each side of camp.

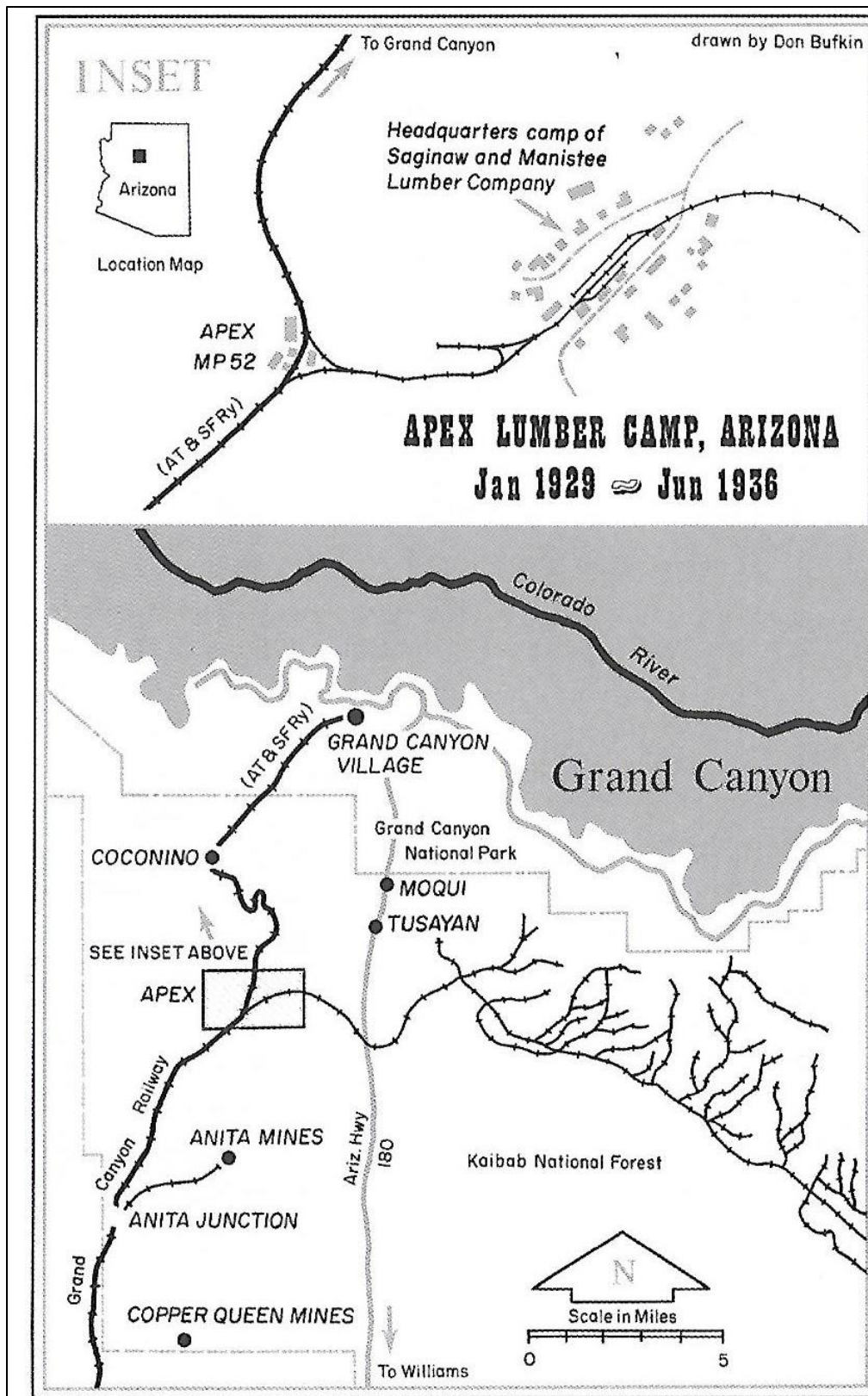


Figure 1.2: Map of Apex's two sides (top), and the camp's location in relation to other labor camps and features of Northern Arizona (bottom). Map by Don Bufkin (Richmond 1988:77).

The Apex schoolhouse opened in 1929 and provided classes for eight grade levels, though all eight were rarely filled. Generally, the total number of students did not exceed 15 children (Richmond 2017:84; Figure 1.3). The Apex school was one of two unsegregated schools in the area, the other located at the Anita mining camp, as seen in Figure 1.2. This meant that white, Hispanic, and Native American children were all allowed to attend together. Because Apex's logging community was overwhelming white, its unsegregated status was mainly theoretical.

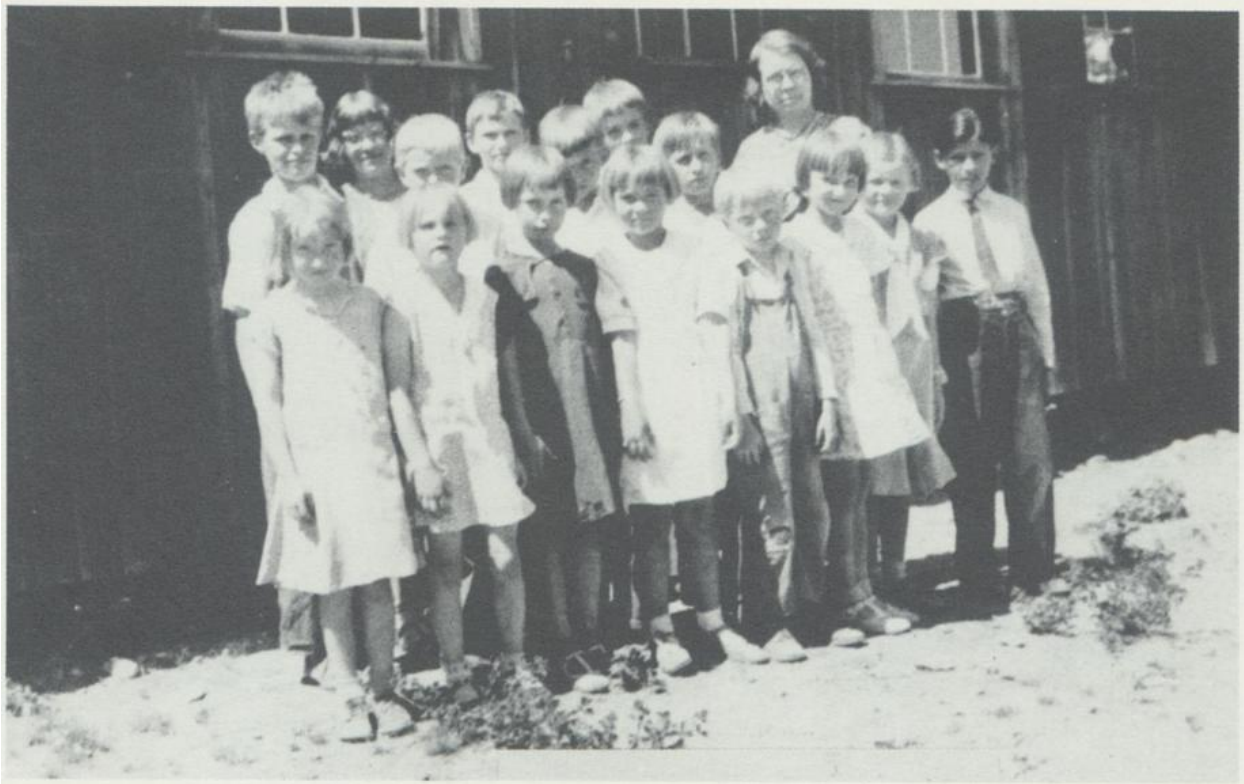


Figure 1.3: Teacher Rose B. Wilson with her class in front of the Apex schoolhouse (Richmond 1988:81).

Archaeology at Apex.

Apex's current material record consists of large can dumps, trash and milled lumber scatters, limestone paths and piles, culturally modified trees, wooden railroad ties, and wooden foundations for the camp's portable structures. At Apex, "culturally modified trees" denote older

growth pine trees that were modified by the residents of Apex. This includes old phone wires and electrical equipment hanging from branches, nails hammered into trunks, and rail spikes stuck into trees to make climbing easier.

Archaeologically, the site has a history of disturbance and looting. Through the 1970s, bottle hunters likely looted the majority of the intact glass bottles from the site. Other materials valuable to collectors, such as glass marbles and coins, may have also been looted based on their marked absence at the camp today. Scrap metal gathering still occasionally occurs (Charles Webber 2024, pers. comm.).

Scholarship on Apex began with the work of railroad historian and Williams resident Al Richmond in the 1980s. In his publications on Apex, Richmond details the daily lives of the camp's residents, including their consumption habits, work processes, and home lives (1988, 2017). Part of this research involved recording oral histories from past residents on their experiences not just at Apex, but in many of Northern Arizona's railroad towns through the Depression era (e.g., Matson 1984; Setterland 1984; Wilson 1984). While Richmond has published some of the most thorough research on Apex, much of his work focuses on the Grand Canyon Railway (1988, 2017).

Collaboration between the Apex, Arizona Archaeology Project and the Williams Historic Photo Project has yielded photographs of the Saginaw and Manistee Lumber Company's Williams mill, logging camps throughout the Kaibab, and a scarce few of Apex itself. This previous research has created a fairly thorough history of the site.

In 2023, this region of the Kaibab National Forest was designated part of the Baaj Nwaavjo I'tah Kukveni Ancestral Footprints of the Grand Canyon National Monument. While the land on which Apex rests certainly has Indigenous history, this thesis exclusively addresses

the 20th century habitation and its nature as a historical site. Descendant groups affiliated with this area include Havasupai, Hopi, Hualapai, Kaibab Band of Paiute Indians, Las Vegas Tribe of Paiutes, Moapa Band of Paiute Indians, Paiute Indian Tribe of Utah, Shivwits Band of Paiutes, Navajo Nation, San Juan Southern Paiutes, Yavapai-Apache, Zuni, and the Colorado River Indian Tribes (Grand Canyon Trust 2026).

This thesis research explores how illicit products contributed to a sense of shared identity among workers at the Apex logging camp. While there have been ample books, articles, and documentaries made about the history of the American Prohibition, archaeological research on the topic has been almost entirely absent from publication. Additionally, previous archaeological studies of vice and consumption have not focused solely on any Arizona sites or populations.

After spending the 2024 field season with the Apex, Arizona Archaeology Project, a field school run by Northern Arizona University and the Kaibab National Forest, I noticed how ubiquitous malt syrup cans and broken alcohol bottles were at the site. The consumption of alcohol was clearly integral to the culture of the camp both during and after Prohibition, and potentially included the illicit brewing and obtaining of alcoholic beverages. In this project, I answer the following research questions:

1. How did alcohol consumption patterns vary across the different areas of the Apex site (i.e., family housing versus communal housing versus management housing)?
2. What strategies did people use, both as consumers and producers, to continue the production and distribution of alcohol in the Prohibition era and immediately after?
3. How did the Scandinavian immigrant residents of Apex use consumption to develop or reject an “American” identity?

Chapter 2: Methods & Theory

To answer the research questions laid out in Chapter 1, I chose multiple methods of data collection to develop a holistic depiction of Apex. Because historical documentation can at times be scarce, it was important to rely on several different lines of evidence. For my theoretical framework, I decided the site's status as a company town with distinct classes of managers and laborers could be understood through Marxist and world-systems approaches.

Methods.

While artifact data is important in determining the types of products consumed at Apex, where that consumption was happening, and how it translated to lifeways at the camp required analyzing the physical environment and archival resources as well.

Archival Material Analysis.

For this project, archival materials comprised a variety of documents, photographs, logs, and oral histories to develop an idea of what the Apex camp was like and who resided there. The majority of the SMLC's records are held by NAU Cline Library's Special Collections. These records roughly cover the company's entire tenure in Northern Arizona, with materials dating from 1902 to 1952, when the company merged with the Arizona Lumber and Timber Company to form the Southern Lumber Company. Mentions of Apex in these files were few and far between. Still, these company records were helpful in understanding the full scope of the Saginaw and Manistee's operations in Northern Arizona, and included financial information such as pay rates. Archival materials from Al Richmond's research into Apex are also at Cline's

Special Collections, including the recordings of oral histories he conducted around 1984 with former Apex residents.

Historic photographs of the SMLC's operations in Williams and of their lumber camps can be found through the Williams, Arizona Historic Photo Collection. This collection is accessible digitally through the Arizona Memory Project. Additional digitized documents about Arizona's prohibition of alcohol were also found on the Arizona Memory Project's website.

Online ancestry-related databases used in this project included Ancestry.com and FindAGrave.com. Records pulled from Ancestry include birth certificates, death certificates, immigration records, census records, yearbooks, and city directories. All of these were helpful in tracing the stories of Apex's residents.

A vital resource to this project was Newspapers.com, a database of digitized historical newspapers. I used newspaper articles to supplement company histories and personal histories related to Apex. Product advertisements aided in artifact identification, seeing where products were advertised and sold, and for analyzing rhetoric. The rhetoric in advertising is helpful in interpreting the product's target audience, how companies wanted the public to perceive the items, and how the residents of Apex viewed the products they were buying.

I prioritized advertisements from the Northern Arizona region due to their immediate proximity to Apex. I included articles and advertisements from California, New Mexico, and Texas if needed due to their relevance to Apex and its residents. For example, Apex had a trade relationship with Los Angeles due to the connecting railroad: milled lumber and crates were shipped to Los Angeles for use in their citrus industry, and products produced in Los Angeles were then sent back to Apex (Dale 2025). Census records showed many Apex residents had connections to other states, including Michigan, New Mexico, Texas, Oklahoma, and Arkansas.

Many of the camp's Swedish residents previously worked for the SMLC in Michigan, Anglo-American residents arrived from states impacted by the Dust Bowl, and some rail workers came from both New Mexico and "Old Mexico" (U.S. Bureau of the Census 1930).

When examining product advertising on a national scale, such as how a company presented itself during and after Prohibition, advertisements from across the entire U.S. were considered based on their relevance and rhetoric. The entire U.S. was also considered when analyzing where certain products may have come from or were purchased by Apex's residents. For example, Vai Bros. wines were scarcely advertised in Arizona from 1933 to 1936, the timeframe from the repeal of Prohibition to the disbandment of Apex. A search on Newspapers.com yielded only 86 ads for the entire state at that time, none of which ran in Northern Arizona.

Artifact Analysis.

Artifact analysis composes the foundation of the research presented in this thesis. While artifacts related to alcohol consumption were prioritized, I also analyzed objects like tobacco, foodstuffs, and non-alcoholic beverages for interpretations on subjects like worker identity and culture.

Artifact attribute data such as size, material, and diagnostic information was recorded through artifact forms, photographs, and supplementary field notes. Internet access at the project area allows access to online resources to identify objects as they are recorded in the field. In addition to more academic sources like the Society of Historical Archaeology Bottle website, the Southern Oregon University Jim Rock Can Collection, and museum websites, additional online resources also encompassed more unorthodox sources, like eBay, collector's forums, and blog

posts, which are often some of the best resources in identifying historical objects. This is especially true when researching materials from the Great Depression era when companies operated and shut down sometimes within a matter of months, leaving little trace of them.

Table 1: Recorded Artifact Information

Artifact Info	Location Info	Alcohol Specific
Artifact Material	Locus Name	"Federal Law Forbids" notice (yes/no)
Type (drink vessel, paraphernalia)	Concentration Name	Alcohol Type
Bottle Marker's Marks	Locus Type (building foundation, can dump, etc)	Prohibition or Post-Prohibition
Writing Transcriptions		

Artifacts were recorded mainly by the students of the Apex, Arizona Archaeology Project field school. The program uses a catch-and-release approach to archaeology, meaning everything is recorded fully in the field and then returned to as close to in-situ as possible. This allows for items to be re-discovered by members of the public, some of whom may have personal insights into specific products. Leaving artifacts in the field also helps in site preservation. Fieldwork protocols were outlined in the Research Design for the Archaeological Resources Protection Act permit approval and are in-line with current Kaibab National Forest practices. Artifact forms completed in the field were digitized and uploaded to a Microsoft Access database for each field season. These records were double-checked alongside photographs, photo logs, and the GPS point records, which are discussed later in this chapter.

Dates for the artifacts were determined using a combination of documentary and diagnostic elements. Many glass bottles from before the 1980s or so have date codes embossed on the bottom. This pinpoints the exact year that a bottle was manufactured. These dating

guidelines are outlined by the Society for Historical Archaeology's Historic Glass Bottle Identification & Information website database (Society for Historical Archaeology 2026). This website outlines the various glassmaker's marks, chronologies on when those logos were changed or updated, what the specific numerical codes on each bottle means, and company histories.

GIS Mapping and Spatial Data.

The best way to understand the patterns of alcohol consumption at Apex is to map where that consumption was occurring. Where consumption occurs is a rough estimate, as the artifacts at Apex are often in refuse piles or concentrated scatters. However, most trash piles are just outside of whatever building the trash came from, making them a good proxy for where consumption occurred. For example, each locus at Apex may have several glass scatters and can dumps around it, attributing those remains to that specific structure. The key spatial information I gathered was how much of the site's consumption occurred on the management side of the camp versus the labor side. I then used that data to make interpretations about the differences in obtaining alcoholic products, brand or alcohol type preferences, class distinctions, and if drinking was a communal or individual activity.

The data collected was limited to what can be considered "diagnostic," or identifiable as a unique, single object. For example, while a bottle finish is indicative of one bottle, it would not be fully clear what the contents of that bottle were; therefore, it was not counted in the data collection process. Because of this collection strategy, the numbers may seem skewed from what can be observed currently at the site. The data collected from this survey was then downloaded as an Excel spreadsheet. Any missing data was cross referenced with the collection forms, field

notes, and photographs to see if the information was just not fully filled in, or if it is truly missing from the dataset.

I conducted Geographic Information Systems (GIS) data collection with the help of Apex field students over the course of the 2025 field season. I created a recordation form using ArcGIS Field Maps Designer. This form included fields for artifact material, artifact type (bottle, can, etc.), if it was from Prohibition years or after, alcohol type (if it could be identified), Locus information, and transcriptions of any text present on the artifact. This form translated to a map on the Esri Field Maps app, which I downloaded onto a tablet.

Data collection consisted of walking around each known Locus of the Apex site and taking a GPS point on the map for every alcohol-related artifact. These artifacts were grouped into three categories: alcohol container, alcohol paraphernalia, and potential brewing materials.

Alcohol containers included bottles and cans that definitively held alcohol products.

Paraphernalia included items like bottle openers and shot glasses. The GPS points were compared to the few existing maps of Apex to estimate where the artifacts are in comparison to camp structures. One of these maps was created by Al Richmond as part of his research in the 1980s (**Error! Reference source not found.**), digitized here for clarity. This map has proven useful because it is the only one where camp structures are labeled.

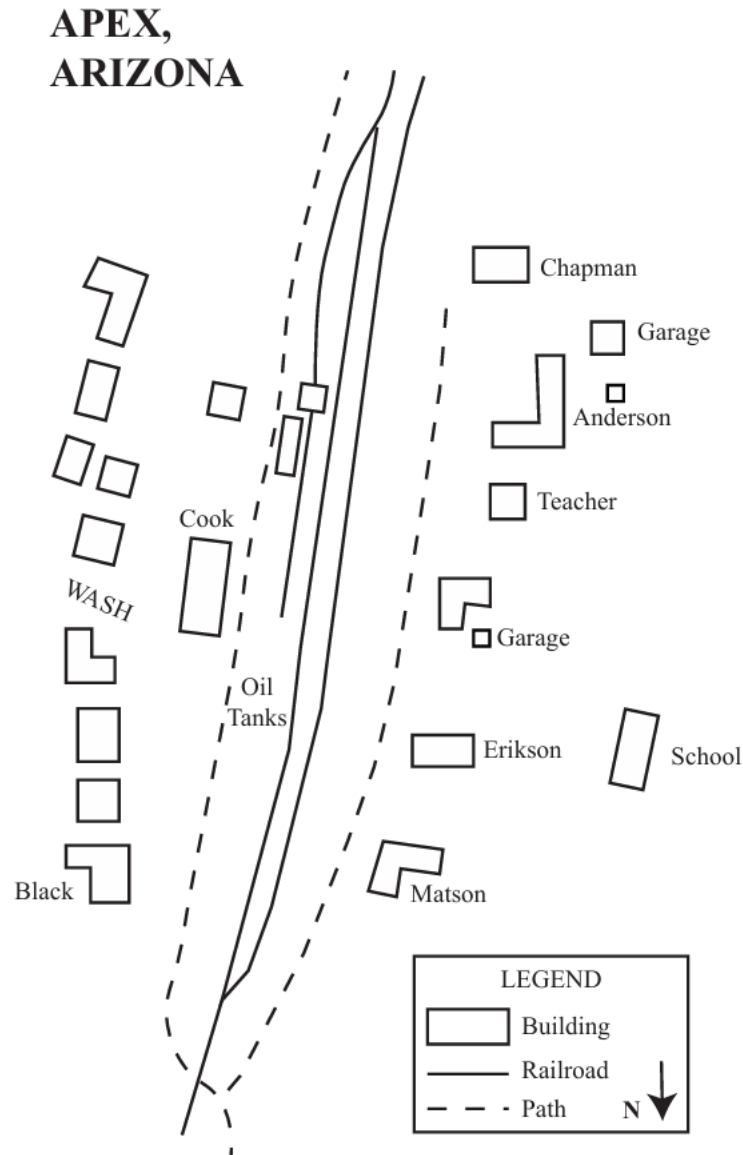


Figure 2.1: Map of Apex's structures drawn by Al Richmond. Digitized by Emily Dale, 2026.

Summary of Loci.

In archaeology, the term “locus” denotes distinct concentrations of cultural material. This can include trash middens, architecture, or even a group of culturally modified trees.

Archaeologists with the Kaibab National Forest identified twenty-two distinct Loci, named Locus A through Locus Q during surveys in 2006 (Figure 2.2). Since the start of the Apex,

Arizona Archaeology Project each locus has been systematically recorded and mapped, and an additional five loci, additional five loci, Locus R through Locus V, have been designated. So far, the Apex, Arizona Archaeology Project has recorded Loci A, C, D, E, G, H, I, J, K, L, M, N, R, S, T, U, and V (Table 2). Loci B, F, P, and Q are scheduled for investigation in 2026.

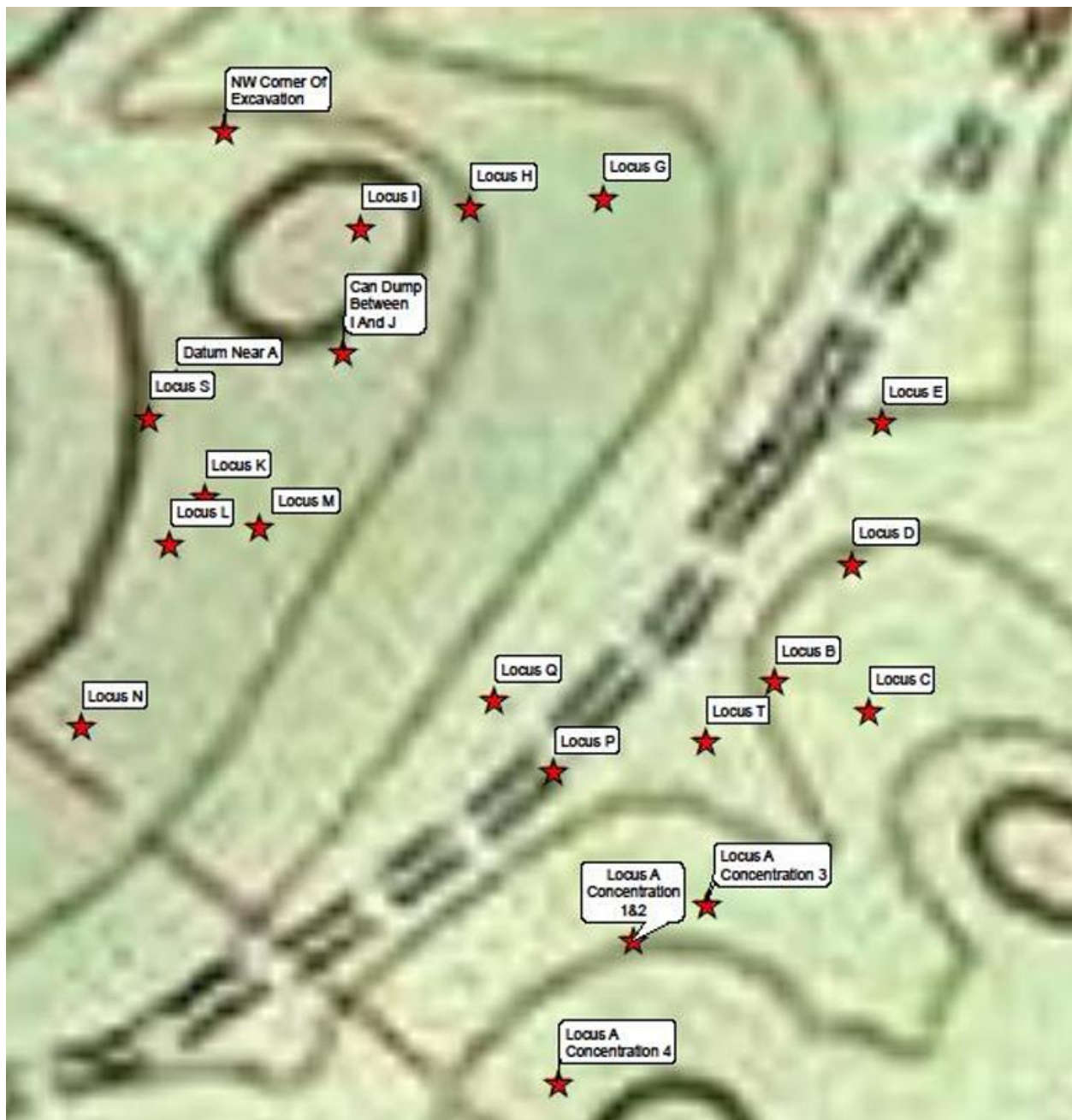


Figure 2.2: Loci map. Map created by the Kaibab National Forest.

Table 2: Apex Loci

Locus	Locus Purpose	Description	Alcohol Artifacts
A	Kitchen/Dining Hall	Milled lumber, can dumps, two stoves	Schlitz malt syrup, Puritan malt syrup, Budweiser malt syrup, Straight American whiskey
B	Unknown	Not yet recorded	Not yet recorded
C	Can Dump	Foodstuffs (cans and jars), wood, paint can, shoes	No alcohol recorded
D	Family Housing	Wood beams, lumber scatters, food cans, ceramic dishware, cleaning supplies, toys	Budweiser malt syrup, Old Quaker
E	Bunkhouse	Wood beams, limestone walls, can scatters, privy pit	Budweiser malt syrup, Vai Bros. wine
F	Unknown	Not yet recorded	Not yet recorded
G	Can Dump	Cans, shoe soles, toys, paintbrush handle, Jack-O-Canterers, glass	Old Quaker, Puritan malt syrup, Acme beer can, Pabst beer can, Budweiser malt syrup, R-19, Seagram's whiskey
H	Privy	Privy pit, tobacco cans, glass	Old Mr. Boston whiskey, Four Roses, American Medicinal Spirits Co.
I	Schoolhouse	Wood beams, limestone piles, stove parts, glass, cans, trunk parts	Budweiser malt syrup, Seagram's whiskey
J	Family Housing	Milled lumber, cans, glass, toys, car parts	Vai Bros. wine, Budweiser malt syrup, R-19, Continental Distilling, Hiram Walker
KLM	Superintendent's House	Two privy pits, building foundation, milled lumber, cans, glass, toys, vinyl record pieces	American Medicinal Spirits Co., shot glass, beer bottles, Seagram's whiskey, bottle opener
N	Timber Sales Office	Building foundation, privy pit, box frame, can scatters, glass	Budweiser malt syrup, Wilken Family whiskey, Old Quaker, R-19
O	Unknown	Not yet recorded	Not yet recorded
P	Unknown	Not yet recorded	Not yet recorded
Q	Railroad Maintenance Pit	Railroad ties, asbestos, fire brick, glass, cans	No alcohol recorded

R	Kitchen/Dining Hall	Food cans, glass, ceramic dishware	No alcohol recorded
S	Can Dump	Cans, shoe soles, car parts, glass	Budweiser malt syrup, Puritan malt syrup, R-19
T	Precontact Site	Lithic scatter	No alcohol recorded
U	Unknown	Not yet recorded	Not yet recorded
V	Family Housing	Milled lumber, wood beams, cleaning supplies, glass, toys, car parts	Budweiser malt syrup, R-19, Continental Distilling, Hiram Walker

Some of the loci at Apex are especially notable. Locus C is a large trash dump comprised of cans, broken colorless glass jars, and bits of wood. Most of the trash seems related to foodstuffs, but other items like paint cans and shoes are also dispersed throughout. Locus C is east of Locus E (the bunkhouse), meaning the trash could be associated with that structure. Locus C was distinct because of its lack of alcohol-related materials, especially when compared to similar trash dumps around Apex. Locus G is a large can dump of over 10,000 cans. Aside from cans, objects include shoe soles, bottle fragments, toys, four of Apex's "Jack-O-Canterns,"¹ and a sealed canning jar with a mysterious brown liquid inside it. This trash is most likely attributed to the bulk of the Locus J family housing. Locus H is a privy downhill from the schoolhouse and near Loci J and V. It includes the privy pit and some small can and glass scatters. One can scatter is made up entirely of upright pocket tobacco tins. Loci J and V encompasses the buildings at the center of the map labeled "Garage," "Erikson," and "Matson." This area has scatters of milled lumber, and abundant evidence of domestic family activity, such as canning jars, toys, and food/dining materials. Some car parts, like the ignition plate from a Ford Model T and a Chevy spark plug, are also found in this area.

Locus KLM, the location labeled "Anderson" on the Richmond map, was where camp superintendent Arvid Anderson lived with his wife and children. During the 2006 Forest Service survey, this area was designated as three separate loci. However, it was soon found that the three were in such close proximity to each other, it made more sense to refer to them as a collective entity. In addition to architectural features like wood scatters, two privy pits, and stone pathways, common artifacts include dishware, broken alcohol bottles, vinyl record pieces, and toys.

¹ The term "Jack-O-Cantern" is specific to Apex and is used to refer to cans found around the site modified with faces punched into them.

Locus N was likely the timber sales office and consists of a building foundation, privy, and glass scatters. A distinct feature of this loci is the presence of what we named a “box frame,” a rectangle made of milled lumber resting on the ground (**Error! Reference source not found.**). Excavation of a half-meter unit in this box during the 2025 field season determined the box was likely used as a trash receptacle.



Figure 2.3: The wooden box frame at Locus N. Photo by Damon Marcinko.

West of Locus KLM is Locus S, a large can dump including car parts and a stove. Scattered amongst the cans are more broken alcohol bottles, shoe soles, and various pieces of scrap metal. Much of this trash may also be associated with the Anderson family.

Theoretical Approaches.

My theoretical approach to Apex relies heavily on the intersecting relationships of Marxism, consumption theory, and world-systems theory. Marxism and consumption theory both focus on class, namely how people fall within an economic hierarchy. Consumption theory additionally examines how individuals use their money to conform with or reject their class status. Together, these can be tied together to examine class, labor, and materialism.

Historical archaeology commonly uses a Marxist theoretical approach, as capitalism and worker-executive dichotomies are positioned as the driving force in cultural developments since the Industrial Revolution. The crux of Marxist perspectives in archaeology is the use of materialism to understand class (e.g., Spude 2005; Staski 1984; Van Bueren 2002).

Archaeologies of class can be “a means of analyzing and critiquing past and present social relations, which grapples with both the symbolic identities and the structural inequalities which bound and divide social groups” (Reckner and Brighton 1999:63). In the context of Apex, this involves examining how the camp existed as an extension of a larger corporate entity, and how the workers themselves interacted with one another and expressed their identities. In archaeological Marxism,

Material culture not only exists in a context, but it also helps form that context. It is not just backdrop; it is, instead, the stage and props for human action. As such, it both structures human action and gives reality to the social ties that bind people together. It serves both as a model of and a model for social action. The realities that it creates may not accurately reflect the social relations it is embedded in and

may instead misrepresent them. In this way, it becomes a medium for domination and the exercise of power over people (McGuire 1992:104).

The lives of those at Apex were chiefly dominated by the SMLC. Living at the camp meant the company provided housing, schooling for workers' children, meals, and a company-stocked commissary where purchases were taken out of workers' wages (Richmond 1988:78-79). This amount of control was typical in company towns. Company towns were generally planned communities built and operated by a company. These settlements varied from overwhelmingly paternalistic (Goddard 2002; Maddock 2024:28-30), to fairly lax and lacking in extreme oversight. To be fired from a company while living in their town would be devastating: not only would it mean a loss of work, but of housing, food, healthcare, and children's education.

The inequalities borne from capitalist structures often lead to counter-actions from the working class. Through the 1910s, timber and mill workers held strikes across the Northwest in protest against unfair wages, poor working and living conditions, and oppressive hours (Mickelson 1999; Powers and Dahlgren 2009:2). The organization of labor "aims to benefit the cause of labor over capital, including improve working conditions, sabotage machinery or destroy products and take owner's profits, reject consumer culture ideals, seize control over leisure time, and compensate for low wages through theft" (Sunseri 2020:185). In the case of the lumber strikes, the Industrial Workers of the World, or Wobblies, unionized lumberjacks at camps and urged workers to burn their bunks and go on labor strikes (Powers and Dahlgren 2009:2; **Error! Reference source not found.**). At least one Apex worker was part of a union, the United Brotherhood of Carpenters and Joiners of America (United Brotherhood of Carpenters

and Joiners of America n.d.). While I found no record of strikes at Apex or at the mill in Williams, conditions at Apex would have been shaped by these earlier movements.

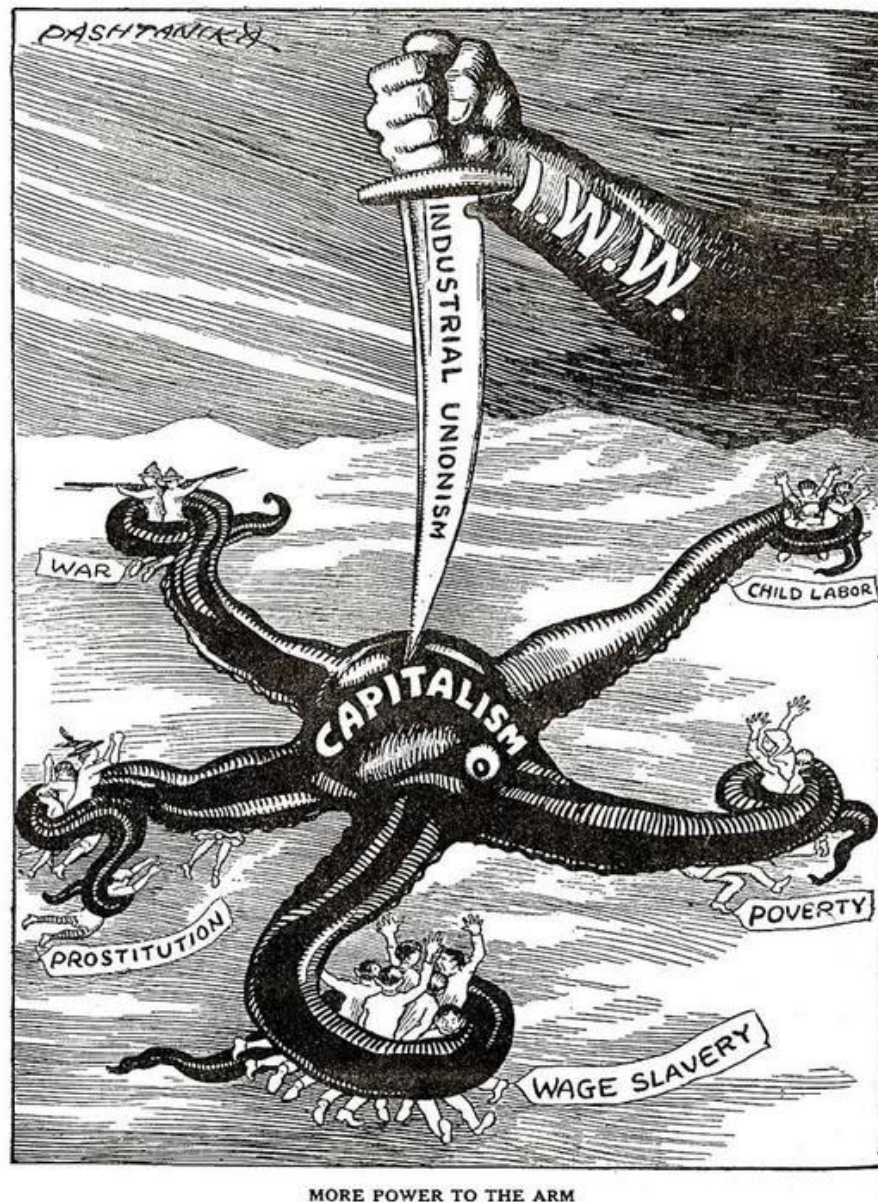


Figure 2.4: A 1921 cartoon by Pashtanika depicting the IWW union forces killing the monster of capitalism (Industrial Pioneer).

World systems theory is extremely helpful in examining the relationships between company towns, especially ones that exist in isolation, and the larger, surrounding society. World

systems theory is used by researchers to understand how labor and capital create a transactional, and often unequal, system between larger wealthy states and poorer, less developed areas (Wallerstein 2004:29). In a global economic system, the large states are the core, while the smaller states are the peripheries. This intersects with Marxist theory because they both focus on the inequalities found within a capitalist society. According to Bourdieu, material culture and the concept of “taste” is determined by elites living in cores, and are either adopted or rejected by the lower classes living in cultural peripheries (2004:23-24).

Work camps and company towns in the Western United States were themselves extensions of corporations and culture operating in the East and Midwest (McGuire and Reckner 2002:44). In the case of Apex, for example, the Saginaw and Manistee Lumber Company originated in Michigan, but its corporate headquarters were located in Chicago. The people profiting off of Apex’s workers were likely not in the West at all. Apex itself, as a temporary camp, resided in the woods several miles away from the larger towns of Williams, Flagstaff, and Grand Canyon Village. While the main road to Williams was paved and easy to travel, the dirt roads in and out of the forest were at times impassable due to snow and mud, further isolating residents during certain parts of the year (Richmond 1988:79). Apex’s purpose as a space for natural resource extraction that was used to develop more urbanized areas also puts it on the periphery of larger society.

The satellite settlement of Steptoe City, Nevada, is a good example of a company periphery. Steptoe City was a shantytown that popped up less than a mile outside of McGill, “a model company town” owned and operated by the Nevada Consolidated Copper Company (Goddard 2002:85). While Steptoe City was perceived as a slum full of brothels and vice, it was mainly home to families with children. Material culture at the site showed that despite the homes

at Steptoe consisting of small wooden cabins, several had carved doors, decorative windows, and large, impractical furniture (92). According to the author's use of world systems theory, this case demonstrates the social influence the model company town had on the periphery settlement. Steptoe City not only provided business opportunities that were lacking in the company town, but also served as a space for workers to indulge in vice and more consumer choice.

My approach to the archaeology of Apex is heavily influenced by the topic of consumption as an explicit area of focus. Stemming from the larger umbrella of Marxist theory, "consumption studies reflect the ways consumers negotiate, accept, and resist goods-dominant meanings within rich social, global, historical, and cultural contexts" (Mullins 2011:1). The specific focus on goods makes this theory an excellent fit with archaeology. Archaeologist Paul Mullins, who argued for consumption studies as a distinct sub-field, defined consumption as "revolv[ing] around the acquisition of things to confirm, display, accent, mask, and image who we are and who we wish to be" (2011:3). Buying and using goods is first and foremost a performative display of identity, assimilation, and class relations. In the previous example of Steptoe City, the large furniture found was bought just because the residents could buy it, not to serve any practical purpose. While residents of Apex were living in company-provided housing in the woods, the material record of the site shows they still valued nice things. Ceramics decorated with floral patterns, decorative figurines, carnival glass dishes and candlesticks, and even a potentially wire birdcage were all bought and used by the residents as small luxuries (**Error! Reference source not found.**). Stone pathways made from Kaibab limestone and red Moenkopi sandstone show a similar amount of care and appreciation for the built environment at Apex; the community should look nice for the eight years residents called it home.



Figure 2.5: Ceramic plate with floral design and gilding (top left), pieces of a ceramic cherub (bottom left), fragment of a watermelon uranium glass cup (right).

In the case of this thesis, observing how illicit substances and vice tie into the web of Marxism, consumption, and world systems theory is highly useful. According to Mintz “temperance was also a national economic issue: an effective, factory-based industrial capitalism could not be consolidated by an absentee-ridden, drunken labor force,” (1985:137). However, while 18th century England was using temperance rhetoric to persuade factory workers away from alcohol, they were allowing members of the Navy a rum ration to keep sailors happy (170). Despite temperance rhetoric through the 19th and 20th centuries, alcohol remained an extremely popular vice among members of the working class. In a study comparing attitudes around alcohol between the social classes of Port Adelaide, Australia, it was found that members of the 19th century up-and-coming middle class would often re-define alcohol as medicinal in order for their consumption to appear more acceptable (Lampard and Staniforth 2011:10). Working class drinking, though, was not purely for the sake of drunkenness. Drinking has long been a symbol

of the end of a workday in capitalistic Western societies, and was utilized by the working class as a means of stress or pain relief, particularly by those working in labor-intensive jobs (Hands 2018).

In summation, I used each of these methods and theoretical frameworks to understand not only how Apex fit in with its surrounding areas, but how the people interacted with each other as members of a larger system. Consumption in particular was helpful in comprehending how people valued specific goods and how the utilization of those goods can reflect identity.

Chapter 3: Archival Results: Historical Contexts

The occupation of Apex coincided with a pivotal era in American history. Emerging from the shadow of World War I, the 1920s and 1930s were marked by large-scale social changes. The economic crash of 1929 and the Dust Bowl left thousands jobless and moving across the West looking for new opportunities. The first wave of the women's liberation movement began in the mid-1800s, leading to national women's suffrage in 1919. These suffrage efforts were tied closely to the American Prohibition movement, which gained enough momentum for Congress to pass the Volstead Act in 1920 (Okrent 2011:109). Meanwhile, extractive industries like mining and logging continued booming throughout the American West, furthering development in states like Arizona. Understanding these historical frameworks places Apex within its broader context. This includes providing insight into why immigrant lumber workers ended up in the American Southwest, the advantages of living in a company logging camp in the 1920s, and the role alcohol consumption played in workers' lives. This chapter not only outlines the sociocultural developments influencing Apex, but also demonstrates the results of my archival research.

Logging and Lumbering in Northern Arizona.

The 20th-century lumber industry was necessary, if not required, for the continued growth of Arizona. Large railroad systems connected the territory to more populous states like California and Texas, meaning miles and miles worth of rail ties were needed. Similarly, the booming agricultural industry in the Salt River Valley required wooden crates, pallets, shooks, and boxes (Richmond 2017:79-80). The lumber industry had consistent economic staying power. A 1930 advertisement for the Saginaw and Manistee Lumber Company touted it as the largest

employer in Williams with over 400 workers and stated the company brought \$450,000 to the community each year (Williams News 1930:7). Northern Arizona was prime territory for logging, as the region is home to the largest contiguous stretches of ponderosa pine forest in the country (Stein 2006:6).

The Saginaw and Manistee Lumber Company, 1899 - 1954.

The Saginaw and Manistee Lumber Company (henceforth referred to as SMLC) was officially formed in November 1899. The company was created from the merger of the Saginaw Lumber Company and the Manistee Lumber Company, both based out of Michigan. The Saginaw Lumber Company began its expansion into Northern Arizona in 1893 when company manager John C. Brown acquired 200,000 acres of ponderosa pine land in the Tusayan district and signed a contract with the Santa Fe railroad to construct logging spurs (The Sunday Times 1894:8). The company established a large mill in Williams and developed the Saginaw Southern Railroad to accelerate logging operations (Stein 2006:27; **Error! Reference source not found.**).



Figure 3.1: The Saginaw Lumber Company's mill in Williams, Arizona, 1898. Image from the Williams, Arizona Historic Photo Collection, Arizona Memory Project.

American lumber companies were known for having a “melting pot” workforce (Franzen 2020:141). Immigrants from Scandinavia, Canada, and Yugoslavia were especially popular for their existing knowledge of the lumber industry. Around World War I, the Saginaw and Manistee began employing large numbers of Mexican and Native American workers in their lumber mill and on the rail lines. While Mexican workers became integral to the SMLC’s workforce, they remained relegated to the box plant and rail siding after World War I. Scandinavian workers were mainly based at the company’s logging camps as lumberjacks, machinery operators, and management personnel. Despite this diversity, racism persisted in the lumber industry, especially

in the American West. For example, SMLC manager E.J. Wilder stated that “he did not consider the negro fitted for work in this locality” (Williams News 1922:1).

Swedish Immigration at Apex.

With the opening of New York’s Ellis Island in 1892, thousands of European immigrants began funneling into America (Library of Congress n.d.). Escaping famine and persecution across Europe, immigrants sought new opportunities and the prosperity sold to them through propaganda and letters from loved ones already settled in the U.S.

Between 1849 and 1930, America received several waves of Swedish immigrants (Lintelman 2019). This was partially thanks to the 1862 Homestead Act, which attracted Swedish farmers and loggers to the Northern Midwest. Hundreds of these Scandinavian loggers moved with the industry to Arizona at the beginning of the 20th century, settling in logging camps like Apex. This thesis research examines consumption as a possible means for assimilation into the American collective; thus, it is vital to understand the Scandinavian immigrant experience.

Swedes in America.

The history of Scandinavians in North America began over 1,000 years ago with the seafaring voyages of Leif Erikson (Blanck 2014:48). Immortalized in Norse mythology, “The Vinland Saga” chronicled Erikson’s expedition to a temperate and fertile land past Greenland. Through the 19th century, the belief emerged that “Vinland” was in fact North America, making Erikson the true first European “discoverer” of the New World. Tales of the Viking discovery, popularized in the 19th century, aided in the acceptance of Scandinavians as an immigrant group to the United States (46-50). They were perceived ambitious, hardworking Protestants making

their way to America due to their innate nature for adventure and exploration. The “exploration” narrative, in particular, was extremely congruent with the ideology of Manifest Destiny developing at the time. Scandinavian immigrants were framed by reporters and writers of the 19th century as “pioneers,” “adventurers,” and “Vikings” (Blanck 2014:49; Lintelman 2019; Wisby 1906:213). As one early 20th century writer described Scandinavian immigrants:

He likes [America] in return because we give him a fair chance to prove his mettle in laying new soil under the plow, in conquering the wilderness, and that is the spirit of the old-time Viking in the present-day pioneer. [...] And so it happens that the same ancient love for adventure over the seas that brought Leif [Erikson] here as discoverer is drawing his people here as settlers. Whether Dane, Norwegian and Swede, his good moral character, his honest way of doing things, and his home-loving instincts are so pronounced that they may be said to be taken for granted. There are the very qualities that make him a desirable immigrant, perhaps the most desirable we have (Wisby 1906:213).

Swedish women, like Apex resident Lilly Eriksson Matson, often arrived in the United States to work as housekeepers or in other homemaking professions (U.S. Department of Labor 1922; Lintelman 2019). A 1923 Scandinavian-American cookbook “for Swedish servants” demonstrates the role these women played in household occupations like cooking for American families (Grimsköld 1923). Each page of the book is split down the middle, the left half written in Swedish and the right half translated into English.

Scandinavian men fit into the American fabric by adopting some of the racial and anti-immigrant prejudices found among white American men. For example, Swedes separated themselves from Irish immigrants when living in shared communities by adopting anti-Irish sentiments (Blanck 2014:40). The Swedish strategy was described as seeming “as close to the Yankee identity and as far away from the Irish one as possible” (39-40). This went as far as Swedish immigrants in the community of Worcester, Massachusetts allying themselves with the local Ku Klux Klan (50).

At least in the early 20th century, it was common for Swedish immigrants to retain their language and teach it to their American-born children (Wisby 1906:223). Swedish was certainly spoken by residents at Apex; Swedish artist Gunnar Widforss was said to have visited the camp just to hear his own language spoken (Maddock 2025, pers. comm.). Resident Elvira Ryberg was noted by her daughter, Anna, as having never learned English at all.

Americans through the 19th and 20th centuries held a variety of ideologies in relation to the new, large influx of immigrants. The majority of fearmongering and stereotyping of immigrants came from the emerging ideology of Nativism. Nativism was linked to white supremacy and differentiated those who had been born in America from those who were just arriving. Nativist political cartoons and propaganda depicted immigrants as dirty, criminal, alcoholic, and overall ruinous to the United States. This was at odds with American capitalists and business owners who saw opportunity in immigrants, namely as a new avenue to cheap and reliable labor (**Error! Reference source not found.**). Most of these cartoons specifically focused on caricatures of the Irish, Italians, Germans, and Chinese, while Scandinavians are largely absent from negative visual depictions. However, some stereotyping and negative images focusing on language differences, specifically how Swedes pronounced certain letters, were

parodied and stereotyped (Moquin and Salmons 2020:5). Negative editorials from 19th century writers portrayed Scandinavians as a cultural monolith, ignorant in politics, and “lack[ing] of sanitary habits” (Brøndal and Blanck 2002:15). However, such statements were often retracted after publication as “mistakes.”



Figure 3.0.2: “The Immigrant” by F. Victor Gillam, published in Judge magazine, 1903, depicting how different aspects of society in America viewed immigrants based on what they stood to gain or lose from them. Image from the Ohio State University Cartoon Research Library.

While Scandinavians were still scrutinized as “strangers” by American Nativist groups, they were seemingly spared the worst of anti-immigrant sentiments (Brøndal and Blanck 2002:14-15). One writer stated: “His desirability is absolutely unquestioned; it is not even being investigated like that of some other peoples who emigrate here” (Wisby 1906:213). Positive treatment allowed Swedes to write relatives and friends back in Sweden encouraging them to

come to America as well (Lintelman 2019). When the waves of immigration slowed after World War I, many immigrant communities soon became dominated by first- and second-generation Americans (23). This shift can be seen in the demographics at Apex. Many of the Swedish workers, like superintendent Arvid Anderson, had American wives and American-born children (U.S. Bureau of the Census 1930). This allowed for a quick integration in the American collective. The children went to American schools, learned English, and adopted an American culture.

Loggers and Immigrant Identity.

The first hints of shared identity and camaraderie among Scandinavian immigrants emerged from the logging bunkhouses of the northern Midwest. Immigrant workers from Sweden and Norway are credited with developing the legend of towering lumberjack Paul Bunyan in the forests of Michigan, Minnesota, and Wisconsin (Keeler 2023). Some of these folktales portray Bunyan as Scandinavian himself. While many scholars debate the true origins of the Bunyan myth, it has undoubtedly become a quintessential part of American logging culture (Dundes 1985; Minnesota Historical Society 1940). The adoption of Bunyan as a mascot for lumberjacks also affirmed the strength, masculinity, and overall American-ness of the workers (Maddock 2024:20).

Apex's logging workforce being primarily comprised of Swedes was not a coincidence. The logging industries of Michigan and Northern Arizona were both dominated by Swedish immigrant workforces dating back to the mid-1800s. Timbering was a dominant industry in Sweden for centuries, leading many to bring their pre-existing skills to new jobs in America (Lintelman 2019). A 1910 census of a Greenlaw Lumber Company logging camp outside of

Bellemont, Arizona recorded about 65 Swedish men living and working communally along with laborers from Norway, Germany, Canada, Denmark, and America (U.S. Bureau of the Census 1910).

The Saginaw Lumber Company employed Scandinavians as lumberjacks during their operations in Michigan and brought some of this workforce with them to Arizona (Stein 1997:Section 8:3). Swedes in particular were “so efficient, in fact, that they finished [logging] leases in less than thirty years” (Richmond 2017:81). While some Swedish workers likely followed the company’s move from Michigan, many came directly from their landing spots on the East Coast, indicating they were either following the lumber work or that companies were explicitly recruiting Scandinavian men.

The American Prohibition.

Before diving into the history of America’s 13-year prohibition on alcohol, it is important to specify the nuances in language. “Prohibition” as a proper noun denotes the legislative banning of alcoholic beverages in the United States between 1920 to 1933. Prohibition was a legal and cultural event in the United States, and this entire timeframe is known as the “Prohibition Era.” A “prohibition” as a non-proper noun denotes the general banning of something by any group at any time. For example, Arizona had a prohibition on the selling of alcohol before Prohibition.

Temperance Rhetoric and National Law.

Much of America’s attitude toward alcohol can be traced back to the Revolutionary War. The war created a national culture of rebellion against authority, which made temperance

movements, and eventually Prohibition, impossible to enforce (Aaron and Musto 1981). The Whiskey Rebellion of 1794, where Pennsylvanian distillers rebelled against an additional tax on whiskey, was an early example of Americans shunning restrictions on alcohol (Okrent 2010:54). Working class Americans highly valued their vices and have historically always been willing to break laws for them.

The anti-alcohol movement gained momentum in the 19th century with the involvement of the women's suffrage movement. Suffragettes framed alcoholism as "demonic" and "sinful," and told women that banning alcohol would decrease domestic violence, child abuse, and unemployment among their husbands (Okrent 2011:16). Mother Eliza Thompson, an early leader of women's temperance movements, brought her followers into saloons, dropping to her knees and praying aloud for the drinkers' souls (13). The establishment of the Women's Christian Temperance Union and Anti-Saloon League organizations aided in the spread of prohibition propaganda and demonstration movements across the country (**Error! Reference source not found.**). Much of this propaganda centered on the harm drinking did to working class men, often focusing on harms to health and the family. While the term "temperance" means moderation, these organizations advocated full abstinence from drink.

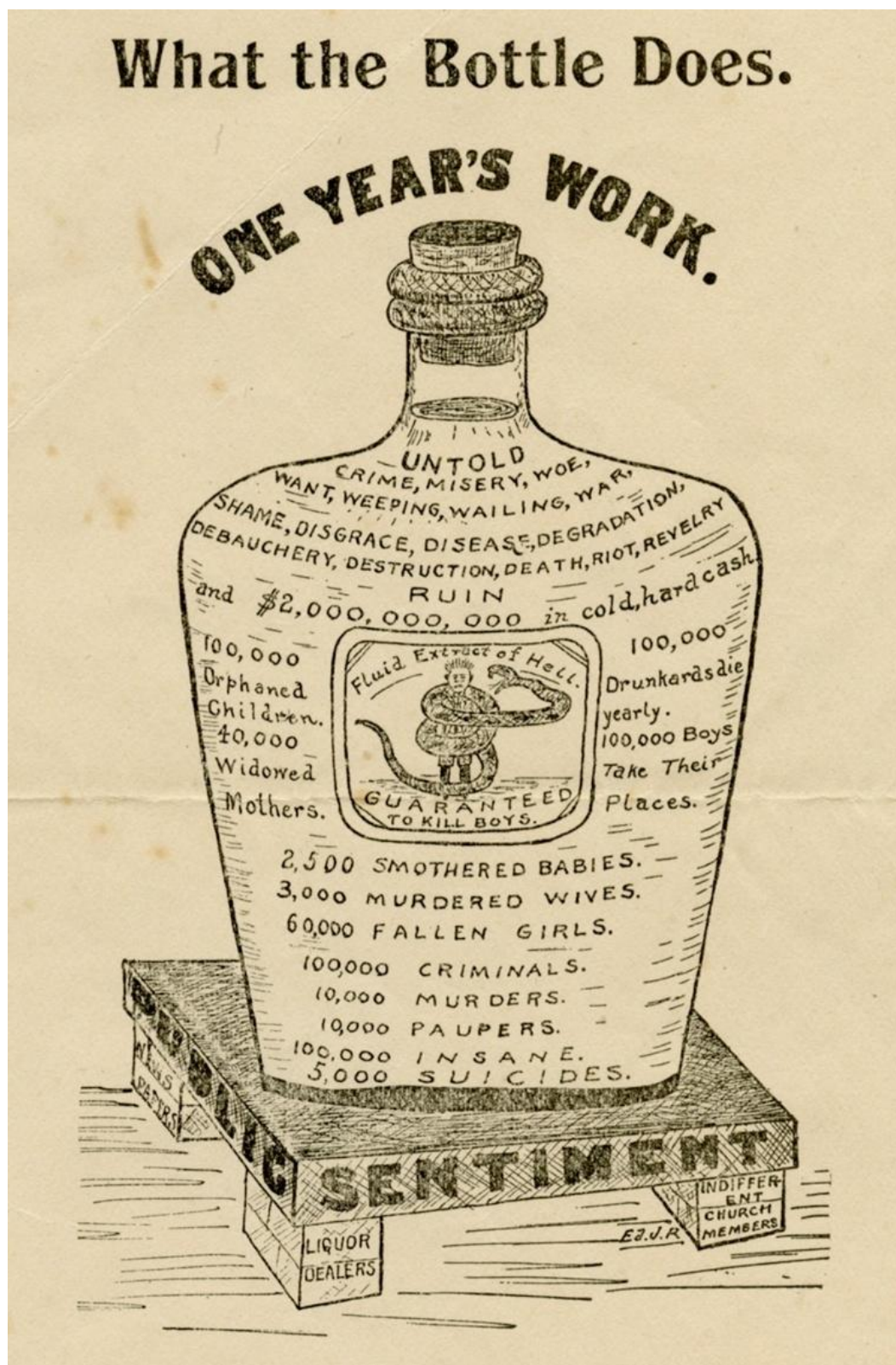


Figure 3.0.3: “What the Bottle Does” handbill by the Virginia Anti-Saloon League, touting statistics on crime, domestic assault, and health issues allegedly caused by alcohol consumption. Image from Virginia Commonwealth University Libraries.

The influx of immigrants during the 19th century was vital to the American temperance movement. Saloons and bars were gathering places both politically and socially, and “the proliferation of saloons was abetted by immigrants (usually German or Bohemian), largely for immigrants (members of those nationalities, but also Irish, Slavs, Scandinavians, and many, many others), was not lost on the moralists of the WCTU and other temperance organizations” (Okrent 2011:26). Nativist propaganda aligned immigrants, namely those from Ireland, Germany, and Italy, as drunken fools who brought crime and disease to America and “drunkenness was seen as a scourge brought by immigrants, rather than the reality of American life it had always been” (Huckelbridge 2016:210; Figure 2.5).



Figure 3.0.4: Nativist political cartoon by John H. Goater, c. 1850, depicting an Irish immigrant and German immigrant in alcohol barrels “stealing” an election. Colorized image from National Geographic.

The New York Five Points neighborhood was a hotbed of tension between immigrants and temperance forces. Archaeological investigations into the Five Points found large quantities of artifacts tied to alcohol and tobacco consumption, indicating the Irish and German immigrants living in the area acted in direct defiance to the pro-temperance restrictions put on them by landlords and local ordinances (Reckner 1999:78). Another study of the neighborhood found that Irish immigrants retained their group identity by consuming soda water, a practice traced back to traditional Irish medicine, demonstrating that consumption and identity could be closely linked in immigrant communities (Linn 2010:71).

In work camps, vices gave workers a means of bonding and common values, even in cases where housing was separated by ethnicity or income. Workers of various nationalities at an aqueduct labor camp outside of Los Angeles used alcohol and tobacco consumption as a point of commonality between them (Van Bueren 2002:39). The presence of this consumption in work spaces indicated ties to social resistance against stricter managerial practices. Excavations of the Mono Mills site in California also found commonalities in the material record between workers despite racial and class segregation, such as through the use of undecorated ceramics, bartering, and alcohol consumption. This created a sense of common worker identity and a rebellion against capitalistic consumption (Sunseri 2020:195).

Despite propaganda efforts emphasizing the almost demonic qualities of drunkenness, prohibition laws struggled right from their onset. In 1851, Maine became the first state to successfully pass a state prohibition law (PBS 2025). However, it was almost immediately a failure and was repealed just five years later. By 1907, only three states managed to enact a state prohibition law (Lewis 2008:380). This did not slow down the propaganda, though, and by 1920, 30 states implemented their own prohibitions. This steady passing of state laws made way for the

proposal of the 18th Amendment, which was eventually passed through the 1919 Volstead Act.

The Amendment declared:

After one year from the ratification of this article the manufacture, sale, or transportation of intoxicating liquors within, the importation thereof into, or the exportation thereof from the United States and all territory subject to the jurisdiction thereof for beverage purposes is hereby prohibited (U.S. Constitution 1919).

While women played an instrumental role in establishing Prohibition, they also played active roles in the production and trade of illicit alcohol. The “women who made whiskey and those who patronized speakeasies were breaking both custom and the law. Their actions were deliberate and self-conscious. For working-class women, bootlegging was a logical extension of the many kinds of home work they had traditionally undertaken” (Murphy 1994:187). Homebrewing was so popular that the only beverage recipes listed in a Prohibition-era bilingual cookbook for Swedish house servants were for grape wine, currant wine, and elderberry wine (Grimsköld 1923:187-188). An example of this is the Beringer Bros. Winery, established in the Napa Valley in 1876, which today touts itself as one of the longest continually operating wineries in the country (Beringer Vineyards 2025). Like many wineries, Beringer survived in part by securing a sacramental wine permit. In addition to this, Bertha Beringer, daughter of the winery’s founder, is credited with the invention of “grape bricks,” sold with instruction on how to *not* turn them into wine (Napa County Historical Society n.d.). During Prohibition, Bertha would surprise

local businessmen touring the winery with “refreshments” served “under the trees behind the [Beringer] house” (*The St. Helena Star* 1932:1).

Arizona and Prohibition.

The First Legislative Assembly of the Arizona Territory discussed some form of temperance legislation in the decades leading to statehood. The Howell Code, passed by the Assembly in 1864, implemented additional licensing fees on vendors that sold “any spirituous or malt liquors or wines in less quantities than one quart” (Howell 1864:Chapter 49, Sec. 3). This was the first alcohol regulation in Arizona’s still “wild” territory.

Statehood eventually came on February 14, 1912, making Arizona the last of America’s contiguous 48 states. Two years later, in November 1914, voters passed Proposition 203 which prohibited the manufacture, sale, and consumption of alcohol in the young state, making it the 13th in the Union to pass a statewide alcohol ban (Roberts 2019). The proposition passed by a very narrow margin, thanks in part to women who were granted the right to vote upon statehood (Lewis 2008:389; Roberts 2019:1). Grady Gammage, the Secretary of the Temperance Federation in Arizona stated that “to the best of my judgement, 2/3 of [the] total yes vote on the Prohibition bill was cast by women” (Arizona State Library 1916). One Arizona Republic reporter lamented, “Booze died rather tamely in Phoenix” on New Year’s Day 1915, the official start of the state’s dry era (*Arizona Republic* 1915:1).

Four years later, a 1919 Arizona news article called the passing of the Volstead Act a “drastic measure,” before explaining which specific products and behaviors were now illegal (*The Coconino Sun* 1919:11). When Prohibition was enacted, almost everyone in Arizona began violating it, including the governor and other high ranking state officials (Roberts 2019:3).

Prominent lumber barons, the Riordan brothers of Northern Arizona's Arizona Lumber and Timber Company not only campaigned against Prohibition regulations but violated the laws themselves (Association Against the Prohibition Amendment 1931). Devout Catholic Matthew Riordan brewed sacramental wine using grape bricks in his linen closet, while his brother, Tim, homebrewed beer (Riordan 1976:3).

Part of the issue with maintaining Prohibition in Arizona was the rural nature of many towns. The small mining, ranching, and logging towns dotting the state were not receptive to the news of either state or federal laws telling them to close down their saloons. Saloons were pivotal gathering places for working-class men across the country, and Arizona was no exception (Reckner 1999:64; Northern Gila County Historical Society n.d.). Prohibition did not sit well, as "To the immigrant workingman, of course, elimination of the saloon would be an act of repression," (Okrent 2011:48). Rural Arizona areas that had long gone unmonitored due to their remote nature were now under the watchful eye of Federal Prohibition agents. Speakeasies quickly popped up underneath bars, theaters, and hotels in Northern Arizona. One such establishment was the Sultana Theater and Bar, founded in Williams in 1912. Serving as a bar, poolroom, and theater, the Sultana was immediately successful (*The Williams News* 1912:1; Figure). During Prohibition, "the basement speakeasy provided bootleg liquor and gambling by invitation only" (City of Williams n.d.).



Figure 3.0.5: The Sultana Bar in Williams, 1921. Note the bottles behind the bar, and the man in a law enforcement uniform to the right. Photo from the Williams, Arizona Historic Photo Collection, Arizona Memory Project.

Flagstaff's network of tunnels, originally designed to connect steam and water pipes from building to building, transformed into underground roads between speakeasies. The Cocktail Lounge, opened underneath the Hotel Monte Vista, operated euphemistically as a "newspaper publishing house" (Hotel Monte Vista n.d.). This speakeasy was short-lived, as law enforcement busted it in 1931.

Between the Great Depression and the closing of legal saloons, bootlegging became a profitable industry in Arizona, and saloons stayed open under the pretense of being gaming halls (Northern Gila County Historical Society n.d.). The entire town of Payson profited off of "Payson Dew," a moonshine that was in such high demand, it helped save the town's Depression-impacted economy. In 1925, a trio of bootleggers from the mining town of Jerome were bloodied in a shootout with local authorities while trying to bring a stash to Flagstaff

(Johnson 2025). A news report from the same year stated that 257 “rum cases,” or Prohibition infringement charges, had been filed in Arizona, 27 of which were in Coconino County (*The Coconino Sun* 1925:8). Punishments for these cases involved fees, jail time, or both.

Repeal.

Prohibition was destined to fail from the very beginning, as “Each time the president, the Prohibition Bureau, or any other agency announced a new effort, brought in new resources, or negotiated a new understanding with other governments, the flood of illegal alcohol found a new (and often more efficient) conduit” (Okrent 2011:344). Organized crime erupted through New York and Chicago, with armed gangs smuggling alcohol to the U.S. from Canada (170). Speakeasies, bootlegging, and rum running continued despite federal crackdowns. Part of the eventual repeal was out of economic necessity: the stock market crashed in 1929, and there was hope that reopening the alcohol industry would boost the economy (Musto 1996:83). This economic need meant “in just a few short years, [the U.S. Treasury] went from hunting down illegal brewmasters and smashing their barrels, to all but begging them to get the brew kettles fired up and working again” (Huckelbridge 2016:218).

By the 1932 presidential election, the majority opinion on Prohibition had changed in the country, with both parties running on a pro-repeal platform (The Mob Museum n.d.). Some of Franklin D. Roosevelt’s campaign materials even featured him and running mate John Nance Garner flanked by beer steins. After winning, Roosevelt quickly approved the legal production of “near beer” which had a below 3.2% alcohol level. This law unofficially ended Prohibition in 1933, as it allowed breweries to get back to work. In November of that year, the 21st

Amendment was passed, fully repealing the American ban on alcoholic beverages. The Amendment read:

Section 1. The eighteenth article of amendment to the Constitution of the United States is hereby repealed. Section 2. The transportation or importation into any State, Territory, or possession of the United States for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited (U.S. Constitution 1933)

The end of Prohibition did not mean the end of alcohol regulation. The Federal Alcohol Administration Act, passed in 1935, required alcohol producers to operate under a federal permitting system (Federal Alcohol Administration Act 1935:190-195). Distillers and rectifiers of alcoholic spirits, like whiskey, were mandated by the U.S. Department of the Treasury to have their code embossed on their bottles along with a notice reading “Federal Law Forbids Sale or Reuse of This Bottle.”

Not everyone was pleased with the end of Prohibition. The Women’s Christian Temperance Union and Anti-Saloon League continued their crusade against drinking but were diminished and bankrupt within a few decades (Okrent 2011:357-358). Arizona’s New Prohibition Party formed in 1938 and advocated for the banning of all liquor on moral grounds (**Error! Reference source not found.**). Their newsletters were heavy in religious rhetoric, harkening back to the original temperance movements of the 19th century. However, the Party seems to have faded quickly, with the publication of their newsletter ending around 1946 (Arizona Prohibitionist 1946).



Figure 3.0.6: Cartoon by Reverend E.J. Pace for the first issue of Arizona Prohibitionist, published 1939. Note the prominence of the Bible verse (Arizona Memory Project).

Chapter 4: Artifact Results

The most relevant artifact types to this project were those relating to alcohol consumption among Apex's residents. For the Prohibition era itself, covering the 1928 to 1933 period at Apex, artifacts included malt syrup cans, medicinal alcohol bottles, and sodas that advertised themselves as new alternatives to drinking. After Prohibition was lifted, though, whiskey bottles belonging to numerous brands, beer cans, wine bottles from California, and paraphernalia like shot glasses were integrated into the residents' consumption.

Recording Artifacts

During the summer 2025 field season, I recorded around 180 alcohol-related artifacts across the Apex project area. The artifacts recorded were placed into two primary classes: alcohol vessels and alcohol paraphernalia. Vessels consisted of any bottles or cans that would have been sold containing an alcoholic beverage or homebrew ingredient. Paraphernalia consisted of items related to drinking but would not have been sold containing alcohol. This included shot glasses and bottle openers. Additional data recorded using the Esri FieldMaps form I created included if the object was from the Prohibition or post-Prohibition timeframes, artifact material, transcriptions of any text on the object, and the information of the locus the object was found at. A locus (plural, loci) is a designated concentration of artifacts within a project area. At Apex, all loci were given alphabetical names according to when they were recorded, ranging thus far from A to V.

Of the 180 artifacts surveyed, 51% were related to beer consumption, and 43% were related to whiskey consumption (Figure). Only 1% of items related to wine consumption. This means that whiskey and beer were substantially more popular among Apex's residents than other

forms of alcohol. This may have to do with product access, affordability, personal taste, the social connotations of certain products, or some combination of factors.

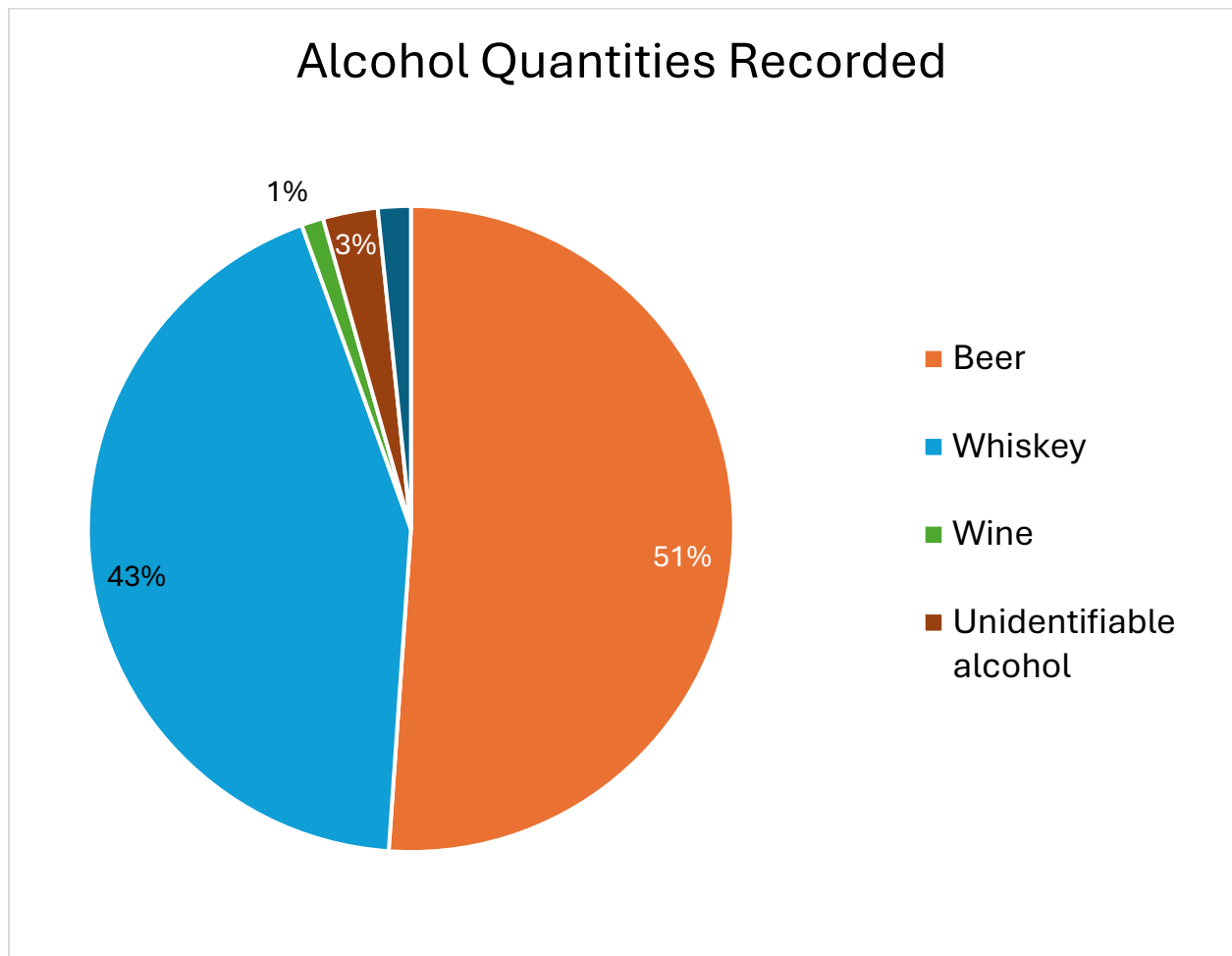


Figure 4.1: Pie chart of alcohol types at Apex. Created by author.

Prohibition Artifacts.

The majority of Apex's occupation overlapped with the American Prohibition. While the manufacture, sale, and transport of alcohol was illegal during Prohibition, the presence of these artifacts at the site highlight the reality of living under restrictions - the laws around drinking

were fairly easy to skirt if people were aware of loopholes and potential smuggling operations in their area.

Malt Syrups.

Malt syrup is a thick, sugary syrup rendered from malted barley (The Mob Museum 2021). These syrups are produced through the same brewing process as beer, meaning any brewery would have its own supply of it. Manufacturers of malt syrups usually would additionally flavor it with “Bohemian hops,” to add an even more beer-adjacent taste. Beginning in the 1890s, malt syrups were mostly found at local pharmacies or drug shops as a health and diet additive (Garner 2017). Breweries advertised their syrups as aiding digestion and being a source of easy-to-consume nutrition for people recovering from illness. Around 1900, advertisements began popping up across the U.S. with malt syrup as an ingredient in beer homebrewing. Pre-Prohibition advertisements from the Ambrew Company, for example, touted malt syrups as an economical way to get large quantities of beer at home with no need for additional ingredients in the brewing process aside from water (American Products Co. 1912). Malt syrup came to the attention of mainstream Americans in 1919, when the U.S. Department of Agriculture declared it would be produced by breweries to account for the sugar shortage of World War I rationing (*The Times* 1919:3). American confectioners had favored malt syrups before the war to sweeten candies and baked goods, which made marketing it as a sugar alternative credible.

During Prohibition, breweries were forced to either close their doors or pivot toward making new products to survive. A common strategy for beer companies was to produce malt extracts and syrups, as they were already being produced from brewing (Huckelbridge 2016:215). In 1920, shortly after the 18th Amendment went into effect, the Bureau of Prohibition

enacted an explicit ban on homebrewing (*The Coconino Sun* 1920:11). This included the crackdown of malt syrup sales to anyone other than confectioners and bakers. To get around this, breweries producing malt syrups doubled-down on advertising their use as a food product. Budweiser and Schlitz frequently published recipes with their syrup ads in newspapers across the country (e.g., *Arizona Daily Star* 1928:5).

Despite this, companies seemingly knew the alternative use of malt syrups. The Anheuser-Busch company did have some sly wink-and-nudge advertising for their syrups. One ad features a store clerk winking knowingly at the customer (**Error! Reference source not found.**). When asked about the use of malt syrup in homebrewing, a representative of Anheuser-Busch stated: “While the product was intended for domestic baking, some consumers found another use and began using the syrup in home brewing, though this was not the intention of August Busch Sr., Anheuser-Busch’s President,” (Anheuser-Busch Archives 2025, pers. comm.).



Figure 4.2: A Budweiser malt syrup store display from Prohibition. Note the clerk's knowing wink at the buyer. Image from the Mob Museum, 2021.

Of the 66 malt cans recorded at Apex, 62 were Budweiser. These cans had no visible labeling on them aside from embossing on the can lids. All cans surveyed read “HOP / FLAVORED / BUDWEISER / BARLEY MALT / SYRUP” on the base. Two cans, one at Locus E and another at Locus U, additionally read “ANHEUSER-BUSCH / ST. LOUIS, MO / BUDWEISER / BARLEY / MALT SYRUP” on the opposite end of the can (**Error! Reference source not found.**). It is unknown if the text on the cans correlate to different can styles or indicate when the can was manufactured (Anheuser-Busch Archives 2025, pers. comm.). It is possible that the side with the “St. Louis” portion is the lid of the can, and therefore was thrown out separately. The cans have a diameter of 10.5 inches and a height of around 11.5 inches. Discrepancies in the measurements of the cans are due to crushing over time.



Figure 4.3: Two Budweiser malt syrup cans from Locus U. Note how the leftmost can still has the “St. Louis” lid attached. Photo by Travis Cumming.

In addition to malt syrups, Budweiser and several other companies also produced a brewer’s yeast. Sold as a diet supplement for those who found being skinny “unattractive,” Budweiser sold its yeast blocks in stores next to their malt syrups, hinting at their true usage (The Houston Chronicle 1930:2; The Mob Museum 2021).

The Puritan Malt Extract Company also advertised itself vaguely throughout Prohibition as “A malt extract with the hops right in it and also the sugar, so that all the trouble and smell and mess that used to go with the making of your favorite beverage are entirely cut out” (Chicago Tribune 1921:23; **Error! Reference source not found.**). What this “favorite beverage” is

remains unknown throughout the company's ads. In 1930, Puritan was bought by the Pabst Brewing Company with the two branches deciding to continue operating separately. By 1938, ads for the Puritan side of Pabst's operations had dried up across the country.

**Here it is
At Last**

**Just
What You've
Been Looking For**

*100 %
Pure makes
'the making'
Sure*

**Puritan Malt Extract
With the Hops in it**

No Boiling—No Spoiling—No Fuss—No Muss

This is what the world has been waiting for. A malt extract with the hops right in it and also the sugar, so that all the trouble and smell and mess that used to go with the making of your favorite beverage are entirely cut out.

No boiling, no spoiling, no fuss, no muss. You just pour your can of Puritan Hop Flavored Malt Extract into warm water and add the same ingredients you have always added, except the sugar and the hops.

As you bottle, just add three-quarters of a teaspoonful of sugar to each bottle.

Ready now for all the delight of the old-time flavor without any of the muss and work of making it.

*Puritan
Is the Richest
Malt Extract
Made*

Remember, in Puritan Hop Flavored Malt Sugar Syrup you have the richest malt extract made combined with imported hops, with their full flavor.

Thousands of stores are ready to serve you today. If your particular dealer hasn't this new Puritan Hop Flavored Malt Extract, insist that he get it from his jobber.

Puritan Malt Extract Co.

31 North Market Street, Chicago

Manufacturers of the famous Puritan Malt Extract and Puritan Fresh Pressed Hops

Figure 4.0.4: A Prohibition ad for the Puritan Malt Extract Company, 1921. From the Chicago Tribune, November 9, page 23.

One can at Locus G, one at Locus S, and one can lid at Locus A are embossed

“PURITAN MALT EXTRACT CO. / CHICAGO, ILL.” in arched text. The lids had a diameter

of 10 centimeters, and based on the lids' full removal and puncture patterns around the rim, were removed using a handheld can opener.

One can lid from Locus A is embossed with "SCHLITZ / 035 687 / MILWAUKEE." The Joseph Schlitz Brewing Company emerged from the German immigrant community of the Midwest and quickly became one of the top beer companies in the U.S. (Huckelbridge 2016:155-156). Prohibition advertising for Schlitz malt syrups were split between never actually stating what the syrups would be used for, and promoting them as related to cooking, with some ads featuring chefs and promotions for recipe booklets (*Arizona Daily Star* 1929:9). Schlitz also kept its original company name, a "Brewing Company," throughout Prohibition instead of dropping any beer implication. One ad features a man whispering into another man's ear with the text "Here's the Secret" (**Error! Reference source not found.**). The "secret" is supposed to be that Schlitz uses a unique "Vitalizing" process, but the whispered secret does mirror similar Prohibition ads dancing around the purpose of the product. This tactic would be a sly, advertising rebellion against the U.S. government's attempts to ban alcohol and homebrewing.

Here's the secret



You will understand the importance of ultra-violet rays when you realize that plants, flowers, trees and grain must have sunshine in order to grow . . They must have ultra-violet rays furnished by the sun. But even nature is incomplete . . Some years crops are good . . other years they are starved for the ultra-violet rays nature has failed to provide for them.

Schlitz completes nature's job . . Schlitz adds days of sunshine to all Schlitz Malt Syrup by an exclusive **ULTRA-VIOLET RAY PROCESS**. That's the secret . . It's "Vitalized" . . It's more mellow . . more perfect . . and absolutely pure. It's the only malt syrup that's really finished.

Try it . . You'll do much better with



the **ONLY**
VITALIZED
MALT SYRUP

Made by Union Labor at the Famous Schlitz Brewery — Milwaukee

Figure 4.0.5: One of the nationally-run Schlitz malt syrup ads from Prohibition. Note the whispered "secret" illustrated at the top of the ad (The Arizona Republic 1932:4).

Prohibition Whiskey.

An exception to Prohibition regulations was the use of prescription alcohol (Biggs 2018; Okrent 2011:195-200). The use of alcohol as medicine existed in Western civilization for hundreds of years, and by the 1920s, was one of the last medicinal holdovers from the patent medicine era. Debates over the efficacy of medicinal alcohol waged throughout the 1910s, with the American Medical Association taking an anti-medicinal alcohol stance in 1917 (Jones 1963:357). However, this did not stop individual doctors from continuing to prescribe medicinal whiskey to patients. Each doctor had their own ideas on what whiskey could be used to cure and it was reportedly prescribed for a wide array of illnesses including “pneumonia, influenza, diabetes, heart failure, anemia, asthma, cancer, poisoning, snake bite, insomnia,” and ironically “alcoholism” (Jones 1963:361). By 1922, the American Medical Association reversed stances, perhaps now seeing an economic opportunity in the prescribing of medicinal alcohol (Okrent 2011:195). Medicinal whiskey proved to be very popular during Prohibition; approximately 2,435,631 gallons of government-sanctioned medicinal whiskey were produced in 1931 alone (*The Houston Chronicle* 1931:24). Yet, medicinal alcohol was not cheap. Obtaining a prescription could cost \$3, plus another \$3 or so to fill the prescription (Biggs 2018). Adjusted for inflation, \$6 is approximately \$112 in 2025. Despite this, it was still potentially cheaper and easier to obtain than illegal options.

The American Medicinal Spirits Company, or AMS Co., was reorganized from distilleries owned by the Wathen brothers of Kentucky at the onset of Prohibition (Okrent 2011:199). Along with the Glenmore and Frankfort distilleries, AMS Co. operated through Prohibition out of numerous Kentucky warehouses, creating tens of thousands of gallons of medicinal bourbon whiskey (*The State Journal* 1929:1).

Three bottle fragments with the AMS Co. logo were found at Apex, all at the camp's management housing areas. Two bottle fragments were found at Locus KLM. The other fragment was found at Locus H. All bottle fragments were made of colorless glass and came from the bases or lower bodies of the bottle. Each fragment was identified by the presence of the "THE A-M-S CO" logo embossed on them (**Error! Reference source not found.**).



Figure 4.0.6: Fragment of American Medicinal Spirits Company bottle at Locus KLM. Photo by Lorna Baker.

One whiskey bottle fragment found at Locus A is embossed with "[DIST]ILLERY C[O] / S.A." (**Error! Reference source not found.**). The serif font and position of the embossing on the lower body of the bottle matches bottles from D.M. Distillery Co., which operated out of Juarez, Mexico during Prohibition. Originally based in Kentucky, the D.M. Distillery Co. moved

south to Mexico, where alcohol was still legal, sometime around the passage of the 18th Amendment in order to stay in business (Lockhart 2012:196). D.M. Distillery’s “Straight American” whiskey, likely the “S.A.” on the bottle, proved popular with Americans who hopped the border to drink at Mexican bars and to smuggle alcohol back into the U.S. One Arizonan smuggler was arrested in Tucson along with his two sons in 1932 trying to bring “12 quarts of straight American Juarez whiskey” (*Arizona Daily Star* 1932:5).



Figure 4.0.7: A fragment of a D.M. Distillery Co. whiskey bottle. Photo by author.

Soda and Prohibition.

Soda in the United States before Prohibition was typically only found at pharmacy-based soda shops (Lambert 2020). Originally created by a pharmacist, sodas were used to flavor drug concoctions to make them more palatable for patients. Most sodas were produced on a smaller scale, with only a few large national companies. However, this changed drastically with

Prohibition. Many breweries and beverage companies saw the opportunity of a new gap in the beverage market and began pivoting their operations to soft drinks. Several brands, like Hires, leaned into Prohibition through advertising emphasizing their non-alcoholic nature. Soda fountains also began to leave the drug store and move into the spaces left by shut-down saloons and bars, filling a now-vacant social need for Americans.

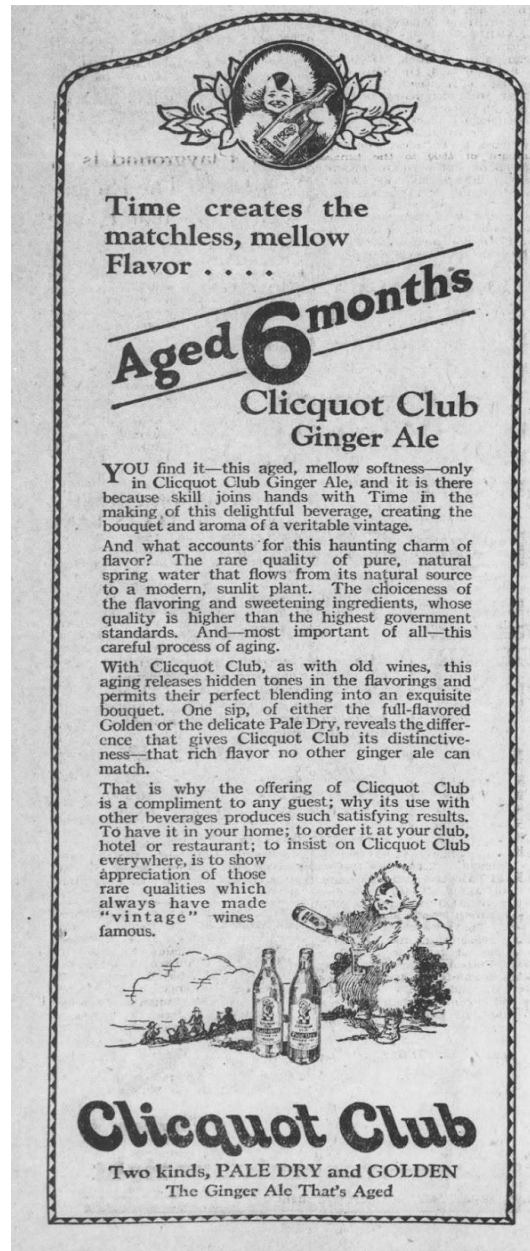
On the flip side, sodas were also used heavily by those violating Prohibition. Bootlegging usually consisted of spirit-making, with the resulting liquor usually unpalatable due to its strength and occasionally the use of industrial alcohols in the distillation process (Miron 1991:244). As a result, soda-based cocktails became very popular (Lambert 2020). Cocktail recipe books were published throughout Prohibition, with booze measurements included, as there was no law against it. Some soda companies mention their use as a “mixer” in advertising, although they do not necessarily say what the soda should be mixed with (*The Evening Star* 1924:33). Several soda brands found at Apex had grown in popularity during Prohibition and allowed workers a non-alcoholic beverage to enjoy at the camp.

Clicquot Club (pronounced “Klee-Ko”) was founded in the 1880s with the goal of selling ginger ale on a national scale (Bay Bottles 2019). At the time, soft drink production was highly localized without many larger national brands. Clicquot soon grew in popularity, thanks in part to the advertising character “Kleek-O the Eskimo Boy”² and its own band that performed on national radio stations. According to advertisements, the green bottles would have contained Clicquot’s Pale Dry Ginger Ale (*The Evening Star* 1924:33). Prohibition-era advertisements from Clicquot Club described their ginger ales as a “spirited,” “dry pale ale” that had been “aged.”

This phrasing mirrors the same language typically used in beer advertisements. Another

² The term “Eskimo,” used to refer to the Inuit and Yupik Indigenous peoples groups of Alaska, Canada, and Siberia, is now widely recognized as a racial slur.

compared the aged flavoring to wines, stating “To insist on Clicquot Club everywhere, is to show appreciation of those rare qualities which have always made ‘vintage’ wines famous” (*Douglas Daily Dispatch* 1927:3; **Error! Reference source not found.**).



Time creates the
matchless, mellow
Flavor

Aged 6 months

**Clicquot Club
Ginger Ale**

YOU find it—this aged, mellow softness—only in Clicquot Club Ginger Ale, and it is there because skill joins hands with Time in the making of this delightful beverage, creating the bouquet and aroma of a veritable vintage.

And what accounts for this haunting charm of flavor? The rare quality of pure, natural spring water that flows from its natural source to a modern, sunlit plant. The choiceness of the flavoring and sweetening ingredients, whose quality is higher than the highest government standards. And—most important of all—this careful process of aging.

With Clicquot Club, as with old wines, this aging releases hidden tones in the flavorings and permits their perfect blending into an exquisite bouquet. One sip, of either the full-flavored Golden or the delicate Pale Dry, reveals the difference that gives Clicquot Club its distinctiveness—that rich flavor no other ginger ale can match.

That is why the offering of Clicquot Club is a compliment to any guest; why its use with other beverages produces such satisfying results. To have it in your home; to order it at your club, hotel or restaurant; to insist on Clicquot Club everywhere, is to show appreciation of those rare qualities which always have made “vintage” wines famous.

Clicquot Club

Two kinds, PALE DRY and GOLDEN
The Ginger Ale That's Aged

Figure 4.0.8: A Prohibition-era ad for Clicquot Club ginger ale. Note how it says the soda has the same “qualities” that made “wines famous” (*Douglas Daily Dispatch* 1927:3).

Twenty-four bottles of Clicquot Club soda were found at Locus N. Bottles are all either aqua or emerald green colored, with embossed labeling. Logos on the bottle bases vary: some have the “A.B. Co. / X” logo for the American Bottle Company, while others have a Clicquot Club specific variation with the company’s “Eskimo boy” logo embossed in the center of the base with either an “A / B,” for the American Bottle Company flanking it, or “RO / OT” (**Error! Reference source not found.**). The “ROOT” logo may be attributed to the Root Glass Company, which bottled sodas, waters, and liquors until around 1932 (Lockhart et al. 2018:264-265).



Figure 4.0.9: Base of an aqua glass Clicquot Club bottle. Note the embossed company logo bisecting the Root Glass Co.’s maker’s mark. Photo by Alex Liu.

While root beer had been produced in the U.S. since the colonial era, Hires was the first to sell it bottled to the masses. This bottled root beer was made using the extract serum created by the company's founder, Charles Hires, who decided to additionally sell the extract in its concentrated form. Advertisements for the extract specifically ramped up after 1929, likely due to the onset of the Great Depression necessitating more economical options for families. Hires went as far as to advertise bottles of their extracts for free, allowing people to make gallons of root beer at home (*San Antonio Light* 1929:10). Hires angled itself as being allied to the temperance movement when it started becoming popular in the 1870s. Charles Hires himself referred to the soda as "The Temperance Drink" and took a pro-Prohibition stance (Burton 2021). Ironically, the Women's Christian Temperance Movement disagreed, as they stated the drink's fermentation process and "beer" name made it too akin to alcohol. Despite this, it was likely the familiarity of a "beer"-named drink that made the soda incredibly popular during Prohibition (Patton 2009). Hires dominated the country's root beer market through the sales of its extracts, bottled drinks, and presence at soda fountains. The popularity of Hires continued past Prohibition well into the 1960s, when its sales could no longer compete with other national soda brands (Burton 2021).

Four shards of a "[HIR]ES/ [HOU]SEHOLD EXTRACT // FOR HOME USE" bottle from the Hires Root Beer company were found at Locus V. This product was sold as a way of making root beer at home, indicating the residents of Apex had some familiarity with home brewing beverages. Like homebrewed beer, the root beer extract would be added to water along with yeast, and in this case, sugar (Patton 2009).

Post-Prohibition Artifacts.

Approximately 41.7% of the alcohol-related objects recorded were from the post-repeal era of Apex's history, or between 1933 and 1936. Post-repeal alcohol containers were primarily identified by date codes and the presence of embossed labeling that was required by law after 1935. After repeal, whiskey and beer seems to have been the most popular alcoholic beverage types at Apex, with wine far less common. While some vessels were designated as "unknown spirits" due to the lack of diagnostic markers tying them to a specific company, they are also most likely whiskey bottles based on their shape and the frequency of whiskey at the site.

Whiskey.

Whiskey was undeniably the most popular alcohol type at Apex in the post-repeal era, with whiskey bottles and jugs making up 43% of the alcohol-related artifacts at the site. The majority of dateable bottles were from specifically 1935, the same year the U.S. government instituted its new system of alcohol regulation. This included the presence of "Federal Law Forbids Sale or Reuse of This Bottle" on the front of bottles, usually at the shoulder, a numerical "R" or "D" code on the base of whiskey bottles for the distiller or rectifier who worked on the product, and, for bottle manufacturers using factory codes, distinct codes for alcohol bottles (Society for Historical Archaeology). In whiskey making, distillers are the companies who make the actual alcohol, while rectifiers add seasoning, water, and other additives that make the drink a complete product. The brands of whiskey present at the site also show the diversification of the market post-Prohibition, with at least 12 different distiller codes and six different rectifier codes present on bottles across the site. The codes found at Apex were tabulated along with company information when available, production year, and the quantity of bottles bearing that specific

code (Table 3; Table 4). Current databases tracking national distiller and rectifier codes from the post-Prohibition era are few, so data collected at Apex will hopefully contribute to expanding the literature with information on these commercial codes (Burke 2024). Common whiskey brands at Apex included Seagram's Crown, Hiram Walker, Old Quaker, and Wilken Family.

Table 3: Post-Prohibition Distiller Codes Present at Apex

Distiller Codes at Apex					
Code	Liquor Company/Brand	Bottle Co.	Other Bottle Codes	Other Bottle Info	Year
D1	National Distiller's Old Crow bourbon whiskey, Old Taylor whiskey, or Old Grand Dad bourbon whiskey	Owens-Illinois		Code "54" - no bottling plant on record, but it is the liquor permit number for the Fairmont, WV factory	1935
D10	Brown Forman's "Old Forester"	Owens-Illinois	"56"	Had a medicinal liquor permit	1935
D11	Four Roses (Frankfort)		"56"		
D126	Seagram's	Consumers Glass Co	"Des Pat 92901"		1935
D129		Latchford Glass Co			
D134	Old Quaker (Schenley)	Owens-Illinois	"62" - Terre Haute, IN factory		1935
D18	Continental Distilling Corp.		"39-6"		
D23	Mountain Ridge Bourbon, Hiram Walker	Owens-Illinois			1936
D30	Wilken Family Blended Whiskey	Whitall Tatum		"Harry E. Wilken Sr." embossed signature	
D372		Glass Corp.			
D525		Owens-Illinois	"88" - Vernon, CA factory		1934
D8	Old Thompson, Glenmore Distilleries Co			Owensboro, KY	

Table 4: List of Post-Prohibition Rectifier Codes Present at Apex

Rectifier Codes					
Code	Company	Bottle Co.	Bottle Codes	Other Bottle Info	Year
R-134	Hiram Walker				
R-19		Latchford Glass Co.	Heel codes "84/(L)/4" and "84/(L)/5"		1934, 1935
R-174	Old Mr. Boston, Ben-Burk Inc.	Owens Illinois		54/oi logo/5/design patented/ applied for/R174//3. ""	1935
R-216		Owens Illinois		"R216/90/oi logo/5""	1935
R-286		Owens Illinois	"Des Pat 87834"		1935
R-85					

Seagram's whiskey bottles were identified using the embossed "DES. PAT. 92901." This U.S. design patent was granted to William Guyer for use by the Seagram company and matches the aforementioned "Crown" ad illustrations (Guyer 1934, **Error! Reference source not found.**). Bottle bases with the company's "D-126" code on them also aided in identification. Whether the design patent code of D-126 code was used depended on what part of the fragment was recorded and the date of the bottle. In addition to the Seagram's bottles, one bottle cap still bearing the gold and red Seagram's logo was found at Locus K.

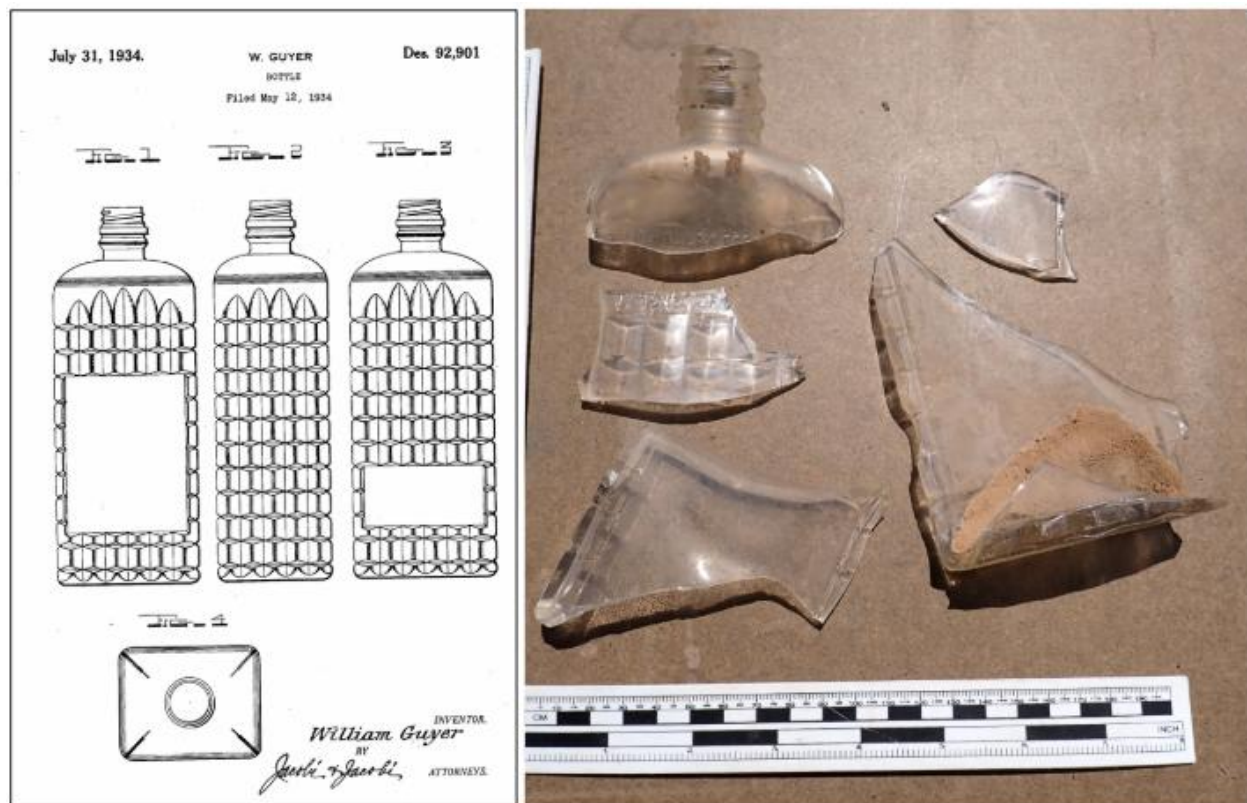


Figure 4.0.10: Left, 1934 design patent for the Seagram's company. Right, fragments of a Seagram's Crown bottle from Locus KLM. Photo by Makenzie Long.

The Seagram company was founded in Canada by hotelier Samuel Bronfman (Hagley Museum n.d.). When Canada's prohibition began restricting alcohol throughout specific provinces, Bronfman began operating a mail-order alcohol service to replace his now-closed

hotel bars. Operations expanded to the U.S. after the repeal of Prohibition in 1933.

Advertisements targeted an exclusively male market, with ads depicting gentlemen toasting bourbon glasses in smoking rooms. Based on the illustrations of Seagram's bottles in these ads, the bottles at Apex would have held the company's "Crown" line of blended whiskies. Ads for Seagram's Crown tout their "moderate price," which may be why the brand was popular among workers at Apex.

Four fragments of an amber 1935 Four Roses bottle were found in a small cluster at Locus H. The bottle was identified through its embossed leaf and rose design along with the "D-11" code on the heel. Bottles produced by Frankfort Distilleries typically came with tin-encased finishes and a tin shot glass that doubled as a lid for the bottle. One of these shot glasses, embossed "LOUISVILLE / FRANKFORT / DISTILLERIES / -INC.- / BALTIMORE" was found as an isolate nearby Locus KLM (**Error! Reference source not found.**). It is unclear if this cup would have belonged to another whiskey bottle, or was part of the Four Roses one surveyed at Locus H.



Figure 4.0.11: Left, tin Frankfort Distilleries shot glass with a fragment of a tin bottle cap, potentially from the same bottle. Right, embossing on the shot glass. Photos by author.

Four Roses was produced by the Frankfort Distillery as both a medicinal whiskey during Prohibition and as a recreational drink after repeal. An advertisement aimed at prescribing doctors during Prohibition listed a case of 12 pints of Four Roses at \$24, roughly \$453 in 2026 after adjusting for inflation (**Error! Reference source not found.**). Like Seagram's, advertisements for Four Roses after repeal feature gentleman illustrations, usually wearing a suit and tie.

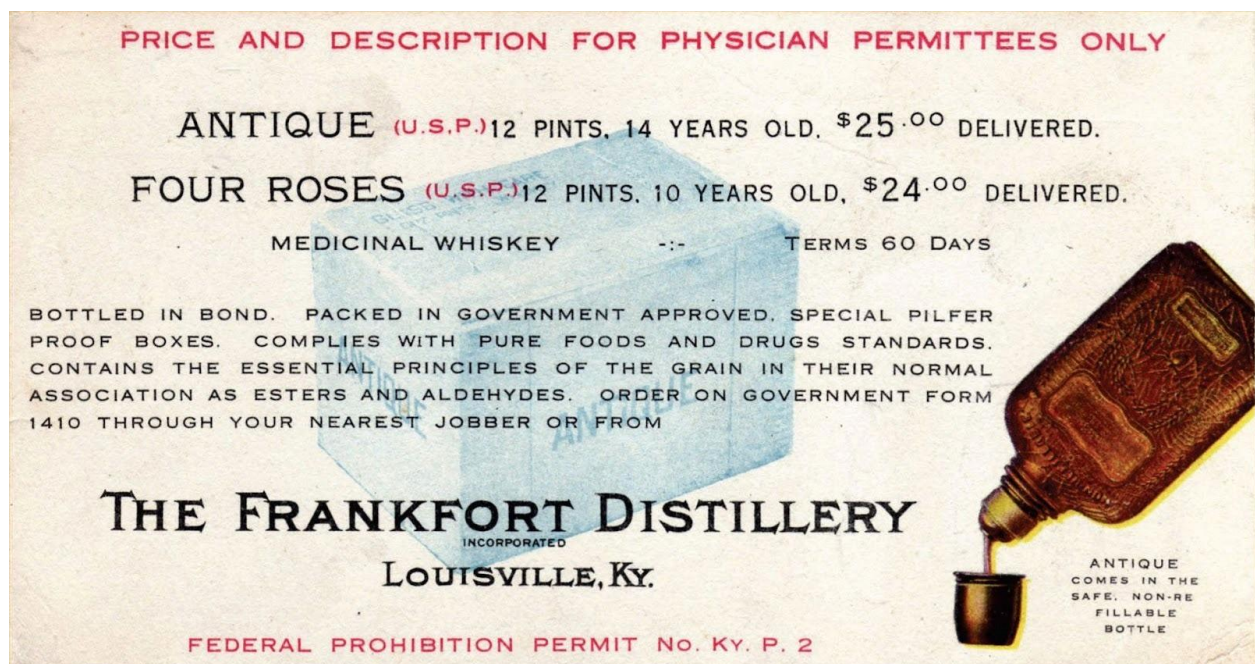


Figure 4.0.12: Advertisement aimed at doctors who prescribed whiskey as medicine during the Prohibition (Leshner n.d.).

The only intact whiskey bottle at Apex was found, ironically, by a metal detectorist during the 2024 field season (**Error! Reference source not found.**). The colorless flask bottle is embossed with the “Federal Law Forbids” notice along the shoulder, the name “Old Quaker” in a cursive script, and the side profile of a man with a hat above some bundles of wheat. This bottle was an isolated artifact found under a tree on the outer edge of Apex west of Locus KLM. A non-

ferrous strip from the bottle's twist cap is still on the finish. The bottle base has the "D-134" code, which aided in identifying other bottle pieces around the site. One bottle finish fragment with an "OLD / QUAKER" bottle cap was recorded in Locus G, two separate bottle base fragments with the distiller code were found at Locus N, and a body fragment with the embossed man was found at Locus D.



Figure 4.0.13: Intact Old Quaker bottle found as an isolate. Photo by Lorna Baker.

According to the above bottles' embossing, Old Quaker was originally founded in 1846. The brand was acquired by the Schenley distillers at the beginning of repeal, with the distiller marketing the whiskey as its primary brand (Time 1939). The man on the front of the bottle is William Penn, the founder of the Quaker religious movement. Members of the Quaker religion took offense to this and felt the whiskey company was promoting the idea that members of the faith were drinkers. In reality, Quakers preached moderation with alcohol consumption.

A non-ferrous metal bottle cap still attached to a colorless glass finish bearing the printed image of a man's head and shoulders was found just east of the 2025 excavation unit at Locus N, along with five colorless bottle shards. The shards do not mend, and had a mix of embossed designs including wheat, a skyline, and part of a cursive signature. An additional base/heel fragment bearing the full cursive signature of "Harry E. Wilken Sr." and two more body fragments were found at Locus N. The bottle base also had the "WT" triangle logo for Whittall-Tatum and Company, which mainly produced medicine and alcohol bottles (Lockhart et al. 2020:154).



Figure 4.0.14: Left, bottle fragment with Harry Wilken Sr.'s signature embossed on the heel. Photo by Emily Dale. Right, non-ferrous bottle cap with Harry Sr.'s portrait printed on it. Photo by author.

According to the Wilken family, Harry Wilken began distilling whiskey in Laurenceburg, Indiana in 1886 (Veach 2018; *Tucson Citizen* 1935:5). By 1892, Wilken's son, Harry E. Wilken, Sr., was added to the company. How the Wilkens operated as a company before Prohibition –is unclear; it is possible they operated on only a small, local scale. However, the company was organized after Prohibition as “The Wilken Family Blended Whiskey” (*Arizona Daily Star* 1936:4). Advertisements were written by Harry E. Wilken, Sr. himself, who added his two sons, William and Harry Jr., to the business. These advertisements also included Harry Sr.'s signature, which can be matched to the embossed cursive on the heels of the bottles from the 1930s (Figure). Photographs in the ads of Harry Sr. also match the embossing and print of the man on the bottles and caps.

It's our family's whiskey, neighbor — and neighbor, it's your price!



**HERE WE ARE
PINCH HITTING**

When the orders for our Family's Whiskey are coming in extra fast, we all chip in with the rest in the shipping room, just so you won't be having to wait for it.
Harry E. Wilken, Sr.

Folks, you're keeping me and the boys a-hopping these days

Seems as though the mild and gentle tastiness of Wilken Family Whiskey is kind of catching on all around—the way the orders pile along. And no matter what happens, as sure as my name is Harry Wilken, that Wilken Family quality is always going to be right there in every bottle. *Harry E. Wilken Sr.*

P. S.—Free, a copy of our Wilken Family Cooking Album if you'll write me at The Maples, R. F. D. No. 3, Schenley, Pa.



THE WILKEN FAMILY
BLENDED WHISKEY

BLENDED AND BOTTLED BY JOS. S. FINCH & CO., INC.,
SCHENLEY, PA.—DIVISION OF SCHENLEY PRODUCTS CO., INC.
36.8 proof—75% grain neutral spirits
Copyright 1936, Jos. S. Finch & Co., Inc.
SUPERVISED BY THE WILKEN FAMILY

Figure 4.0.15: 1936 advertisement for the Wilken Family. The family additionally promoted a free cookbook with each sale as part of their “family business” marketing, usually including recipes using their bourbon (Arizona Daily Star 1936:4).

The “R-19” rectifier code was embossed on the bases of at least 10 colorless glass bottles across the Apex site. This as-yet unidentified code has proven particularly challenging on the Apex, Arizona Archaeology Project. Unlike the other distiller and rectifier codes recorded at the site thus far, the “R-19” bottles vary in shape. The majority are a Philadelphia or Buffalo oval shape, common amongst whiskey bottles, while one is round (Figure). This variation could mean that the rectifier company with the “19” code was contracted out to several different distillation companies, but none of the bottles at Apex have yielded further diagnostic information that can be tied to any specific whiskey. One commonality amongst the R-19 bottles is the logo for the

Latchford Glass Company along with the “84” code, denoting the company’s Los Angeles plant. Date codes have all been from 1935.



Figure 4.0.16: Two bottle bases with the R-19 code. Note the different shapes of the bases.

Beer & Other Alcohol.

Eighteen amber bottle bases, most likely from beer bottles, had marks indicating manufacture by the Owens-Illinois Glass Company at their Alton, Illinois plant (Factory Code #7) in 1933. The “G” code on a few of these bottles identify them as beverage bottles. Some of these bottles have a “H,” “I,” or “J” code instead of a “G,” but none of these are listed in the Society of Historical Archaeology’s Owens-Illinois bottle records, so it is unclear what they meant. Several of these bottles have been found in clusters throughout Locus KLM, indicating that they may have been bought in bulk cases. Beer bottles were sold in Arizona in six-pack containers immediately after repeal was lifted, so it is possible that residents of Apex either bought them at local grocery stores or that the company commissary provided them (Society for Historical Archaeology).

Canned beer was introduced sometime between 1934 and 1935 (Maxwell 1993:96). Cone-top cans, which became commonplace in both the beer and soft drink industries, are found within the numerous can dumps throughout the site. Two diagnostic beer cans are at the Locus G can dump: both are flat-top cans with church-key holes in them. One can reads “NON-FATTENING REFRESHMENT / CONTENTS 12 FL. OZS. / ACME BEER/ KEGLET.” Acme beer’s “non-fattening” advertising appealed to female consumers (*The Arizona Republic* 1936:7). The Keglet was an emerging style in beer can production and advertised itself as being similar to a traditional beer keg, keeping the beer fresher than a bottle.

Another flat-top can at Locus G reads “Pabst / Tapa Can.” These were produced by the Pabst Brewing Company following Prohibition and sold in stores with the option of a separate branded church-key style can opener. A metal “Pabst Blue Ribbon” bottle opener with a beer bottle etched design was found at Locus KLM. As bottle openers would have been sold separately, this may indicate a preference for the PBR brand by whoever bought it.

Three amber bottle bases for “VAI BROS. WINES / LOS ANGELES” were found at Loci E, V, and KLM. The Vai brothers, Giovanni and James, were Italian immigrants who came to the United States around 1912 (U.S Department of Labor 1913). The brothers operated the Padres Vineyard in California’s Cucamonga Valley and pivoted to the production of medicinal wine elixirs to survive Prohibition (Daily News 2010). Advertisements for Vai’s “Padres Elixir” wine tonic included a recommended dosage of “one or two measure glassfuls before or after meals,” supposed health properties, reminders that it is definitely not to be used as a recreational beverage, and even occasional testimonials from registered nurses (*Kansas City Journal* 1930:4). Supposed medicinal uses of wine tonics included aiding in blood flow, digestion, nerves, and sleeplessness (*St. Joseph’s News-Press* 1927:11). Given that the bottles at Apex have the “VAI

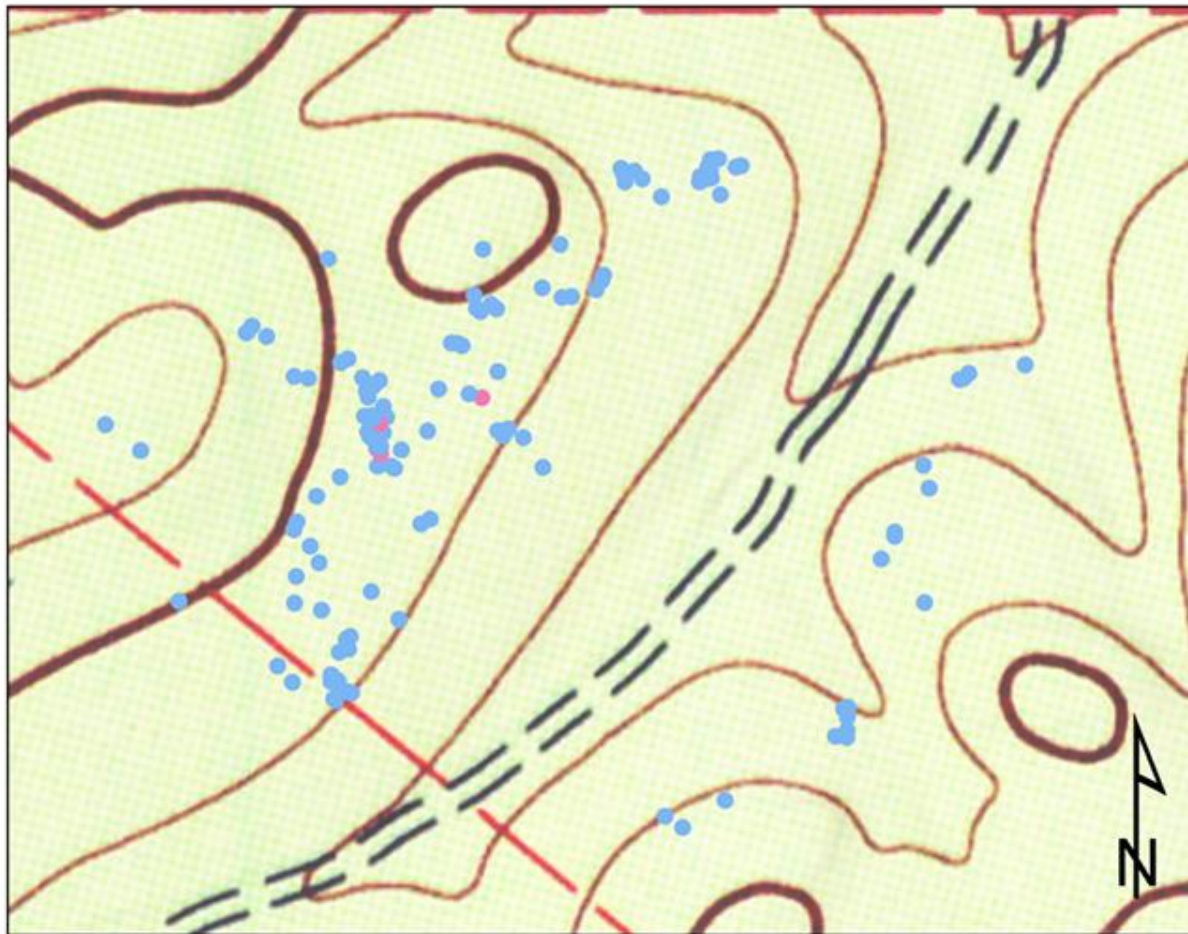
BROS.” name on them, which the company reverted back to after Prohibition, they most likely were produced, bought, and consumed sometime in the 1933 to 1936 period. An analysis of Post-Prohibition advertising for the company emphasized the wine’s cost, often stating that the taste was indistinguishable from more expensive options. The vineyard closed in 1961, with advertising in slow decline since around 1940 (Spitzzeri 2019). As shown in this chapter, the data relevant to Apex is not only material, but is also based in corporate histories and marketing. The artifacts themselves are not enough to make interpretations, but situating them within the context of their costs, uses, and intended demographics can aid in understanding how the people of Apex obtained the products and why.

Chapter 5: Interpretations and Conclusions

The overall consumption of alcohol at Apex was shaped largely by class. Where and how alcohol was obtained and consumed seems to have been a major difference between those living on each side of the camp. Pay rates, ethnic divisions, and the differences in family versus individual socialization all contributed to how Apex residents preferred their alcohol. In this chapter, I address the research questions established at the beginning of this thesis and base interpretations off of artifacts, spatial results, and the application of the theoretical lenses.

Research Question One: How did alcohol-related consumption patterns vary across the different areas of the Apex site?

Results of the spatial data show that a disproportionate amount of alcoholic beverage containers are located on the management side of the site. Approximately 86% of the alcohol-related objects recorded were on the management side, with only 13% on the laborer side (Figure 5.1). According to a Marxist theoretical lens, this discrepancy is tied to the financial differences between those living on the management side versus those living on the laborer side of the camp.



Alcohol Artifact Locations

This map shows the locations of alcohol-related artifacts across the Apex archaeological site. The blue dots denote the locations of alcohol containers, such as whiskey bottles, beer cans, and malt syrup cans. The pink dots symbolize alcohol paraphernalia, such as shot glasses and bottle openers.

Figure 5.0.1: Map of the alcohol artifact across Apex as symbolized by dots. Map by author.

The most surprising find was that 23% of alcohol-related objects on the management side of Apex were found around superintendent Arvid Anderson's home. A square wooden foundation, likely of Anderson's garage, was scattered with the remains of 1933 Owens-Illinois branded beer bottles. The most significant area was a large tree near a privy. Broken whiskey and beer bottles cover the ground around the tree, indicating it was either a drinking spot or a convenient place to dispose of empty bottles. Either way, the trash is in direct proximity to Anderson's home. After applying a density-based heat map filter to the artifact map, a large, very dense area appeared near the middle of the management side of the camp (Figure 5.2). This concentration symbolizes the location of KLM, or Arvid Anderson's house. Other significant areas of density are the large can dumps on the management side, namely Loci S and G. Two concentrations, Loci G and N, are both notably on the peripheral edges of the management sides.

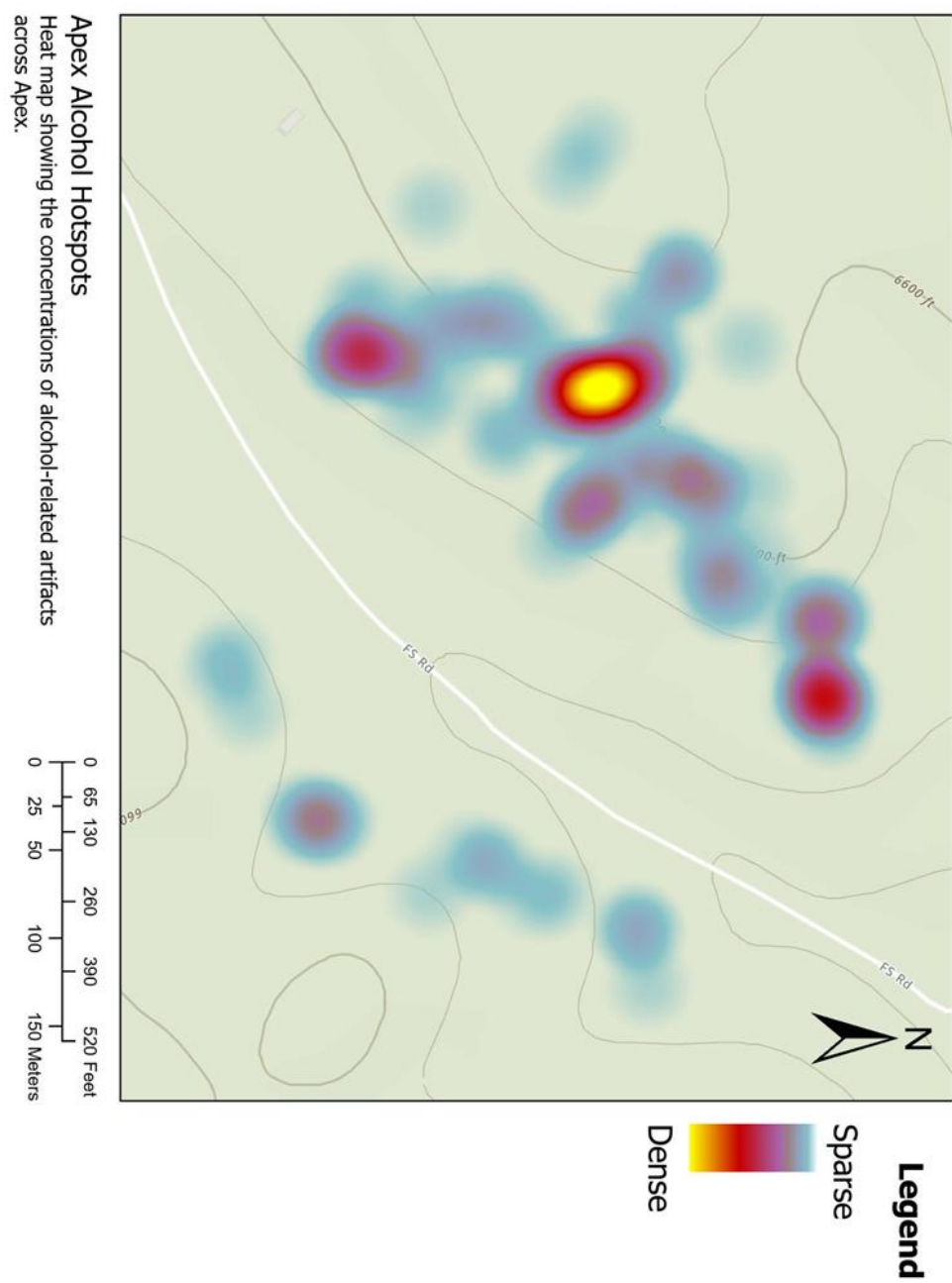


Figure 5.0.2: Alcohol-related artifacts across Apex rendered as a heat map on a scale of density. Note the higher frequency of “dense” areas on one side versus the other. Map by author.

The presence of alcohol consumption at Anderson's home means a few things. Management personnel at Apex not only did not care if workers were drinking at the camp, but were themselves participants in it. The large quantity of alcohol bottles indicate Anderson's home may have acted as a gathering place for other workers to hang out and bond, with alcohol consumption being a part of those activities. Anderson himself may have been a heavy consumer of alcohol outside of social drinking, or he used his position of power amongst the other Swedish workers at the camp to cultivate a social drinking scene. Anderson's larger paycheck may have also meant he had increased access to products, such as the medicinal whiskey and six-packs of beer bottles.

A breakdown of alcohol quantities by locus demonstrates that KLM and S had by far the highest number of alcohol-related artifacts (Figure 5.3). Given S's proximity to KLM, these items were likely also consumed in the area of Anderson's house. Loci N, J, and G have the next highest alcohol artifact quantities and are also located on the management side of the camp. Locus J was the location of family housing, G was a management side can dump, and N was the timber sales office. While the office was technically a work area, most of the alcohol-related objects were found on the periphery of the locus.

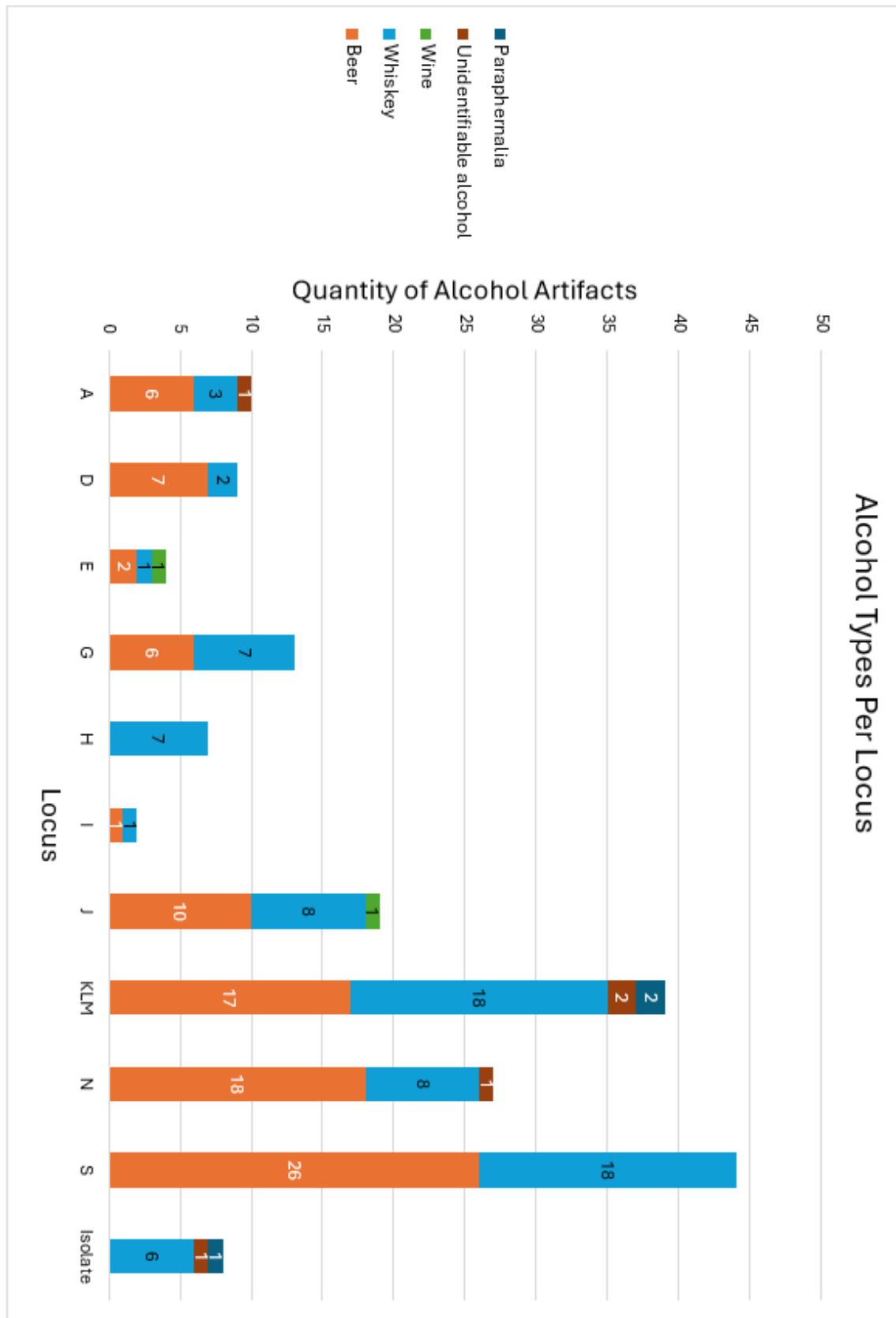


Figure 5.0.3: Graph showing alcohol quantities by locus at Apex.

So, who was site superintendent Arvid Anderson? Andres Arvid Anderson, born August 31, 1888, spent over 20 years working for the SMLC. Born in Orsa, Sweden, Anderson immigrated to the United States in 1913. He found work as a locomotive engineer with the SMLC around 1915 (U.S. Department of Labor 1915). During World War I, Anderson joined the U.S. Engineering Corps. He was discharged in 1918 and, as an article on his return from military service touted, “arrived in Williams one day and went back to work the next” (*The Williams News* 1918:3).

Anderson married 16-year-old Margaret Skinner of Oklahoma in 1920, and she soon moved with Arvid to the various camps where he worked (U.S. Department of Labor 1931). Margaret had been living independently and working as an assistant cook for a boarding house in New Mexico, potentially where she and Arvid met (U.S. Bureau of the Census 1920). They had five children: Arvid Clement (b. 1922), Paul Lenard (b. 1924), Elna Marie (b. 1927), Betty Lue (b. 1935), and Alfred Allen (b. 1944). While the 1930 census and Saginaw and Manistee company correspondence list a Michigan man, Wayne Russell, as "superintendent" at the logging camp, oral histories from Apex residents all identified Anderson as the person in charge at the camp (Matson 1984; Wilson 1984). Anderson's official position in the 1930 census is “Mechanic.” However, he is listed in company records as having a sundry ledger, or a logbook for smaller expenses (Saginaw and Manistee Lumber Company). This means Anderson had some degree of financial or at least secretarial responsibility at the camp. Furthermore, evidence of phone wires are strung from culturally modified trees around where his home at Apex would have been, signifying he remained connected to activities happening at work sites and potentially in Williams. The Anderson family house, the largest at Apex, had a living room, kitchen, two bedrooms, and a shed or garage out back (Richmond 1988:78). After Apex disbanded, the family

stayed in Williams, with the older children attending Williams High School (U.S. Bureau of the Census 1940; *The Williams News* 1941:4, 1944:1).

Around 1940, the Anderson family relocated to Loyalton, California, potentially because of Arvid's health; he died in 1943 at 55 years old (U.S. Find A Grave Index). His family remained in California. Margaret remarried Jacob Blazeovich, a Yugoslavian immigrant who had previously worked as the blacksmith at the Apex logging camp (U.S. Bureau of the Census 1930, 1950; *Portola Reporter* 1969:13). Blazeovich seemingly also moved to Loyalton around the same time as the Anderson family, finding work in California's lumber industry. The couple had one daughter, Margaret Irene (*Portola Reporter* 1969:13). All of Margaret's children stayed around Loyalton and surrounding towns.

Arvid Anderson's position at Apex put him in the center of camp activities, as seen by his frequent mentions in oral histories given by past residents (Matson 1984; Wilson 1984). His social relationships with his fellow workers, specifically the other Swedish workers, will be discussed in further detail under Research Question 3.

Less drinking activity on one side of the camp versus the other could be due to differences in social activity. Those living on the management side lived and dined in somewhat nuclear family homes with their own kitchens (Franzen 2020:160). Alcohol may have been purchased in Williams or surrounding towns after Prohibition and consumed by these workers in the comfort of their own homes. Meanwhile, laborers living and dining communally may have gone elsewhere to drink, such as the saloons and speakeasies of Williams.

Research Question Two: What strategies did people use, both as consumers and producers, to continue the production and distribution of alcohol in the Prohibition era and immediately after?

Residents at Apex utilized a variety of strategies to obtain alcohol both during and after the American Prohibition. Material evidence points to both legal and illegal means of acquiring liquor, including using legal loopholes in Prohibition law, consuming bootlegged and smuggled alcohol, and potentially even homebrewing beer.

The presence of repetitive branded products, such as the over 60 cans of Budweiser malt syrup, means there was a nearby source of those items that was easily accessible to the camp's residents. The company commissary, which was stocked with a variety of goods, is a good possibility. The commissary sold "tobacco, canned goods, soap, and other household necessities" (Richmond 1988:78-79), and was restocked by supply trucks from the company's main store in Williams. This specific article does not list alcohol as being sold by the commissary, but canned goods are. Because malt syrups were marketed as a baking ingredient, they may have been stocked by the Saginaw and Manistee as a canned food product, not as a homebrew ingredient. While I assume bottled liquor was not sold by the company even after repeal, it is impossible to know for sure due to the absence of commissary order logs, kitchen records, and company store records. While similar studies of foodways at other Western logging camps also lack commissary records, menus and oral accounts mention or list alcohol as having not been served at meal times (Conlin 1979:167; Oyangen 2009:334). The commissary itself acted as a core for the residents of Apex. Convenient product access was shipped to the camp from Williams, and the products stocked at the commissary were not members of Apex (or the "periphery") but instead were members of the core (either of the Williams SMLC headquarters, or the corporate headquarters).

Spending money on products sold outside of the commissary, such as at the shops at Grand Canyon Village, Flagstaff, or Jerome, would then be countering the capitalist system created by the core-periphery relationship (Sunseri 2020:187; Wallerstein 2004:29).

The neighboring town of Williams was home to a “saloon row” before Arizona’s state prohibition passed in 1915, as speakeasies and moonshining occurred across the town as venues for working class men to socialize and drink (**Error! Reference source not found.**). Williams would have acted as the primary core for consumption outside of the camp. The presence of car parts and license plates at Apex means that at least a few people had personal vehicles they could use as transportation in and out of the camp. Other workers could hop on the train.



Figure 5.0.4: Saloon Row in Williams just before Arizona’s prohibition, 1914. Image from the Williams, Arizona Historic Photo Collection, Arizona Memory Project.

The presence of American Medicinal Spirits Co. bottles on the management side indicates residents making more money had increased opportunities to obtain alcohol, particularly during Prohibition. Most of these bottles were recorded at Arvid Anderson's house, meaning he likely had a prescription for medicinal whiskey and could afford to get it refilled at least two times. Meanwhile, the Straight American whiskey bottle from Juarez, Mexico was found on the labor side, meaning workers with less money may have had to take part in more illegal means of acquiring alcohol during Prohibition. Illegal moonshine was known to come from Flagstaff on the train, which one worker is said to have been accessible to Apex (Setterland 1984:00:30:40-00:31:15). This is a great demonstration of Apex's situation within a world systems framework. Apex as a periphery was connected to larger cores, like Flagstaff, Los Angeles, and the U.S.-Mexico border through rail access.

Workers with labor jobs may have chosen to drink in more isolated areas where supervision from management personnel was less pressing. Uphill from Locus N was what appeared to be a secluded spot away from supervision where alcohol may be consumed, as a flask whiskey bottle and the potential moonshine jar were found (**Error! Reference source not found.**). While Locus N had some evidence of alcohol consumption, it also had large scatters of soda bottles. The lack of cooking materials, dishware, and food containers support the idea that the timber sales office was just used during working hours and would not have housed the same types of activities found elsewhere at the camp. These bottles, mostly dating from 1926 to 1928, included brands not found at any other Loci. This indicates two things: one, the timber sales office was potentially one of the first places at Apex to have been set up and staffed, as indicated by the earlier date codes on the bottles; and two, that drinking soda as opposed to alcohol in work areas may have been preferred or encouraged. Two whiskey bottles were recorded at the

schoolhouse, possibly consumed by workers tasked with disassembling parts of the camp in 1936.



Figure 5.0.5: A 1935 whiskey bottle (left) and a canning jar (right). Both were found uphill from Locus N, possibly left by someone drinking in seclusion away from the work area. Photo by author.

The use of secluded areas for drinking by some workers, while others seem to have been comfortable drinking publicly, could indicate a few things. First, it is possible workers attempting to covertly drink at work areas or during work hours were breaking camp policy. While drinking alcohol in general did not seem to be against any rules, doing it in certain areas or during certain times of day may have been. Secondly, the “laborers” at Apex, namely the loggers and railway workers, were transient workers. Many had families living elsewhere and slept communally while at the Apex camp. Apex was then just a work site and not “home.” It is

possible laborers did not feel comfortable socializing or drinking at the camp and preferred to go elsewhere to do it.

Research Question Three: How did the Scandinavian immigrant residents of Apex use consumption to develop or reject an “American” identity?

Alcohol consumption was an important part of the culture at Apex. When asked about Prohibition, former Apex worker John Setterland quipped “we weren’t dry, I’ll tell you that” (Setterland 1984:00:30:40). Several stories of Saginaw and Manistee workers from oral histories and newspapers feature alcohol consumption amongst the workers. In one story, a Swedish worker at Apex who was attempting to save money to visit his wife and children in Sweden “never got out of Williams,” and instead drank his money away (Wilson 1984: 0016:53-00:17:43). A Saginaw and Manistee worker was charged in 1936 for “driving on the highway while under the influence of intoxicating liquor,” after he drove one truck off the freeway, went back into Williams to drink whiskey at the Sultana, then crashed a second truck in an effort to retrieve the first (*The Williams News* 1936:1).

As far as existing records show, there was no central structure at Apex that was used for alcohol consumption or other leisure activities. Recreation after work hours was generally difficult due to the lack of lighting at the camp, so most laborers usually went to bed early (Richmond 2017:32). The camp kitchen is not known to have served alcohol to workers, and there is no record of it being consumed in the dining hall (Richmond 1988:84). However, there are malt syrup cans and whiskey bottles at Locus A, meaning there was likely alcohol production or consumption happening near communal areas.

While some oral histories state there were few social activities at Apex, this may actually highlight a major difference between the “laborer” and “manager” demographics at the camp. A former commissary clerk explained the only social activity among logging camp laborers was an occasional game of cards or craps, but that some of the younger married couples spent time together socializing (Wilson 1984). Families at Apex often visited each other as a means of entertainment (Richmond 1988:79). While many company towns in the early 20th century had restrictions on drinking alcohol, “artifacts related to intoxicants, including alcoholic beverages, patent medicines (which often contained alcohol and occasionally opiates), and tobacco are common at logging industry sites” (Franzen 2020:127). While Prohibition did not halt drinking, it did stop most social drinking, leaving people to consume alcohol alone or in smaller, localized groups (Slingerland 2021:168).

Variation in personal taste can be seen through the presence of numerous whiskey brands in the post-Prohibition era. As mentioned back in Chapter 4: Artifact Results, at least ten distinct whiskey brands were recorded at Apex. As the commissary likely did not sell distilled spirits, workers would have had to obtain whiskey from outside sources. This would tie back into the core-periphery relationship, as workers would leave the periphery in order to access a wider variety of products. In consumption theory, the act of going elsewhere to acquire products not found in the periphery could constitute an act of defiance against the SMLC, or as a sign of status amongst workers (Mullins 2011:10).

The fact that most of those living on the “management” side of camp were Swedish was no accident. One former employee of Apex noted of superintendent Arvid Anderson: “The superintendent, he wanted all Swedes, you know, and if they didn’t have enough Swedes, they’d go back to Minnesota or somewhere in the spring and hire folks to come out here. There was

nothing but Swedes here then” (Setterland 1984:00:34:00-00:35:45). While Apex’s worker pool was a melting pot of Anglo-Americans, Russians, Yugoslavians, Mexicans, and Norwegians, Swedes certainly seemed to have held privileges at the camp.



Figure 5.0.6: Apex loggers (Richmond 1988).

Resident Frans Emil Chapman, formerly Köpman, is a good example of perks given to Swedish workers. While Chapman is listed in the 1930 census as being a “laborer” and living at the camp without his family, Al Richmond’s map of the site shows he had his own home on the management side right next to Arvid Anderson’s house. A possible reason for this is that Chapman was married to Maria Matson, fellow Apex resident Erick Matson’s sister (*The Coconino Sun* 1927:1). This meant that Chapman was not only given perks for being Swedish, but for being part of a larger family network at the camp.

Residents of Apex.

Archival and oral history evidence demonstrated the persisting relationships formed by Apex's Swedish workers. In an article about future Apex camp cook Oscar Ryberg's wedding, it was stated that he and his bride, Elvira, were "popular members of the local Swedish colony," indicating that the Swedes in Northern Arizona stuck together as a community (*The Williams News* 1912:1). Newspaper articles revealed that several of Apex's Swedish workers maintained relationships with each other long after the camp itself was gone. When Oscar Ryberg's daughter, Anna, married fellow SMLC worker Roy Johnson in 1940, guests included Andy Smith and his wife Alice, and Arvid and Margaret Anderson (*The Williams News* 1940:1). Both couples had lived with the Rybergs at Apex and were Swedish men with American wives (U.S. Bureau of the Census 1930). When former Apex loader Erick Matson died in 1973, pallbearers included Roy Johnson and Eric Ryberg, Oscar's son-in-law and son (*The Williams News* 1973:4).

Håll Erick Matson, born 1890, immigrated to the United States from Våmhus, Sweden, in 1909. Like Arvid Anderson, Matson quickly found work in Northern Arizona's logging industry. According to the 1910 census, Matson worked as a sawyer at a logging camp outside of Bellemont with dozens of other single male laborers from Sweden. A 1917 registration card indicated that he claimed his parents in Sweden as "dependents" and was sending money home to them. In 1923, Matson married fellow Swedish immigrant, Lilly Eriksson (b. 1892), in Flagstaff. Lilly, also from Våmhus, came to the U.S. in 1922 (U.S. Department of Labor 1922). Her anticipated occupation was listed as "housekeeper," a common route for young, single immigrant women.

The Matsons had four children: Harry Erick (b. 1924), Estrid Ellen "Helen" (b. 1925), Mary (b. 1927), and Donna June (b. 1942) (U.S. Department of Justice 1955). Matson's

occupation at the Apex logging camp was as a loader, meaning he operated a steam-powered machine used to load logs onto outgoing trucks and railcars. The Matsons resided in the typical one-bedroom house and had the luxury of their own car, a 1928 Chevy (Matson 1984:00:18:14-00:19:43; **Error! Reference source not found.**). After Apex, the Matsons continued living in logging camps around the Williams area. Like the Anderson children, the Matsons attended Williams High School. At least three of the four Matson children remained in Northern Arizona for the remainder of their lives.

Oscar Ryberg was the Apex camp cook, and one of the few people at the camp with a nuclear family home on the laborer side. This allowed him to be closer to the kitchen and dining hall he worked out of. He and his wife, Elvira, lived with their ten children and several Mexican borders in their humble one-bedroom house (U.S. Bureau of the Census 1930). The hypothesized former location of their home will be a topic of investigation in the upcoming 2026 field season.



Figure 5.0.7: Lilly, Erick, and Harry Matson outside their home and car at the Apex logging camp (Richmond 1988:85).

Modern Legacies of Prohibition

In the decades following Prohibition's repeal, attitudes toward alcohol have swung back and forth with each generation. Initially, consumers did not immediately jump back into alcohol consumption, especially when it came to beer, as "An entire generation of drinkers had come of age at a time when beer was essentially non-existent, and sugary cocktails and soft drinks were

all the rage” (Huckelbridge 2016:219). Beer consumption changed thanks to the advent and popularization of canned beers and the rise of in-home refrigerators, making it more convenient to drink.

New research on conditions like fetal alcohol syndrome in the 1970s reignited discussions around whether alcohol is healthy or harmful (Musto 1996:79). Alcohol sales gradually decreased again through the 1980s and 1990s when drunk driving awareness and underage drinking advocacy groups gained traction (78-79). In 1984, President Ronald Reagan signed the National Minimum Drinking Age Act, which increased the national drinking age from 18 to 21 (Alcohol Policy Information System).

Despite the failure of Prohibition, a Prohibition political party is still active in the United States. Operating for over 150 years, the Prohibition Party is the oldest third-party organization in the United States (The Prohibition Party 2024). While modern Prohibitionists no longer advocate for alcohol being made fully illegal, the Party does support continued taxation on alcohol and drug products and an end to all alcohol advertising. In response to the rising popularity of marijuana products, the Prohibition Party’s modern platform supports outlawing all drug products.

In 2025, alcohol is back on a generational decline. A 2025 survey found 54% of American adults consume alcohol, the lowest recorded rate since 1939 (Gallup 2025). Reasons for recent declines in alcohol consumption are attributed to a mix of awareness of family medical histories, changes in socialization in the aftermath of the COVID-19 pandemic, and the rise of recreational marijuana usage (Burga 2025; Wolfer 2025). As of 2025, 24 states have legalized recreational marijuana for consumers over the age of 21. A 2022 survey found that 69% of the young adults surveyed preferred marijuana to alcohol (Cross 2026). Like alcohol companies,

marijuana companies in the 2020s advertise their products according to their different uses.

Some companies emphasize their medicinal qualities with an emphasis on aiding mental health issues (BakedBros n.d.; Wyld 2026). Other brands explicitly advertise their products as alcohol alternatives, allowing consumers the joys of vice without the downfalls of hangovers. One company's website included the slogan "Raise Your Gummies, Not Your Glass," (Soul 2025).

Anti-marijuana propaganda, which has been around since the mid-1930s, uses similar language to the pro-Prohibition ads of years past. People using marijuana are portrayed as sinful youths, relegating their lives to crime and ruin (Figure 5.5). Many of these posters have since been reclaimed by cannabis culture, which makes determining what was genuine and what was parody difficult. The ongoing debates around marijuana legislation, namely its status as a recreational and medical substance and over the incarceration of those with drug charges, demonstrate the how the legacy of Prohibition can be seen in modern issues around vice.



Figure 5.0.8: Poster for the 1942 exploitation film “Devil’s Harvest,” which attempted to warn young people about the dangers of marijuana usage. Image from IMDB.

Future Directions.

The archaeological record of the Apex logging camp still holds a wealth of future research material, particularly as it pertains to consumption and immigrant identity. While this project focused on the camp's Swedish population, further scholarship can be done into the other groups of workers at the camp, namely the large Mexican population that worked for the railway. There are future plans by the Apex, Arizona Archaeology Project to record Loci B, F, P, and Q, which would focus on some of the family housing on the labor side including the Ryberg home.

This thesis and further research will also be used by the Apex, Arizona Archaeology Project's collaborating agency, the Kaibab National Forest, to aid in site preservation. An anticipated outcome of this partnership is a National Register of Historic Places application, of which this thesis will be a part.

While the American Prohibition is the topic of seemingly endless history publications and museum exhibits (e.g., Aaron and Musto 1981; Okrent 2011; The Mob Museum n.d.), it is an area of untapped potential in archaeology. This thesis highlight how much archaeological information can be gleaned about class, ethnicity, labor, and consumption in the Prohibition era.

Bibliography

Aaron, Paul and David Musto.

1981 Temperance and Prohibition in America: A Historical Overview. In *Alcohol and Public Policy: Beyond the Shadow of Prohibition*, edited by Mark H. Moore and Dean R. Gerstein, pp. 127-181.

American Products Co.

1912 How to Make Your Own Beer at Home with “Ambrew.”

<<https://www.abebooks.com/first-edition/Own-Beer-Home-Ambrew-Concentrated-Extract/21978568199/bd>>. Accessed 8 May 2026.

Arizona Prohibitionist.

1939 Arizona Prohibitionist, Issue No. 1. *Prohibition State Committee*.

<<https://azmemory.azlibrary.gov>>. Accessed 11 November 2025.

1946 Arizona Prohibitionist, Volume 8, Issue 1. *Prohibition State Committee*.

<<https://azmemory.azlibrary.gov>>. Accessed 28 November 2025.

The Arizona Republic.

1915 City Calmly Watched the New Year In. *The Arizona Republic*. 1 January: 1. Phoenix, AZ.

1919 The Sugar Substitute. *The Arizona Republic* 19 November: 4. Phoenix, AZ.

1932 “Here’s the Secret.” *The Arizona Republic* 27 August: 4. Phoenix, AZ.

1936 “It’s Here!” *The Arizona Republic* 10 July: 7. Phoenix, AZ.

Arizona State Library.

1916 Note from unknown author regarding Grady Gammage quote about Prohibition, September 5, 1916. *Arizona State Library, Archives, and Public Records*.

<<https://azmemory.azlibrary.gov/nodes/view/247808>>. Accessed 12 November 2025.

Associated Press.

1931 Government Makes 2,435,631 Gallons of Medicinal Whiskey. *Houston Chronicle* 14 December: 24. Houston, TX.

Association Against the Prohibition Amendment.

1931 Some Men You Know who are Directing the Fight for Repeal of the National Prohibition Amendment. Pamphlet. Riordan Mansion Prohibition Research Collection, Flagstaff, AZ.

BakedBros.

N.d. About Us. <<https://bakedbros.com/learn/about-us/>>. Accessed 6 February 2026.

Bay Bottles.

2019 Clicquot Club. <<https://baybottles.com/2019/11/19/clicquot-club/>>. Accessed 6 January

2026.

Beringer Vineyards.

2025 Pioneer in Napa. <<https://www.beringer.com/pages/pioneer-in-napa>>. Accessed 9 December 2025.

Blanck, Dag.

2014 “A Mixture of People with Different Roots”: Swedish Immigrants in the American Ethno-Racial Hierarchies. *Journal of American Ethnic History* 33(3):37-54.

Bourdieu, Pierre.

1984 *Distinction: A Social Critique of the Judgement of Taste*, Richard Nice, translator. Harvard University Press, Cambridge.

Burga, Solcyré.

2025 Why Gen Z is Drinking Less. <<https://time.com/7203140/gen-z-drinking-less-alcohol/>>. Accessed 12 January 2026.

Burke, Eric.

2024 User Permit Number Spreadsheet. <<https://www.bourbonguy.com>>. Accessed 6 May 2026.

Burton, Bill.

2021 Hires Root Beer - The First American Carbonated Drink. <<https://postcardhistory.net>>. Accessed 20 February 2026.

Chicago Tribune.

1921 “Puritan Malt Extract With the Hops in it.” *Chicago Tribune* 9 November: 23. Chicago, IL.

City of Williams.

n.d. “The World Famous Sultana.” Historic building plaque, Williams, AZ.

The Coconino Sun.

1919 Dry Law Passed by Congress is Drastic Measure. *The Coconino Sun* 21 November: 11. Flagstaff, AZ.

1920 Government Put Ban on Home Brew Makin’s. *The Coconino Sun* 3 December: 11. Flagstaff, AZ.

1925 257 Rum Cases in Arizona Filed in Year. *The Coconino Sun* 25 December: 8. Flagstaff, AZ.

1927 Matt Matson Dies in Sleep; Buried Here. *The Coconino Sun* 4 March: 1.

Cross, Greta.

2026 Dry January is Here, but Gen Z is Exploring Sobriety. <<https://www.usatoday.com/>>. Accessed 6 February 2026.

Dale, Emily.

2025 California Dreamin': Apex-Los Angeles Connections. <<https://in.nau.edu/departments-anthropology/apex-los-angeles/>>. Accessed 7 April 2026.

Dale, Emily and Margaret Hangan.

2022 Public Engagement and Collaborative Archaeology at Apex, Arizona. *The Ol' Pioneer* 33(2): 14-17.

Franzen, John G.

2020 *The Archaeology of the Logging Industry*. University Press of Florida, Gainesville.

Garner, Anne.

2017 The "Best" Tonic: Pabst Malt Extract Pamphlets in the Academy Library. <<https://nyamcenterforhistory.org/>>. Accessed 30 January 2026

Goddard, Richard A.

2002 Nothing but Tar Paper Shacks. *Historical Archaeology* 36(3): 85-93.

Grand Canyon Trust.

2026 Baaj Nwaajoi I'tah Kukveni - Grand Canyon National Monument. <<https://www.grandcanyontrust.org/>>. Accessed 25 April 2026.

Grimsköld, Carl.

1923 *Swedish-American Book of Cookery and Adviser for Swedish Servants in America*. Library of Congress, Washington, D.C.

Guyer, William.

1934 Design for a Bottle. United States Patent Office, 92,901. Filed 12 May.

Hagley Museum and Library.

N.d. Seagram Company. <<https://www.hagley.org/seagram-company>>. Accessed 11 March 2026.

Hands, Thora.

2018 Neither Carnival nor Lent: Everyday Working Class Drinking. In *Drinking in Victorian and Edwardian Britain: Beyond the Specre of the Drunkard*. <<https://www.ncbi.nlm.nih.gov/books/NBK524979/>>. Accessed 8 May 2026.

Hotel Monte Vista.

N.d. History of a Flagstaff Legend. <<https://hotelmontevista.com>>. Accessed 19 November 2025.

Howell, William T.

1865 Howell Code. First Legislative Assembly of the Territory of Arizona. *Office of the Arizona Miner*. <<https://azmemory.azlibrary.gov>>. Accessed 29 October 2025.

Huckelbridge, Dane.

2016 *The United States of Beer: The True Tale of How Beer Conquered America, From B.C. to Budweiser and Beyond*. HarperCollins Publishers, New York.

Johnson, Susan.

2025 Flagstaff History: Jerome bootleggers caught with a cache. *Arizona Daily Sun* <<https://azdailysun.com>>. Accessed 5 October 2025.

Jones, Bartlett C.

1963 A Prohibition Problem: Liquor as Medicine 1920 - 1933. *Journal of the History of Medicine and Allied Sciences* 18(4):353-369.

Kansas City Journal.

1930 "Springtime is Tonic Time." *Kansas City Journal* 8 May: 4. Kansas City, MO.

Keeler, Kasey.

2023 Paul Bunyan (folklore character). *Minnesota Historical Society*. <<https://www3.mnhs.org/mnopedia>>. Accessed 29 October 2025.

Library of Congress.

N.d. Immigration to the United States, 1851-1900. <<https://www.loc.gov>>. Accessed 18 November 2025.

Library of Congress.

1935 United States Code: Federal Alcohol Administration Act, Chapter 8.

Linn, Meredith B.

2010 Elixir of Emigration: Soda Water and the Making of Irish Americans in Nineteenth-Century New York City. *Historical Archaeology* 44(4):69-109.

Lintelman, Joy K.

2019 Swedish Immigration to Minnesota. *Minnesota Historical Society* <<https://www3.mnhs.org/mnopedia>>. Accessed 28 October 2025.

Lockhart, Bill.

2012 Breweries and Beer Bottles at El Paso, Texas. <<https://secure-sha.org/bottle/pdffiles/ElPasoBeer/Chap5c-2-EPBrew.pdf>>. Accessed 6 April 2026.

Lockhart, Bill, Bill Lindsey, Beau Schriever, and Carol Serr.

2018 Root Glass Co. <<https://secure-sha.org/bottle/pdffiles/RootGlass.pdf>>. Accessed 20 February 2026.

Lockhart, Bill, Pete Schultz, Beau Schriever, Carol Serr, Bill Lindsey, and Bob Brown.

2020 Whitall Tatum - Part II - Whitall Tatum Co. <<https://secure-sha.org/bottle/pdf/WhitallTatum2.pdf>>. Accessed 6 April 2026.

Maddock, Timothy S.

2024 Life, Work, and Identity at Apex, Arizona: The Archaeology of a Twentieth-Century Logging Camp and Company Town. Master's thesis, Department of Anthropology, Northern Arizona University, Flagstaff.

Martell, Devony.

2025 Planes, Trains, and Automobiles: Boy Toys from Apex.

<https://legacy.nau.edu/anthropology/apex_boy_toys/>. Accessed 22 October 2025.

Matson, Harry.

1984 Interview by Al Richmond, 4 May. Manuscript and audio tape, Register of the Al Richmond Collection, (NAU.OH.71), Box 71, Folder 11, Northern Arizona University Special Collections, Flagstaff, AZ.

Maxwell, D.B.S.

1993 Beer Cans: A Guide for the Archaeologist. *Historical Archaeology* 27(1):95-113.

McGuire, Randall H.

1992 *A Marxist Archaeology*. Academic Press Inc., San Diego.

Mickelson, Erik.

1999 The Loyal Legion of Loggers and Lumbermen.

<<https://depts.washington.edu/labhist/strike/mickelson.shtml>>. Accessed 7 April 2026.

Mintz, Sidney W.

1985 *Sweetness and Power: The Place of Sugar in Modern History*. Penguin Books, London.

Miron, Jeffrey A. and Jeffrey Zwiebel.

1991 Alcohol Consumption During Prohibition. *An American Economic Review* 81(2): 242-247.

The Mob Museum.

n.d. Alcohol as Medicine and Poison. *Prohibition: An Interactive History*.

<<https://prohibition.themobmuseum.org>>. Accessed 20 September 2025.

n.d. Bootleggers and Bathtub Gin. *Prohibition: An Interactive History*.

<<https://prohibition.themobmuseum.org>>. Accessed 28 November 2025.

2021 Ten Alternative Products Made by Breweries During Prohibition.

<<https://themobmuseum.org>>. Accessed 30 January 2026.

Mullins, Paul R.

2011 The Archaeology of Consumption. *Annual Review of Anthropology* 40:133-144.

- Murphy, Mary.
1994 Bootlegging Mothers and Drinking Daughters: Gender and Prohibition in Butte, Montana. *American Quarterly* 46(2):174-194.
- Musto, David F.
1996 Alcohol in American History. *Scientific American* 274(4):78-83.
- Napa County Historical Society.
N.d. Business & Industry. <<https://napahistory.org/programs/shouting-down-the-wind/business-industry/>>. Accessed 9 December 2025.
- Northern Gila County Historical Society.
n.d. Prohibition and “Payson Dew.” <<https://www.rimcountrymuseum.org>>. Accessed 13 August 2024.
- O’Hagen, Lauren Alex.
2023 “Alcohol is Humanity’s Enemy!” Propaganda Posters and the 1922 Swedish Prohibition Referendum. *Scandinavian Journal of History* 48(2):179-205.
- Okrent, Daniel.
2011 *Last Call: The Rise and Fall of Prohibition*. Scribner, New York.
- Oyangen, Knut.
2009 The Gastrodynamics of Displacement: Place-Making and Gustatory Identity in the Immigrants’ Midwest. *The Journal of Interdisciplinary History* 39(3):323-348.
- Patton, Kate.
2009 Hires Root Beer: The Great Health Drink. <<https://pabook.libraries.psu.edu>>. Accessed 20 February 2026.
- PBS.
2025 Prohibition: A Timeline. <<https://www.pbs.org/kenburns/prohibition/timeline>>. Accessed 14 November 2025.
- Portola Reporter.
1969 Margaret S. Blazeovich. *Portola Reporter* 13 February: 3. Portola, CA.
- Power, Kay Grant and Dorothy Dahlgren.
2009 Unions in the Timber Industry 1917 to 1947. *Museum of Northern Idaho* 29(1):1-5.
- The Prohibition Party.
2024 The Prohibition Party. <<https://www.prohibitionparty.org/>>. Accessed 4 February 2026.
- Reckner, Paul E. and Stephen A. Brighton.

1999 “Free from All Vicious Habits”: Archaeological Perspectives on Class Conflict and the Rhetoric of Temperance. *Historical Archaeology* 33(1):63-86.

Richmond, Al.

1988 Apex: A Vanished Arizona Logging Community. *The Journal of Arizona History* 29(1): 75-88.

2017 *Cowboys, Miners, Presidents & Kings: The Story of Grand Canyon Railway*. Grand Canyon Association, Arizona.

Riordan, Richard.

1976 Interview by Kristine Prennace, 15 June. Interview transcript, Flagstaff Public Library Oral History Project, (NAU.OH.28.79). Northern Arizona Special Collection, Flagstaff, AZ.

Roberts, Heather.

2019 Bottom’s Up: A History of Prohibition in AZ. *Heritage Square History Blog* <<https://thesquarephx.org/news/bottoms-up/>>. Accessed 17 March 2025.

Slingerland, Edward.

2021 *Drunk: How We Sipped, Danced, and Stumbled Our Way to Civilization*. Little, Brown Spark, New York.

Society for Historical Archaeology.

2026 Historic Glass Bottle Identification & Information Website. <<https://secure-sha.org/bottle/>>. Accessed 8 April 2026.

Soul.

2025 Out of Office THC Gummies. <<https://www.getsoul.com/products>>. Accessed 6 February 2026.

Southern Oregon Digital Archives.

2016 Jim Rock Can Collection. <<https://libguides.sou.edu/soda>>. Accessed 17 January 2026.

Spitzzeri, Paul R.

2019 Ticket to the Twenties Themes & Tangents: Wine Tonics, Elixirs, and Bitters in the Prohibition Era. <<https://homesteadmuseum.blog>>. Accessed 26 March 2026.

Staski, Edward.

1984 Just What Can a 19th Century Bottle Tell Us? *Historical Archaeology* 18(1):38-51.

Stein, Pat.

1997 “Williams Residential Historic District.” National Register of Historic Places nomination, February. Arizona State Historic Preservation Office.

2006 *Logging Railroads of the Coconino and Kaibab National Forests: Supplemental Report to a National Register of Historic Places Multiple Property Nomination*. Report to the United

States Department of Agriculture, Forest Service, Southwestern Region from SWCA
Environmental Consultants, Flagstaff, AZ.

The St. Helena Star.

1932 Business Men Visit Farms. *The St. Helena Star* 20 May: 1. St. Helena, CA.

St. Joseph News-Press.

1927 Scanlan's Robidoux Pharmacy. *St. Joseph News-Press* 16 September: 11. St. Joseph, MO.

The Sunday Times.

1894 No title. *The Sunday Times* 13 May: 8. Bay City, MI.

Sunseri, Charlotte K.

2020 Archaeologies of Working-Class Culture and Collective Action. *International Journal of Historical Archaeology* 24(1): 183-202.

Time.

1939 Religion: Quakers, Old Quaker. <<https://time.com/archive>>. Accessed 11 March 2026.

The Times.

1919 U.S. Breweries to End Sugar Famine. *The Times* 3 November: 3. Trenton, NJ.

United Brotherhood of Carpenters and Joiners of America.

N.d. Membership Booklet: Wladyslaw Sutkowski. Saginaw and Manistee Lumber Company Collection, (NAU.MS.84), Box 12, Folder 447, Northern Arizona University Special Collections, Flagstaff, AZ.

United States Constitution.

1919 Eighteenth Amendment. <<https://constitution.congress.gov/constitution>>. Accessed 14 November 2025.

1933 Twenty-First Amendment. <<https://constitution.congress.gov/constitution>>. Accessed 14 November 2025.

U.S. Bureau of the Census.

1910 Bellemont Precinct, Coconino County, Arizona, U.S. Bureau of the Census, Washington, DC.

1920 Precinct No. 7 Thoreau, McKinley County, New Mexico, U.S. Bureau of the Census, Washington, DC.

1930 Saginaw Lumber Camp, Coconino County, Arizona. U.S. Bureau of the Census, Washington, DC.

1940 Williams City, Coconino County, Arizona. U.S. Bureau of the Census, Washington, DC.

U.S. Department of Labor.

1913 United States of America Declaration of Intention, No. 5955. U.S. Department of Labor and Commerce Naturalization Service, Washington DC. <<https://www.ancestry.com>>. Accessed 30 September 2025.

1915 United States of America Declaration of Intention, No. 168. U.S. Department of Labor and Commerce Naturalization Service, Washington DC. <<https://www.ancestry.com>>. Accessed 29 October 2025.

1922 List or Manifest of Alien Passengers for the United States Immigration Officer at Port of Arrival. U.S. Department of Labor Immigration Service, Washington DC. <<https://www.ancestry.com>>. Accessed 29 October 2025.

1931 United States of America Petition for Citizenship, No. 1195-M. U.S. Department of Labor and Commerce Naturalization Service, Washington DC. <<https://www.ancestry.com>>. Accessed 16 May 2025.

U.S. Find A Grave Index.

n.d. Andreas A. Anderson, 31 Aug 1888 - 2 Dec 1943, Mount Hope Cemetery, San Diego. <<https://www.ancestry.com>>. Accessed 19 November 2025.

U.S. Smokeless Tobacco Company.

N.d. About U.S. Smokeless Tobacco Company. <<https://www.ussmokeless.com>>. Accessed 22 January 2026.

Van Bueren, Thad M.

2002 Struggling with Class Relations at a Los Angeles Aqueduct Construction Camp. *Historical Archaeology* 36(3):28-43.

Veach, Michael.

2018 From My Archive: The Wilken Family Home Cooking Album. <<https://bourbonveach.com>>. Accessed 20 February 2026.

Wallerstein, Immanuel.

2004 *World-Systems Analysis: An Introduction*. Duke University Press, Durham and London.

The Williams News.

1912 Sultana Theater Success Every Way. *The Williams News* 16 November: 1. Williams, AZ.

1918 First Saginaw Soldier Back. *The Williams News* 12 December: 3. Williams, AZ.

1922 Manager Wilder Speaks of Mill Operations. *The Williams News* 28 April: 1. Williams, AZ.

1930 Build With Arizona Pine. *The Williams News* 21 March: 7. Williams, AZ.

1941 Congratulations Seniors. *The Williams News* 15 May: 4. Williams, AZ.

Wilson, Woodrow E.

1984 Interview by Al Richmond, 4 May. Manuscript and audio tape, Register of the Al Richmond Collection, (NAU.OH.71), Box 71, Folder 10, Northern Arizona University Special Collections, Flagstaff, AZ.

Wolfer, Macey.

2025 Gen Z's Weed Habits Put Function Over Fun. <<https://www.vice.com/en/article/gen-zs-weed-habits-put-function-over-fun/>>. Accessed 4 February 2026.

Wyld.

2026 The Why in Wyld. <<https://www.wyldcanna.com>>. Accessed 6 February 2026.

Appendix 1: Full Artifact Log

Artifact #	Locus	Artifact Material	Artifact Type	Common Contents	Bottle Info	Maker's Marks	Alcohol Types
1	Isolate	Glass	Alc container	Old Quaker	D-134/62//OI LOGO/5/N1670	Owens-Illinois	Whiskey
2	Isolate	Glass	Alc container		R-85	Owens-Illinois	Whiskey
3	Isolate	Glass	Brewing			Hazel Atlas	Other/Unknown
4	Isolate	Glass	Alc container		glass gogp logo. d372		Whiskey
5	Isolate	Glass	Alc container		des pat87834/90/oi/5/r286//10	Owens-Illinois	Whiskey
6	Isolate	Non-ferrous metal	Alc paraphernalia		Frankfort distillers shot glass		Whiskey
7	Isolate	Glass	Alc container		r134. Hiram Walker bottle		Whiskey
8	Isolate	Glass	Alc container	Budweiser malt syrup	HOP/FLAVORED/BUDWEISER/BARLEY MALT/SYRUP		Whiskey
9	I	Ferrous metal	Alc container	Budweiser malt syrup	Logo is a cross in a shield. base ""5/(latch ford logo)/247""	Latchford Glass Co	Beer
10	N	Glass	Alc container	Budweiser malt syrup	HOPS/FLAVORED/BUDWEISER/BARLEY MALT/SYRUP		Other/Unknown
11	N	Ferrous metal	Alc container	Budweiser malt syrup	HOPS/FLAVORED/BUDWEISER/BARLEY MALT/SYRUP		Beer
12	N	Ferrous metal	Alc container				Beer
13	N	Glass	Alc container			Owens-Illinois	Beer
14	N	Glass	Alc container			Owens-Illinois	Beer
15	N	Glass	Alc container			Owens-Illinois	Beer
16	N	Glass	Alc container			Owens-Illinois	Beer

17	N	Glass	Alc container			Owens- Illinois	Beer
18	N	Glass	Alc container	Old Quaker	D-134	Owens- Illinois	Whiskey
19	N	Glass	Alc container	Harry Wilken			Whiskey
20	N	Glass	Alc container	R-19	Harry E. Wilken Jr.//[D]30 (Whitfall Tatum logo)		Whiskey
21	N	Glass	Alc container		ONE PINT"		Whiskey
22	N	Ferrous metal	Alc container	Budweiser malt syrup	HOPS/ FLAVORED /BUDWEISER/ BARLEY MALT/ SYRUP		Beer
23	N	Ferrous metal	Alc container	Budweiser malt syrup	HOPS/ FLAVORED /BUDWEISER/ BARLEY MALT/ SYRUP		Beer
24	N	Glass	Alc container	Harry Wilken			Whiskey
25	N	Glass	Alc container			Owens- Illinois	Beer
26	N	Glass	Alc container		ONE QUART	Maywood Glass Co	Whiskey
27	N	Glass	Alc container			Maywood Glass Co	Whiskey
28	N	Glass	Alc container	Old Quaker	D134/62/Oi logo/5/M1678"" possibly Old Quaker base	Owens- Illinois	Whiskey
29	N	Ferrous metal	Alc container	Budweiser malt syrup	HOPS/ FLAVORED /BUDWEISER/ BARLEY MALT/ SYRUP		Beer
30	N	Ferrous metal	Alc container	Budweiser malt syrup	HOPS/ FLAVORED /BUDWEISER/ BARLEY MALT/ SYRUP		Beer
31	N	Ferrous metal	Alc container	Budweiser malt syrup	HOPS/ FLAVORED /BUDWEISER/ BARLEY MALT/ SYRUP		Beer
32	N	Ferrous metal	Alc container	Budweiser malt syrup	HOPS/ FLAVORED /BUDWEISER/ BARLEY MALT/ SYRUP		Beer
33	N	Ferrous metal	Alc container	Budweiser malt syrup	HOPS/ FLAVORED /BUDWEISER/ BARLEY MALT/ SYRUP		Beer
34	N	Ferrous metal	Alc container	Budweiser malt syrup	HOPS/ FLAVORED /BUDWEISER/ BARLEY MALT/ SYRUP		Beer
35	N	Glass	Alc container			Owens- Illinois	Beer

36	N	Glass	Alc container		6/oi logo/3/C5/G11	Owens-Illinois	Beer
37	L	Glass	Alc container			Owens-Illinois	Beer
38	L	Glass	Alc container			Owens-Illinois	Beer
39	L	Glass	Alc container		1933 code	Owens-Illinois	Beer
40	L	Glass	Alc container		1933 code	Owens-Illinois	Beer
41	L	Glass	Alc paraphernalia		shot glass	Other/Unknown	
42	L	Glass	Alc container		1933 code	Owens-Illinois	Beer
43	K	Glass	Alc container		M169	Owens-Illinois	Whiskey
44	K	Glass	Alc container		M169	Owens-Illinois	Whiskey
45	K	Glass	Alc container		1933 code	Owens-Illinois	Beer
46	K	Glass	Alc container		1933 code	Owens-Illinois	Beer
47	K	Glass	Alc container		G11	Owens-Illinois	Beer
48	KLM	Glass	Alc container	Seagrams, R-19	D126/67/c in diamond logo/5/des pat 92901//one pint		Whiskey
49	KLM	Glass	Alc container				Whiskey
50	KLM	Glass	Alc container	AMS Co.	the ans co	Hazel Atlas	Whiskey
51	KLM	Glass	Alc container		0-9026		Whiskey
52	KLM	Glass	Alc container		1933	Owens-Illinois	Beer
53	KLM	Glass	Alc container		1933	Owens-Illinois	Beer
54	KLM	Ferrous metal	Alc paraphernalia		"[PA]BST / [BLUE RIBBON / BEE[R] / 517" image of beer bottle w ribbon around neck		Beer

55	H	Glass	Alc container		R216/90/oi logo/5	Owens-Illinois	Whiskey
56	H	Glass	Alc container		54/oi logo/5/design patented/ applied for//R174//3. Old Mr. Boston		Whiskey
57	H	Glass	Alc container	AMS Co.	Arms partial logo		Whiskey
58	H	Glass	Alc container				Whiskey
59	H	Glass	Alc container				Whiskey
60	H	Glass	Alc container		partial possible prohibits notice		Whiskey
61	H	Glass	Alc container		Four Roses whiskey bottle. "D11/THIS BOTTLE ONLY IN/IN TOP SEALED CARTON/TM. REG[]/56/PAT. PENDING""	Owens-Illinois	Whiskey
62	G	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/BUDWEISER/BARLEY MALT/SYRUP		Beer
63	G	Glass	Alc container	Seagrams,	D126		Whiskey
64	G	Glass	Alc container				Whiskey
65	G	Glass	Alc container	R-19			Whiskey
66	G	Glass	Alc container	R-19			Whiskey
67	G	Ferrous metal	Alc container		ACME		
68	G	Glass	Alc container		FULL PINT		Whiskey
69	G	Glass	Alc container		HALF PINT	Latchford Glass Co	Whiskey
70	G	Glass	Alc container	Old Quaker	old quaker/since 1846//		Whiskey
71	G	Ferrous metal	Alc container		PURITAN EXTRACT CO./CHICAGO		Beer
72	G	Ferrous metal	Alc container	Budweiser malt syrup	HOP/ FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
73	G	Ferrous metal	Alc container		pabst.		Beer
74	G	Ferrous metal	Alc container	Budweiser malt syrup	HOP/ FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
75	J	Glass	Alc container	Vai Bros.			Wine
76	J	Glass	Alc container				Whiskey

77	J	Glass	Alc container		CONTINENTAL DISTILLING/D18		Whiskey
78	J	Glass	Alc container		"6/33"	Owens-Illinois	Beer
79	J	Glass	Alc container		7/oi/33	Owens-Illinois	Beer
80	J	Glass	Alc container				Whiskey
81	J	Glass	Alc container	R-19			Whiskey
82	J	Glass	Alc container				Whiskey
83	J	Glass	Alc container				Whiskey
84	J	Glass	Alc container		design pat 80567	Owens-Illinois	Whiskey
85	J	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
86	J	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
87	J	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
88	J	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
89	J	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
90	J	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
91	J	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
92	J	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
93	J	Glass	Alc container		Hiram Walker bottle. ""134""		Whiskey
94	KLM	Glass	Alc container	R-19			Whiskey
95	KLM	Glass	Alc container	R-19			Whiskey
96	KLM	Glass	Alc container	Seagrams,			Whiskey
97	KLM	Glass	Alc container				Whiskey
98	KLM	Glass	Alc container				Whiskey

99	KLM	Glass	Alc container		shield logo		Whiskey
		Non-ferrous metal	Alc paraphernalia				Whiskey
100	KLM	Glass	Alc container	Seagrams			Whiskey
101	KLM	Glass	Alc container				Whiskey
102	KLM	Glass	Alc container		oi 7 3		Beer
103	KLM	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
104	KLM	Glass	Alc container		des pat 91561 (wheat design)	Owens-Illinois	Whiskey
105	KLM	Glass	Alc container		7 3	Owens-Illinois	Beer
106	KLM	Glass	Alc container	AMS Co.			Whiskey
107	KLM	Glass	Alc container		d8		Whiskey
108	KLM	Glass	Alc container				Whiskey
109	KLM	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
110	KLM	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
111	KLM	Ferrous metal	Alc container	Budweiser malt syrup	HOP/FLAVORED/ BUDWEISER/ BARLEY MALT/ SYRUP		Beer
112	KLM	Glass	Alc container		7 3	Owens-Illinois	Beer
113	E	Glass	Alc container	Vai Bros.		Maywood Glass Co	Wine
114	E	Glass	Alc container			Owens-Illinois	Whiskey
115	E	Ferrous metal	Alc container	Budweiser malt syrup	st Louis can		Beer
116	E	Ferrous metal	Alc container	Budweiser malt syrup			Beer
117	D	Glass	Alc container				Whiskey
118	D	Ferrous metal	Alc container	Budweiser malt syrup			Beer

119	D	Ferrous metal	Alc container				Beer
120	D	Ferrous metal	Alc container				Beer
121	D	Glass	Alc container	Old Quaker			Whiskey
122	D	Ferrous metal	Alc container	Budweiser malt syrup			Beer
123	B/D	Ferrous metal	Alc container	Budweiser malt syrup			Beer
124	B/D	Ferrous metal	Alc container	Budweiser malt syrup			Beer
125	B/D	Ferrous metal	Alc container	Budweiser malt syrup			Beer
126	A	Ferrous metal	Alc container	Budweiser malt syrup			Beer
127	A	Ferrous metal	Alc container		SCHLITZ / 035 687 / MILWAUKEE		Beer
128	A	Ferrous metal	Alc container	Budweiser malt syrup			Beer
129	A	Ferrous metal	Alc container	Budweiser malt syrup			Beer
130	A	Ferrous metal	Alc container	Budweiser malt syrup			Beer
131	A	Ferrous metal	Alc container	Budweiser malt syrup			Beer
132	A	Glass	Alc container		full pint		Whiskey
133	A	Glass	Alc container				Whiskey
134	A	Ferrous metal	Alc container		Puritans MALT		Beer
135	A	Glass	Alc container		Pat # 14810-35		Other/Unknown
136	A	Glass	Alc container		[D.M. DILLERY C]O / S.A.		Whiskey
137	S	Glass	Alc container		9/3/61/g11	Owens-Illinois	Beer
138	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer

139	S	Glass	Alc container				Whiskey
140	S	Glass	Alc container				Whiskey
141	S	Glass	Alc container				Whiskey
142	S	Glass	Alc container		4/5 quart/ d129	Latchford Glass Co	Whiskey
143	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
144	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
145	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
146	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
147	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
148	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
149	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
150	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
151	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
152	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
153	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
154	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
155	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
156	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
157	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer

158	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
159	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
160	S	Glass	Alc container				Whiskey
161	S	Glass	Alc container	R-19			Whiskey
162	S	Glass	Alc container			Owens-Illinois	Whiskey
163	S	Glass	Alc container		r286		Whiskey
164	S	Glass	Alc container	R-19			Whiskey
165	S	Glass	Alc container				Whiskey
166	S	Glass	Alc container				Whiskey
167	S	Glass	Alc container		full pint		Whiskey
168	S	Glass	Alc container		full pint one pint		Whiskey
169	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
170	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
171	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
172	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
173	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
174	S	Ferrous metal	Alc container	Budweiser malt syrup			Beer
175	S	Glass	Alc container				Whiskey
176	S	Glass	Alc container				Whiskey
177	S	Glass	Alc container		one pint wheat		Whiskey
178	S	Glass	Alc container	R-19			Whiskey
179	S	Glass	Alc container		one pint		Whiskey

180	S	Ferrous metal	Alc container		Puritans MALT		Beer
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Appendix 2: ARPA Permit

Authorization ID: KAI151
Contact ID: HR03NAU
Expiration Date: 12/31/2026

FS-2700-32 (V.07/2012)
OMB No. 0596-0082

**U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE**

PERMIT FOR ARCHAEOLOGICAL INVESTIGATIONS

AUTHORITY

The Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa-mm

1. Holder Emily Dale, Ph.D. Department of Anthropology Northern Arizona University	2. Date of corresponding application 12/8/2022
3. Address PO Box 15200 Flagstaff, AZ 86011-5200	4. Telephone numbers 928-523-1272
	5. Email addresses emily.dale@nau.edu
6. Name of authorized officer Diane Taliaferro Acting Forest Supervisor Telephone numbers 928-635-8200 Email addresses diane.taliaferro@usda.gov	7. Name of principal investigators Emily Dale, Ph.D. Telephone numbers 928-523-1272 Email addresses emily.dale@nau.edu
8. Name of field directors authorized to carry out field projects Emily Dale, Ph.D.	Telephone numbers 928-523-1272 Email addresses emily.dale@nau.edu
9. Activities authorized • Academic Research (consulting activities not authorized) • Non-ground-disturbing activities (such as surveys) • Non-ground-disturbing activities that include limited testing (e.g., shovel tests or scrapes) • Ground-disturbing activities (e.g., excavation or collection) involving archaeological resources more than 100 years old.	

• Ground-disturbing activities (e.g., excavation or collection) involving archaeological resources 100 years old or less.
10. Description of National Forest System lands authorized for use (hereinafter referred to as "the permit area") Township 30 North, Range 2 East, sections 27 and 34, Gila and Salt River Baseline, Coconino County, Arizona. Kaibab National Forest – Tusayan Ranger District
11. Permit term From: 1/1/2022 To: 12/31/2026
12. Name and address of the curatorial facility in which collections, records, data, photographs, and other documents resulting from activities conducted under this permit shall be deposited for permanent preservation on behalf of the United States Government. Kaibab National Forest 800 S. 6th Street Williams, AZ 86046

TERMS AND CONDITIONS

I. GENERAL TERMSA. AUTHORITY. This permit is issued pursuant to The Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa-mm, 36 CFR Part 251, Subpart B, 36 CFR Part 296, the Uniform Rules and Regulations of the Antiquities Act of 1906, 43 CFR Part 3, and applicable Forest Service policies and procedures and is subject to their provisions.

B. AUTHORIZED OFFICER. The authorized officer for this permit is the Forest Supervisor or a subordinate officer with delegated authority.

C. ANNUAL REVIEW. If this permit is issued for more than one year, it shall be reviewed annually by the authorized officer.

D. RENEWAL AND EXTENSION. This permit is not renewable. The holder may request an extension of this permit for a limited, specified period to complete activities authorized under this permit. Requests for an extension must be submitted in writing at least one month before expiration of this permit.

E. AMENDMENT. This permit may be amended in whole or in part by the Forest Service when, at the discretion of the authorized officer, such action is deemed necessary or desirable to incorporate new terms that may be required by law, regulation, the applicable land management plan, or projects and activities implementing a land management plan pursuant to 36 CFR Part 215. Any amendments to individuals named in or activities authorized by this permit that are needed by the holder must be approved by the authorized officer in writing.

F. COMPLIANCE WITH LAWS, REGULATIONS, AND OTHER LEGAL REQUIREMENTS. In exercising the privileges granted by this permit, the holder shall comply with all present and future federal laws and regulations and all present and future state, county, and municipal laws, regulations, and other legal requirements that apply to the permit area, to the extent they do not conflict with federal law, regulations, or policy. The Forest Service

assumes no responsibility for enforcing laws, regulations, and other legal requirements that fall under the jurisdiction of other governmental entities.

G. NON-EXCLUSIVE USE. The use and occupancy authorized by this permit are not exclusive. The Forest Service reserves the right of access to the permit area, including a continuing right of physical entry to the permit area for inspection, monitoring, or any other purpose consistent with any right or obligation of the United States under any law or regulation. The holder shall allow the authorized officer or the authorized officer's representative full access to the permit area at any time the holder is in the field for purposes of examining the permit area and any recovered materials and related records. The Forest Service reserves the right to allow others to use the permit area in any way that is not inconsistent with the holder's rights and privileges under this permit, after consultation with all parties involved.

H. ASSIGNABILITY. This permit is not assignable or transferable.

II. OPERATIONS

A. OPERATING PLAN. The application corresponding to this permit is incorporated as the operating plan for this permit and is attached as Appendix A. The authorized officer may supplement the information contained in the application as appropriate or necessary.

B. REQUIRED PERMITS. The holder shall obtain all other permits required for conducting the activities authorized by this permit.

C. QUALIFIED INDIVIDUALS. Archaeological project design, literature review, development of regional historical contexts, site evaluation, conservation and protection measures, and recommendations for subsequent investigations shall be developed with direct involvement of an individual who meets the Secretary of the Interior's Standards for Archaeology and Historic Preservation. Fieldwork shall be overseen by an individual who meets the Secretary of the Interior's Standards for Archaeology and Historic Preservation.

D. CONDITION OF OPERATIONS. The holder shall maintain the authorized improvements and permit area to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the authorized officer and consistent with other provisions of this permit. Standards are subject to periodic change by the authorized officer.

E. PROHIBITION ON USE OF MECHANIZED EQUIPMENT IN WILDERNESS AREAS. The holder shall not use mechanized equipment in wilderness areas and shall not use mechanized equipment in proposed or potential wilderness areas without prior written approval from the authorized officer.

F. PROHIBITION ON FLINT KNAPPING AND LITHIC REPLICATION EXPERIMENTS. The holder shall not conduct any flint knapping or lithic replication experiments at any archaeological site, aboriginal quarry source, or non-archaeological site that might be mistaken for an archaeological site as a result of such experiments.

G. PROHIBITION ON IMPEDING OR INTERFERING WITH OTHER USES. The holder shall perform the activities authorized by this permit so as not to impede or interfere with administrative or other authorized uses of National Forest System lands.

H. RESTRICTION ON MOTOR VEHICLE USE. The holder shall restrict motor vehicle use to designated roads, trails, and areas, unless specifically provided otherwise in the operating plan.

I. MINIMIZING GROUND DISTURBANCE. The holder shall keep ground disturbance to a minimum consistent with the nature and purpose of the authorized fieldwork.

J. RESOURCE PROTECTION. The holder shall conduct all activities so as to prevent or minimize scarring, erosion, littering, and pollution of National Forest System lands, water pollution, and damage to watersheds. In addition, the holder shall take precautions at all times to prevent wildfire. The holder may not burn debris without prior written approval from the authorized officer.

K. PREVENTION OF INJURY. The holder shall take precautions to protect livestock, wildlife, the public, and other users of National Forest System lands from accidental injury at any excavation site.

L. DESTRUCTION AND REMOVAL OF TREES. The holder shall not destroy or remove any trees on National Forest System lands without prior written approval from the authorized officer.

M. RESOURCE MANAGEMENT FACILITIES. The holder shall not disturb resource management facilities, such as fences, reservoirs, and other improvements, within the permit area without prior written approval from the authorized officer. Where disturbance of a resource management facility is necessary, the holder shall return it to its prior location and condition.

N. BACKFILLING. The holder shall backfill all subsurface test and excavation sites as soon as possible after recording the results and shall restore subsurface test and excavation sites as closely as possible to their original contour.

O. REMOVAL OF STAKES AND FLAGGING. The holder shall remove temporary stakes and flagging installed by the holder upon completion of fieldwork.

P. SITE RESTORATION. The holder shall restore all camp and work areas to their original condition before vacating the permit area. Refuse shall be carried out and deposited in disposal areas approved by the authorized officer.

Q. TITLE TO ARTIFACTS AND ASSOCIATED DOCUMENTATION. Archaeological and historical artifacts excavated or removed from National Forest System lands and any associated documentation shall remain the property of the United States.

R. NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION (NAGPRA). In accordance with 25 U.S.C. 3002 (d) and 43 CFR 10.4, if the holder inadvertently discovers human remains, funerary objects, sacred objects, or objects of cultural patrimony on National Forest System lands, the holder shall immediately cease work in the area of the discovery and shall make a reasonable effort to protect and secure the items. The holder shall immediately notify the authorized officer by telephone of the discovery and shall follow up with written confirmation of the discovery. The activity that resulted in the inadvertent discovery may not resume until 30 days after the authorized officer certifies receipt of the written confirmation, if resumption of the activity is otherwise lawful, or at any time if a binding written agreement has been executed between the Forest Service and the affiliated Indian tribes that adopts a recovery plan for the human remains and objects.

S. ADDITIONAL REQUIREMENTS. Prior to beginning any fieldwork under the authority of this permit, the holder shall contact the authorized officer responsible for administering the lands involved to obtain further

instructions regarding current land and resource conditions.

III. REPORTING REQUIREMENTS

A. PRELIMINARY REPORT. The holder shall submit a preliminary report to the authorized officer within 12 weeks of completion of the first stage of fieldwork. The preliminary report shall enumerate what was done during the first stage of fieldwork, how it was done, by whom, where, and with what results, including maps, global positioning satellite data, an approved site form for each newly recorded archaeological site, and the holder's professional recommendations regarding resource significance, as appropriate. Depending on the scope, duration, and nature of the work, the authorized officer may require progress reports periodically for the duration of the authorized activities.

B. DRAFT FINAL REPORT. Within 26 weeks of completion of fieldwork, the holder shall submit an edited draft final report to the authorized officer for review to ensure conformance with applicable laws, regulations, policies, and procedures and the terms and conditions of this permit.

C. FINAL REPORT. The holder shall submit the original final report and at least two copies to the authorized officer within 12 months after completion of fieldwork.

D. BLANKET SURVEY CONSULTING PERMIT. If this is a multi-year survey consulting permit, at the end of each calendar year, the holder shall submit to the authorized officer a report enumerating all activities conducted under this permit.

E. DEPOSIT OF MATERIALS AND DOCUMENTS WITH A CURATORIAL FACILITY. Within 90 days of the date the final report is submitted to the authorized officer, the holder shall deposit all artifacts, samples, and collections and original or clear copies of all records, data, photographs, and other documents resulting from activities authorized by this permit with the curatorial facility named in block 12.

F. CATALOGUE AND EVALUATION OF DEPOSITED MATERIALS. The holder shall provide the authorized officer with a catalogue and evaluation of all materials deposited with the curatorial facility named in block 12, including the facility's accession or catalogue numbers, and confirmation, signed by an authorized curatorial facility official, that artifacts, samples, and collections were deposited with the approved curatorial facility. The confirmation shall include the date the materials were deposited and the type, number, and condition of the deposited materials.

G. CONFIDENTIALITY OF SENSITIVE RESOURCES. The holder agrees to keep the specific location of sensitive resources confidential. Sensitive resources include but are not limited to threatened, endangered, and rare species; archaeological sites; caves; fossil sites; minerals; commercially valuable resources; and traditional cultural properties.

H. CONFIDENTIALITY OF INFORMATION IDENTIFYING ARCHAEOLOGICAL SITES. Without the authorized officer's prior written approval, the holder shall not publish any locational or other information identifying archaeological sites that could compromise their protection and management by the federal government.

I. IDENTIFICATION OF FOREST SERVICE PERMIT. Any published article, paper, or book containing results of work

conducted under this permit shall specify that the work was performed in the Kaibab National Forest under a Forest Service permit.

J. SUBMISSION OF WRITTEN MATERIALS. The holder shall submit a copy of any published or unpublished report, article, paper, or book resulting from the authorized activities (other than reports required by clauses III.A, B, and C) to the authorized officer and the appropriate official of the curatorial facility named in block 12. The holder shall submit tabular and spatial data to the authorized officer in the format specified in Appendix A.

IV. RIGHTS AND LIABILITIES

A. LEGAL EFFECT OF THE PERMIT. This permit, which is revocable and terminable, is not a contract or a lease, but rather a federal license. The benefits and requirements conferred by this authorization are reviewable solely under the procedures set forth in 36 CFR Part 251, Subpart C, and 5 U.S.C. 704. This permit does not constitute a contract for purposes of the Contract Disputes Act, 41 U.S.C. 601. The permit is not real property, does not convey any interest in real property, and may not be used as collateral for a loan.

B. VALID OUTSTANDING RIGHTS. This permit is subject to all valid outstanding rights. Valid outstanding rights include those derived from mining and mineral leasing laws of the United States. The United States is not liable to the holder for the exercise of any such right.

C. ABSENCE OF THIRD-PARTY BENEFICIARY RIGHTS. The signatories of this permit do not intend to confer any rights on any third party as a beneficiary under this permit.

D. DAMAGE TO UNITED STATES PROPERTY. The holder has an affirmative duty to protect from damage the land, property, and other interests of the United States. Damage includes but is not limited to fire suppression costs, and all costs and damages associated with or resulting from the release or threatened release of a hazardous material occurring during or as a result of activities of the holder or the holder's heirs, assigns, agents, employees, contractors, or lessees on, or related to, the lands, property, and other interests covered by this permit. For purposes of clause IV.F, "hazardous material" shall mean any hazardous substance, pollutant, contaminant, hazardous waste, oil, and/or petroleum product, as those terms are defined under any federal, state, or local laws or regulations.

E. INDEMNIFICATION. The holder shall indemnify, defend, and hold harmless the United States for any costs, damages, claims, liabilities, and judgments arising from past, present, and future acts or omissions of the holder in connection with the use and occupancy authorized by this permit. This indemnification and hold harmless provision includes but is not limited to acts and omissions of the holder or the holder's family, guests, invitees, heirs, assignees, agents, employees, contractors, or lessees in connection with the use and occupancy authorized by this permit which result in (1) violations of any laws and regulations which are now or which may become applicable; (2) judgments, claims, demands, penalties, or fees assessed against the United States; (3) costs, expenses, and damages incurred by the United States; or (4) the release or threatened release of any solid waste, hazardous waste, hazardous materials, pollutant, contaminant, oil in any form, or petroleum product into the environment. The authorized officer may prescribe terms that allow the holder to replace, repair, restore, or otherwise undertake necessary curative actions to mitigate damages in addition to or as an alternative to monetary indemnification.

F. CONTINUATION OF LIABILITY BEYOND EXPIRATION. The holder shall not be released from requirements of this permit until all outstanding obligations have been satisfied, regardless of whether the permit has expired.

V. LAND USE FEE. The land use fee for this permit is waived pursuant to 36 CFR 251.57(b)(3).

VI. REVOCATION, SUSPENSION, AND TERMINATION

A. REVOCATION AND SUSPENSION. The authorized officer may revoke or suspend this permit in whole or in part:

1. For noncompliance with federal, state or local law.
2. For noncompliance with the terms and conditions of this permit.
3. For abandonment or other failure of the holder to exercise the privileges granted.
4. With the consent of the holder.
5. For specific and compelling reasons in the public interest.

Prior to revocation or suspension, other than immediate suspension under clause C, the authorized officer shall give the holder written notice of the grounds for revocation or suspension. In the case of revocation or suspension based on clause VI.A.1, 2, or 3, the authorized officer shall give the holder a reasonable period, not to exceed 90 days, to cure any noncompliance.

B. RELINQUISHMENT OF ARTIFACTS AND DOCUMENTS. Within 30 days of revocation or suspension of this permit, the holder shall deliver to the Forest Service all artifacts and originals of all photographs, negatives, catalogues, field notes, analysis sheets, reports in any stage of preparation, computer files, and any other records resulting from any activity conducted under this permit.

C. IMMEDIATE SUSPENSION. The authorized officer may immediately suspend this permit in whole or in part when necessary to protect public health or safety or the environment. The suspension decision shall be in writing. The holder may request an on-site review with the authorized officer's supervisor of the adverse conditions prompting the suspension. The authorized officer's supervisor shall grant this request within 48 hours. Following the on-site review, the authorized officer's supervisor shall promptly affirm, modify, or cancel the suspension.

D. APPEALS AND REMEDIES. Written decisions made by the authorized officer relating to administration of this permit are subject to appeal pursuant to 36 CFR Part 214. Revocation or suspension of this permit shall not give rise to any claim for damages by the holder against the Forest Service.

E. TERMINATION. This permit shall terminate when by its terms a fixed or agreed upon condition, event, or time occurs without any action by the authorized officer. Examples include but are not limited to expiration of the permit by its terms on a specified date. Termination of this permit is not subject to administrative appeal and shall not give rise to any claim for damages by the holder against the Forest Service.

VII. MISCELLANEOUS PROVISIONS

A. MEMBERS OF CONGRESS. No member of or delegate to Congress or Resident Commissioner shall benefit from this permit either directly or indirectly, except to the extent the authorized use provides a general benefit to a corporation.

B. SUPERIOR CLAUSES. If there is any conflict between any of the preceding clauses and any subsequent clauses or appendices, the preceding clauses shall control.

C. CULTURAL RESOURCES PROTECTION (D001RO). The holder, contractor, or lessee shall be responsible for the protection from damage of all identified cultural resources within the area which may be affected by their actions. In addition, the holder, contractor, or lessee shall be liable for all damage or injury to the identified cultural resources caused by their actions. The holder, contractor, or lessee shall immediately notify the agency Project Administrator if any damage occurs to any cultural resource and immediately halt work in the area in which damage has occurred until approval to proceed has been granted by the Project Administrator after consultation with the Forest Archeologist. All provisions of the Region 3 Cultural Resources Damage Assessment Handbook are incorporated by reference herein.

D. NATIVE AMERICAN GRAVE PROTECTION AND REPATRIATION ACT (X003RO). Pursuant to the Native American Grave Protection and Repatriation Act (NAGPRA) 25 USC 3002(d); 43 CFR Part 10.4, if any human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during the course of ground disturbing activity, the holder will immediately cease activity in the area of the discovery and will make a reasonable effort to protect the remains and objects. The holder will provide immediate telephone notification of the discovery to the Forest Service, and will follow up with written confirmation to the authorized officer. The holder will not resume the activity that resulted in the discovery until the authorized officer gives written approval. Approval to resume the activity, if otherwise lawful, will be given thirty (30) days after certification by the authorized officer of the holder's written confirmation of the discovery, or at any time that a written binding agreement is executed between the Forest Service and the affiliated tribes adopting a recovery plan for the remains and objects.

THIS PERMIT IS ACCEPTED SUBJECT TO ALL ITS TERMS AND CONDITIONS.

BEFORE ANY PERMIT IS ISSUED TO AN ENTITY, DOCUMENTATION MUST BE PROVIDED TO THE AUTHORIZED OFFICER OF THE AUTHORITY OF THE SIGNATORY FOR THE ENTITY TO BIND IT TO THE TERMS AND CONDITIONS OF THE PERMIT.

ACCEPTED:

EMILY DALE, PH.D.
DEPARTMENT OF ANTHROPOLOGY
NORTHERN ARIZONA UNIVERSITY



December 17, 2021

HOLDER NAME, PRECEDED BY NAME AND
TITLE OF PERSON SIGNING ON BEHALF OF
HOLDER, IF HOLDER IS AN ENTITY

SIGNATURE

DATE

APPROVED:

DIANE TALIAFERRO
ACTING FOREST SUPERVISOR
KAIBAB NATIONAL FOREST

NAME AND TITLE OF AUTHORIZED OFFICER

SIGNATURE

DATE

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