

“To Make a Pure Resort”: The Conflict Between Temperance and Profit at the Saltair  
Resort Under the Church of Jesus Christ of Latter-Day Saints

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## Authorization to Submit Thesis

This thesis of Tessie Burningham, submitted for the degree of Master of Arts with a major in Anthropology and titled ““To Make a Pure Resort”: The Conflict Between Temperance and Profit at the Saltair Resort Under the Church of Jesus Christ of Latter-Day Saints,” has been reviewed in final form. Permission, as indicated by the signatures and dates given below, is now granted to submit final copies to the College of Graduate Studies for approval.

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## **Abstract**

In 1893 Saltair, a resort with a massive Moorish revival pavilion, was built on the shores of the Great Salt Lake and attracted visitors from across the state of Utah. Owned by the Church of Jesus Christ of Latter-Day Saints (LDS), which was heavily influenced by the temperance movement, the question of whether alcohol should be served was a controversial subject for owners and visitors alike. The Church wanted a wholesome resort where families could relax in peace away from alcoholic influences yet were also concerned that banning alcohol would result in the loss of profits. Despite this controversy and the hesitancy of the LDS owners to sell alcohol, evidence of alcohol consumption is prevalent in the archaeological record. In this work I examine the role of alcohol at Saltair, and the spaces in which it was consumed. Additionally, I consider the attitudes that patrons and owners of Saltair had towards alcohol, and how its presence impacted their experience at the resort.

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# CHAPTER 1

## Introduction

*The magnificent pavilion rising, Venice-like, out of the waves in stupendous and graceful beauty, deepened in its semi-Moorish architectural lines the suspicion that what one saw was not firm structural reality but rather a delightful oriental dream.*

-Great is Saltair! *Deseret Evening News*, June 9, 1893:4

This thesis is an archaeological and historical analysis of the public spaces at Saltair, a late 19th and early 20th century resort owned by the Church of Jesus Christ of Latter-day Saints (commonly known as the Mormon Church and will be referred to as the LDS Church hereafter). I examine the role of alcohol at this resort patronized by both members of the LDS Church and non-members. The LDS Church was torn between turning a profit and the question of whether alcohol, banned in religious literature, should be served in their own establishment (Shoemaker 1983). Other than paid advertisements, the role of alcohol at Saltair is largely missing from the historical record though alcohol is heavily represented in the archaeological record.

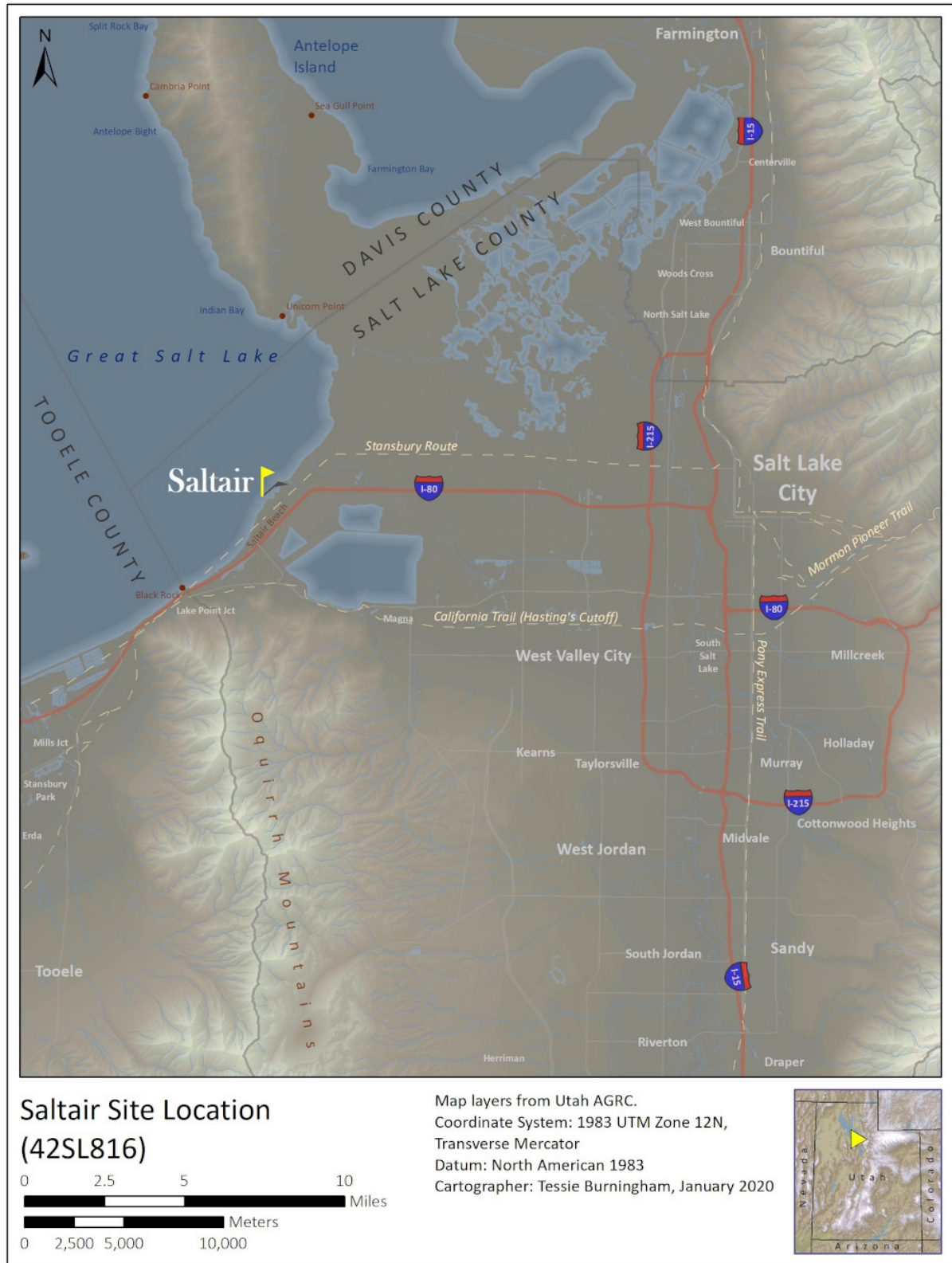
First, I examine the use of alcohol in public spaces at Saltair and how this use may be connected to beliefs towards alcohol. This resort was patronized by both members of the LDS Church and non-members who had conflicting ideas of what behavior is acceptable in public recreation spaces. This is most evident in the differing attitudes towards alcohol, especially with a Church that was morally against such consumption. References to alcohol at Saltair in contemporary newspapers typically portray it as a deviant commodity and activity despite it being allowed. I also rely on the archaeological record to determine exactly how prevalent alcohol was at Saltair and if it was limited to specific areas at certain times.

Second, I consider how the LDS Church reconciled the dilemma between restricting alcohol to satisfy religious beliefs and the capitalist desire to make a profit from alcohol. Neighboring resorts, such as Garfield Beach, did not have restrictions on alcohol and therefore were tough competition for the resort with a goal of “wholesomeness.” Many members

of the LDS Church were enthusiastic to patronize a resort that lacked alcohol, but their support alone was not enough to support a resort that chose to be the largest, and as a result, the costliest of all similar local resorts.

## 1.1 The Saltair Project

Saltair Beach was a bathing, musical, and carnival resort built in 1893 along the southern shores of the Great Salt Lake, thirteen miles west of downtown Salt Lake City, Utah (figure 1.1). Constructed and owned by the LDS Church, Saltair was a popular destination for tourists and locals alike during the turn of the 20th century and sought to be the “Coney Island of the West”. Patrons were drawn in by both the impressive architecture of the pavilion and the unique salty lake where people “float like a cork” (*Salt Lake Tribune* 1917a:68). The era of Saltair’s high demand ended with a fire in 1925 (McCormick and McCormick 1985). Though Saltair was rebuilt two more times it never regained its former popularity and is now a small music venue in a different location about two miles further west. The phases of Saltair are referred to as Saltair I (1893-1925), Saltair II (1925-1970), and Saltair III (1981-present day). Today Saltair I and II exist on State Sovereign lands. They consist of an archaeological landscape of foundations of the former structure and surrounding developments, and associated artifacts that have withstood the salty water.



**Figure 1.1:** Map of Saltair's location

The Utah Division of State History (UDSH), in response to large-scale looting activity at this site, has committed to documenting what remains of Saltair I and II, which have been given the Smithsonian trinomial 42SL816 (Williams 2018a, Williams 2018b). This project is led by Dr. Chris Merritt, the Utah State Historic Preservation Officer and professional historical archaeologist. I have participated in this project over the past three years. UDSH has focused on documenting a sample of diagnostic artifacts on the surface and the remnants of the pavilion and related facilities, including electrical alignments, telephone alignments, railroad grades, historic roads, pipelines, and a scatter of artifacts that covers approximately 120 acres.

This thesis uses existing historical data in addition to more focused archaeological documentation efforts at Saltair with an emphasis on diagnostic beverage bottles. Due to the lack of a curation facility for historic-period artifacts in Utah, research methods are limited to surface documentation only, with no excavation or artifact collection.

This project helped inspire this thesis, which is laid out for the remainder of this chapter. Chapter 2 is a review of the history of Saltair that starts out with an overview of the overall region before narrowing down to Saltair. I give an overview of the natural history of the region, as the intermittent waters of the Great Salt Lake play a large role in the history of Saltair itself. I acknowledge the indigenous peoples who were in the region before European American settlers, including the Ute, Goshute, and Shoshone through both an oral history and an archaeological lens. I also discuss the history of Salt Lake City, as the history of Saltair is intertwined with the history of the city and helps give context for the history of the resort. This chapter ends with a history of Saltair itself, emphasizing the period when the LDS Church was the most influential.

Chapter 3 titled “Beverages in Context” is an overview of the social and political history of alcohol in Utah and public spaces. As the history of alcohol in Utah did not exist in a bubble, I briefly describe the social and political landscape of the nation around this period, in particular the Temperance Movement, which played a role in how alcohol was handled in



Utah. This chapter then discusses the history of the LDS Church's moral outlook on alcohol, and how this impacted legislation governing alcohol within Utah. Finally, the chapter gives an overview of the history of alcohol marketing and consumption at Saltair.

Chapter 4 covers the field methods employed and summarizes the data that was recovered. It also includes a discussion of local brands that have not been thoroughly researched previously. The intent is to provide context for these brands. An overview of the spatial and statistical analyses demonstrating the spatial distribution of the different types of bottles at Saltair is outlined here.

Chapter 5 provides my interpretation of the data within the context of limitations placed on alcohol. A comparison of the spatial distribution of beverage bottles at Saltair has found that each distribution is significantly different, which reveals a pattern in how beverages were consumed. Beer was largely consumed around the restaurant, liquor was consumed around the resort, soda was evenly distributed and concentrated in potential dump events, and wine has a small sample size and is not considered for this thesis. This spatial distribution is interpreted within the historical context of Saltair to determine how the LDS Church ownership may have influenced alcohol consumption.

Chapter 6, is a summary of the thesis and concludes the implications of the research. The value of the archaeological data is made clear and gives a strong argument for why Saltair should be protected from looting activity.

## CHAPTER 2

### Saltair Background

#### 2.1 Introduction

The Saltair Resort holds significance to the history of the American West and Utah, partly due to its relationship to the region's most notable geographic feature, the Great Salt Lake. This area has been visited and inhabited by humans for over 12,000 years. Local American Indian communities such as the Goshute, Ute and Shoshone claim the surrounding areas as their ancestral homelands. Furthermore, it is only 15 miles from Salt Lake City, the home of the LDS Church. Saltair was built as a place for the residents of Salt Lake City and surrounding communities to have a place to relax and enjoy the lake's perceived restorative properties. Saltair was not only a product of local geography, but also a result of wider social trends, such as the explosion in popularity of leisure resorts. Saltair boomed from its construction until the destruction of Saltair I in 1925. However, even with the construction of Saltair II the resort fizzled out of popularity until its abandonment in 1959. After Saltair II burned down in 1970 the resort lived on in the memories of locals who once visited Saltair, but no archaeological documentation took place until 2017. The legacy of Saltair is tied into the region, and its memory lives on in its archaeological remains and in Saltair III.

#### 2.2 The Great Salt Lake Region

The Great Salt Lake is a remnant of the vast prehistoric inland sea called Lake Bonnevillie which once enveloped the western half of Utah, and portions of eastern Nevada and Southern Idaho. After the Ice Age, ca. 15,000 years ago, temperatures rose and the great sea evaporated, leaving behind the Great Salt Lake, Sevier Lake, Utah Lake, and other smaller water bodies. As water receded, concentrations of salt in the water increased, resulting in a lake with three times higher salt content than the ocean. The level of the Great Salt Lake fluctuates dramatically over time, dependent on the spring runoff from melting snow in the

surrounding areas (Morgan 2002). As a striking geographic feature in the area it has played a role in the lives of the people who traveled through and lived within the area.

The current archaeological record places humans in the Great Salt Lake region as early as 12,300 years ago with the arrival of big game hunters, known as Paleo-Indians (Cromar 2016). Great Basin fluted points and Clovis fluted points (11,200 - 10,800 years ago) have been discovered along the edges of Pleistocene and early Holocene lakes and marshes. Stemmed points dating to approximately 10,500 to 8,800 years ago have been discovered west of the Great Salt Lake where marshlands existed at the time, but as the marshes disappeared people moved elsewhere (Grayson 2011). The first archaeological evidence of semi-sedentary communities in the area is 8,500 years ago, and these communities resided in caves and rockshelters along the edges of the lake. Flooding during the middle of the Holocene pushed these communities further into upland areas and resulted in more nomadic lifestyles (Madsen 2002).

Archaic and Fremont groups occupied the Black Rock Caves, located in the Oquirrh Mountains south of the Great Salt Lake and only a few miles from Saltair, from approximately 3,200 years ago to 1,000 years ago (Madsen 1983). Small villages of horticulturalists known as the Fremont Culture or Formative Stage Culture occupied the Great Salt Lake margin and marsh areas from 1,500 and 600 years ago. Groups who spoke Numic languages—a branch of the Uto-Aztecan language group which includes modern day Utes, Goshutes, Shoshone, and other American Indian groups—migrated from the southwestern Great Basin and had replaced these groups by 500 years ago. The Numic peoples of the Great Basin relied more on upland resources than the previous inhabitants of the region, thus the Great Salt Lake held less significance to them than to previous communities (Madsen 2002).

The American Indian groups in this area have oral histories of their origins. The Ute have an origin story of the god Sinauf placing the Utes in their ancestral homelands of Utah and Colorado after Coyote accidentally released all other humans in different regions (Duncan 2000). The Goshute origin story speaks of Coyote making children with two women on an

island, and then placing the ugliest of the children, who were the Goshute, in their ancestral homelands in Utah. The Shoshone creation story tells of Coyote impregnating two women he came across and while he was away the women took the attractive children with them. Coyote inherited the ugliest children, who became the Shoshone (Smith and Hayes 1993). Each of these creation stories show that the Ute, Goshute, and Shoshone believe that their people have been in their ancestral homelands since creation.

By the time of European contact, the Salt Lake Valley was a buffer zone between the Shoshone, Goshute, and Ute American Indian groups. Spanish Franciscan explorers, Francisco Atanasio Dominguez and Silvestre Velez de Escalante, out of Santa Fe New Mexico were the first European explorers in central Utah in 1776. However, in their discussions with members of a Ute community they determined that there was nothing of value in the Great Salt Lake region, and never bothered to venture northward. They said the following about the Great Salt Lake, “The other lake with which [Utah Lake] comes in contact covers many leagues,...and its waters are harmful and extremely salty, for the Timpanois [Ute band] assured us that anyone who wet some part of the body with them immediately felt a lot of itching in the part moistened (Escalante and Dominguez 1792:72).”

The first European-American explorations of the Great Salt Lake were by fur trappers searching for beaver in the 1820s, but as saltwater is a poor habitat for beaver the trappers did not stay for very long (Topping 2002). Later, explorers found their way to the Great Salt Lake in the United States’ mission to explore and claim the continent. In a detour from the Oregon trail in 1843, John C. Fremont on behalf of the federal government travelled to the northern portion of the Great Salt Lake and was the first European-American to formally document the lake in depth. In addition, the infamous Hastings Cutoff of the California Trail went around the southern shore of the Great Salt Lake. In 1846, just a year before LDS Church President Brigham Young and his followers descended into the Salt Lake Valley, the Donner Party cleared a path through the region after hearing that the Hastings Cutoff was faster than the other trails. During their journey the party had grazed past the spot where

Saltair would stand in less than half a century (Topping 2002). After Americans poked and prodded the region, a group of displaced settlers from the East would make the decision to make this region their home.

## 2.3 Salt Lake City

In 1846, in the rush of settlers travelling to Oregon and California, members of the LDS Church made their way from Missouri and Illinois along the Oregon Trail. The LDS Church was founded by Joseph Smith in New York in 1830, the year he completed the Book of Mormon (The Church of Jesus Christ of Latter-Day Saints 1830). Between 1830 and 1838 LDS Church members moved westward to escape persecution, moving to Ohio and Missouri and subsequently being chased away by local non-members. In 1838 Smith established Nauvoo in Illinois as the LDS capital, but the group faced hostility again by local non-members which lead to the murder of Smith on June 27, 1844. Throughout the following year the LDS members faced angry mobs and decided to flee Nauvoo in fall of 1845 under the leadership of Smith's successor Brigham Young (Kerstetter 2015). Not welcome in any previous towns they had settled, they sought a place they could call their own and settled in Salt Lake Valley in 1847, which at the time was part of Mexico. Brigham Young envisioned a self-sustaining community in what became Utah, called Zion or the State of Deseret (Alexander and Allen 1984). LDS Church members did not initially receive resistance from the neighboring Ute, Goshute, and Shoshone due to the lack of interest these Tribes had in the valley and its status as a buffer zone between the tribes. This settlement, known as Great Salt Lake City, was seen as an opportunity for trade to these American Indian groups as recounted by Clifford Duncan of the Ute Tribe, but they did not anticipate that the small group of settlers planned on bringing thousands of more people into the area and expanding settlements past the Salt Lake Valley (Jones 2019, Duncan 2000).

Unlike other European-American religions, LDS Church scripture includes North America in its religious history adding another layer of incentive for the concept of Manifest Destiny,

which is the idea that American settlers were destined to spread across North America. It was said that President Brigham Young had a vision of the Salt Lake Valley, and that this was the spot for settlement based on ordained charter from God, and this was to be built up in civilization as preparations for the second coming of Jesus Christ. This made LDS members feel that they had justification to create settlements along the Wasatch Front despite backlash from the local American Indian communities (Kerstetter 2015).

By 1848 the population of Salt Lake City was over 5,000, and one of the largest settlements in the Intermountain West. Utah's early European-American population was almost entirely members of the LDS Church, and the religious leaders envisioned the city and surrounding communities as being a permanent haven from persecution. However, the California Gold Rush, Civil War Army movements, and the growth of mining interests in the 1860s all brought an influx of "gentile", or non-LDS immigrants (Alexander and Allen 1984). A tension already existing between LDS and non-LDS peoples, formed over decades of persecution and violence, only heightened as new immigrants appeared in Utah Territory.

In 1869 the United States' first transcontinental railroad was completed at Promontory Summit, Utah Territory and would help create a stronger link between Utah and the rest of the country. In 1870 the Utah Central Railroad was completed and created a connection between Salt Lake City and the transcontinental railroad. The population of Salt Lake City boomed and hit 44,800 by 1890 (Alexander and Allen 1984). This incoming population caused the LDS population of Utah to dilute from 88 percent in 1860 to 66 percent in 1890 (Shoemaker 1983). Any bustling city requires entertainment, and in 1893 Saltair was completed to meet the recreational needs of the city and to attract tourists from outside areas.

## 2.4 Saltair

In the late 1800s, the United States saw a rise in social and amusement resorts due to the reduction of travel time given by railroads and decreasing work hours. By 1900, the average

work hours of Americans was reduced by 15 hours a week, freeing up significantly more time to spend how they pleased (Ashby 2006). Leisure was seen as a means for maintaining good health, and Americans sought out places to relax. Of amusement resorts, Coney Island in New York was dominant in the minds of the American people thus setting the standard for all resorts and amusement parks. Coney Island offered a wide range of recreational activities and was a popular destination for people from all social classes and with a variety of tastes (Shoemaker 1983). Working classes in particular were attracted to Coney Island and other amusement parks because they were a cheap recreational option. Alternatively, higher classes were repelled by amusement parks due to the types of patrons they attracted and instead sought recreation in the high arts, such as music performed by orchestras, which was inaccessible to most people. Amusement parks and resorts provided a unique opportunity for families to relax, as they included attractions for both children and adults of any gender (Ashby 2006).

Various scholars have discussed the role that leisure and places of leisure played in the United States around the turn of the 20th century. In *Cheap Amusements*, Kathy Peiss (1986) examines gendered working-class sociability in New York. The social realm of men was centered around the values of competitive individualism, while the social realm of women was centered around the household labor and kinship. This impacted the ways men and women spend their leisure time. Working-class women had a small bit of disposable income to spend on heterosocial leisure, such as dance halls, amusement parks, and resorts. By interacting with men, these women could compensate for their small income by encouraging men to spend money on them. Dr. Rebecca S. Graff, associate professor at Lake Forest College, conducted archaeological investigations at the Chicago's World's Fair along the shores of Lake Michigan and has a dissertation and three articles devoted to it. Here, I will focus on "Fair-as-Foodway: Culinary Worlds and Modernizing Tastes at Chicago's 1893 World's Columbian Exposition," (2018) where Graff and Megan E. Edwards analyze food consumption as impacted by individual identity and increasingly industrialized systems.

While this article does not discuss alcohol, it does discuss the spaces and roles that food held at the fair. Food did not exist simply to nourish tourists, but was also a source of pleasure and a supplement to the fair experience. In *The Social Anxieties of Progressive Reform: Atlantic City, 1854-1920* Martin Paulsson (1994) analyzes the history of Atlantic City, which was both a recreational destination and the target of religious criticism. He describes the conflict between public morality and business interests within Atlantic City. By hiding illicit activity from the eyes of moral crusaders, such as the consumption of alcohol or gambling activity on Sundays, business owners could prevent drastic moral changes. These studies help provide a broader context for what was happening in the United States during the time Saltair was utilized.

The Great Salt Lake was a recreational destination for settlers in the surrounding areas. The locals enjoyed the water that allowed them to easily float and served as an escape from the extreme summer heat of the semi-arid region. Additionally, the water was believed to have healing properties and was often compared with the Dead Sea. In an 1885 advertisement for the Utah and Nevada Railway, a claim was made that the lake was a remedy for “Rheumatism, paralysis, general debility and kindred diseases (U.S. Directory Publishing Co. 1885:9).” However, Howard Stansbury remarked that swimming was difficult in the water, that one must wash off in fresh water to remove salt deposits, and that getting the water in the eyes or mouth caused discomfort. Despite these factors, Stansbury also remarked that “a bath in this water is delightfully refreshing and invigorating (Stansbury 1852:212)” and he was fond of floating in the water.

In 1875 the Utah Western Railway (renamed the Utah and Nevada Railway in 1881) was constructed from downtown Salt Lake City westward for seven miles to Black Rock, a natural rock feature on the southern shore of the Great Salt Lake, to make the lake more accessible to the local population (McCormick and McCormick 1985; *Salt Lake Herald* 1881; Utah Western Railway Company 1875). For about a decade Black Rock was an unofficial tourist destination for locals who wished to visit the Great Salt Lake. Subsequently, five resorts–



Lake Park, Lake Point, Black Rock, Garfield Beach, and Lake Shore—were built following the railroad, where patrons could easily change into swimwear and reach the waters of the Great Salt Lake. These resorts attracted the attention of both locals and tourists and proved to be quite profitable (Shoemaker 1983). The LDS Church soon set plans in motion to capitalize on this trend.

The Saltair Beach Company was organized by LDS Church officials in June 1891 with the intent to construct a wholesome resort for Salt Lake City families and that would also serve as a place of employment for LDS members. LDS prophet Wilford Woodruff wanted a resort on the Great Salt Lake that abided by the morals of the LDS Church. At this time Garfield Beach, just west of Black Rock, was popular with locals but was owned by non-members. Church officials were concerned about the impact it would have on members of the LDS Church. Garfield beach allowed alcohol and caused young people to return home at late hours, and the LDS Church was concerned that women would bring home questionable men. At their proposed Saltair Resort, the LDS Church planned on banning alcohol and tobacco, supervising dancing, and holding prayers during opening and closing activities to enforce morality. In order to facilitate easy movement of visitors, the Saltair Beach Company formed the Saltair Railway Company, soon renamed the Salt Lake and Los Angeles Railway Company, to construct a railroad between Salt Lake City and Saltair. This new railroad connected to existing lines leading to other cities, such as Ogden and Provo, allowing visitors to come from all over the Wasatch Front (McCormick and McCormick 1985, Shoemaker 1983, Gadd 1968).

The LDS Church hired Richard K. A. Kletting, a German architect who had worked on major projects in Europe before moving to Utah, to design the pavilion. Kletting later designed various buildings in Utah, most notably the State Capitol. In the winter of 1893, the Saltair Beach Company began construction of Saltair. This resort was to be bigger and better than all the resorts that had preceded it and included a massive and ornate pavilion as a way to be competitive within the amusement realm. The total cost of construction was

\$350,000, at least \$185,000 of that was provided by the LDS Church. Saltair opened on June 8, 1893 to a crowd of 10,000 people.

The pavilion was a Moorish-inspired structure that was elevated above the water, an embodiment of Victorian Orientalism, to give patrons the feeling that they were travelling to a distant land far away from the monotony of their daily lives. The LDS Church wanted to prove to the world that Utah was not simply a dry and dreary desert wasteland, but a bustling metropolis that provided all the leisure of civilization (McCormick and McCormick 1985, Arrington 2005). The pavilion was much larger than the structures of the other resorts, laying on a foundation of 2,500 pilings embedded into the lakebed 4,000 feet from the contemporary shore, and purported to be “the largest bathing pavilion in America (Saltair Beach Company 1893)”. A large arch formed the entrance to the pavilion, providing a grand entry to the resort that sought an air of opulence. Ornate arches formed the walls of the pavilion where patrons inside the building could gaze across the lake and still be locked within the “oriental dream.” Thousands of electric lights lined the exterior of the pavilion, allowing the grand architecture to be visible at night in a dazzling display of light. Wings to the south and north of the pavilion gently curved into the lake, providing access to more bathing areas and deeper water. Bathing entries were strategically placed to be out of sight of those in the pavilion, so that bathers could retain a level of modesty and security in their revealing bathing suits (McCormick and McCormick 1985). Unlike the other resorts, Saltair was built out where the water was around five feet deep at the time of construction, and this ultimately allowed Saltair to last longer through the lake’s intermittent levels. While other resorts were sitting over a dried lakebed, Saltair was still either over water or at least close enough for a short walk to the water (Shoemaker 1983). Though swimming was still a huge attraction, Saltair offered more than previous resorts with its pavilion, dining facilities, and large dance floor. Saltair was a success and would attract thousands of visitors over the years (McCormick and McCormick 1985).

Early on, the main attractions were floating in the Lake and dancing in the pavilion,

purported to be the largest dance hall in the world. To supplement the dance hall Saltair invested in providing quality music, such as Pederson's Band and the Mormon Tabernacle Choir. Beyond music, the large pavilion provided a convenient space for political parties to hold rallies and conventions. Meanwhile, rowboats, a merry-go-round, food and refreshment stands, a bar, and trips in the boat named Talula were other early attractions (McCormick and McCormick 1985, Gadd 1968).

Over the years Saltair would add more attractions to entice visitors to keep coming back. Resort owners added slot machines and billiards in 1894, midway games in 1895, and by 1899 offered silent movies every night. By 1911 Saltair featured a roller coaster, roller skating rink, fun house, skee ball, arcade, and bowling alley. To continue public interest in the resort, Saltair featured short term attractions throughout its years, including Professor Macarter's African Dog, Baboon, and Monkey Comedians in 1899 and an alligator farm in 1911. A bicycle track was constructed, but due to competition from the bicycle track of the Salt Palace in Salt Lake City the races were canceled but the Hippodrome continued to be utilized for other purposes, such as boxing matches and dances. In 1909 the Leviathan cafe with refrigerators and fresh-baked bread was introduced. During World War I Saltair played patriotic music and films. Saltair reached its peak in 1920 when the resort was a mile out on the lake and attendance was at its highest (McCormick and McCormick 1985, Gadd 1968, Sanborn Map Co. 1911). During the 1920s Saltair received a lot of attention from outside tourists, as people would take excursion trips which would make a stop at Saltair.

Fares were kept low to encourage many people to visit Saltair. Lagoon, in contrast, a resort 15 miles north of Salt Lake City, raised fares in an attempt to dissuade those of lower means from visiting thus attracting smaller, more affluent crowds. In this way Saltair was actively encouraging members of all social classes to enjoy the pavilion.

Saltair provided different realms of experiences for the patrons who visited. Men and women could arrive at the resort in fashionable clothing, showing off their tastes, values, and income. They also had the option to shed their identifying clothing and don plain

bathing suits to submerge in water that further obscured their individuality. Here, they could float around others of different backgrounds as equals, all soaking in the relaxing and cooling saltwater.

Despite its popularity Saltair never became a profitable venture. As it became apparent that the resort would not make as much profits as originally intended, the resort eased rules regarding serving alcohol and operating on Sundays. For many working-class families, Sundays were the only days they had time to spend on leisure, and Saltair would have lost out on a large customer base. As the LDS Church found itself in increasing debt it sold off many of its business ventures, including Saltair to LDS businessmen in 1906, though it still held on to many of its shares (Arrington 2005, Ashby 2006). In 1910 strong winds destroyed sections of the resort, leading to approximately \$10,000 in repairs. Later that year the two excursion boats, Irene and Vista, were blown two miles from Saltair. Winds such as these were not uncommon and continued to impact the resort. Additionally, the resort faced heavy weathering over the winter that required the resort to spend a significant amount of funds towards repairs. These repairs made it difficult for the resort to stay ahead in profits. In the 1920s cars became more accessible to the public, and while it allowed people to visit Saltair it also opened more options for places to find leisure. Crowds were drawn away from Saltair to areas that had not been as accessible before (Gadd 1968).

On April 22, 1925 a fire sparked in the Ali Baba Cave Concession under the seats of the Hippodrome. Employees, volunteers, and firefighters fought to save the resort, but the timber structure was soon engulfed in flames that were visible from Salt Lake City and the resort was destroyed. Insurance only covered \$150,000 of the \$500,000 in damages. Plans began immediately for reconstruction (McCormick and McCormick 1985). Faced with debt and strong competition from Lagoon, LDS Church took this as an opportunity to drop all its ties to the resort and sold its shares to the Saltair Investment Corporation (Saltair Investment Corporation 1926). On May 29, 1929, Saltair reopened with a new pavilion in an updated design (Saltair II). Saltair II started out strong, but due to a combination of bad luck and

growing disinterest the resort struggled to maintain popularity. In 1959 Saltair closed for good. In 1970 Saltair II was burned down by arson. Saltair was rebuilt again in 1982 to restore its place as a resort, but in a different location and less impressive architecture as its core is a re-purposed airplane hangar from Hill Air Force Base with a facade resembling Moorish architecture. In Saltair's run of bad luck, the new pavilion was immediately flooded, which was followed by the water rapidly receding. Saltair's renewed status as a resort did not last long (McCormick and McCormick 1985). In 2005 Saltair III was resurrected as a music venue, and continues this role to this day, featuring a large stage, an amphitheater overlooking the lake, and the Saltair Sky bar (The Great Saltair 2009).

## 2.5 Relevant Archaeological Work

Prior to the work done by UDSH there was no formal archaeological documentation of Saltair I and II. The road to the south east of Saltair has been surveyed, and the portion of the Salt Lake, Garfield, and Western Railroad (42SL306) adjacent to Interstate I-80 has been documented in previous surveys. The railroad (42SL306) carried passengers to Saltair was originally constructed by the Saltair Beach Company in 1892. Today the portion of the railroad adjacent to the road is in use by Union Pacific, but the spur where the railroad breaks off towards Saltair I and II has been abandoned and dismantled and only the grade remains. A section of 42SL306 was destroyed in the construction of I-80. Table 2.1 shows which projects have documented 42SL306 at the entrance of Saltair. No artifacts or features other than the grade were discovered. These surveys did not recognize 42SL306 as being within the boundary of Saltair (42SL816), but UDSH has determined that it is within the boundary of Saltair, thus it deserves recognition in this overview. It will maintain its separate site number due to its nature as a linear site as defined by the Utah Professional Archaeological Council (Utah State Historic Preservation Office and Antiquities Section 2019).

In 2017 Certus Environmental Solutions, LLC surveyed an area hugging the western side of the railroad grade 42SL306, where they documented site 42SL764. This site consists of

Author	Project Title	Agency	Year
Coleman and Gourley	A Cultural Resource Inventory of the Level (3) Communications Fiber Optic Cable Located Between Salt Lake City, Salt Lake County, and Lynndyl Millard County, Utah.	Baseline Data Inc.	1999
Spurling and Yeiter	Class III Cultural Resources Inventory of the Jordan Valley Water Conservancy District Wells EA Project, Salt Lake County, Utah.	SWCA	2009
Self et. al.	Class III Cultural Resources Survey UNEV Pipeline Project - Utah Segment.	WSA, Inc.	2008
O'Mack	Aligned with History: Mitigative Documentation of Historic Linear Sites.	WSA, Inc.	2012
Steele	An Archaeological Investigation of the I-80 Fiber Optic Project.	Horrocks Engineers	2018

**Table 2.1:** Reports documenting 42SL306

the bases of utility poles for an electricity line feeding electricity to Saltair (Murray Ellis 2016). Though the archaeological documentation of Saltair and the surrounding areas has been scant, it helps paint a picture of the layout of Saltair I and II.

## 2.6 Saltair's Legacy

Though Saltair I and II have long burned down they still exist in the minds of locals today. Saltair III continues the legacy by keeping the memories of Saltair I and II alive (The Great Saltair 2009). The collections section of UDSH is working towards digitizing historical records, photographs, and artifacts from Saltair and curating a collection to convey the history of the resort (Coy 2020). In my time working on the archaeology of Saltair I have encountered many people who have fond memories of the dilapidated Saltair II before it was destroyed in fire. The history of Saltair is tied to the history of Utah and gives a unique look into the role alcohol has played in the state largely controlled by a religion that is vehemently against the consumption of alcohol. This relationship will be explored in the following chapter.

## CHAPTER 3

### Beverages in Context

#### 3.1 Introduction

The status of alcohol in Utah has been controversial from the Temperance movement of the mid-19th century to the present day. The Temperance movement had a short-lived victory in American Prohibition where alcohol was illegal from 1920 to 1933. However, after Prohibition was repealed the Temperance movement lost steam, but the LDS Church continued the fight for temperance (Foster 2002). Utah has had strange alcohol laws over the years, including requiring the infamous “Zion Curtain” behind which restaurant staff would pour alcohol out of the gaze of restaurant patrons. These laws have been the subject of various popular media articles such as “Deciphering Utah’s Insanely Strict and Very Weird Liquor Laws” by Thrillist (Hunt 2014) which outlines alcohol laws unique to Utah, and “How Utah’s Old-School Liquor Laws Forced Bartenders to Get Creative” by Vice (Dao 2018) which describes the different ways Utah bartenders alter common drinks to abide by alcohol laws while maintaining flavor. As a Utah resident the most common questions I get from people out of state involve two subjects: alcohol and Mormons. The relationship Utah has with alcohol and the spectacle it has become for those outside the state made me wonder about the status of alcohol at Saltair. Resorts and other places of recreation typically provide alcohol, and when finding alcohol bottles at Saltair it made think about how alcohol was handled at Saltair, and how the bottles ended up in the places they were found.

This chapter begins with an overview of the history of anthropological analysis of alcohol and the human behavior surrounding alcohol. This provides a framework for a brief history of the Temperance Movement. This movement influenced LDS attitudes towards alcohol and the public attitudes and laws towards alcohol within Utah. These laws and attitudes impacted the role of alcohol at Saltair, where the LDS Church was conflicted between profit and morality in how it managed the resort.

### 3.2 Alcohol Through an Anthropological Lens

The categorization of alcohol used in this project is a European American concept that was birthed from the temperance movement. Previously, beverages such as beer, wine, and whiskey were not necessarily grouped as items sharing the trait of being intoxicating. Many cultures have different concepts of beverages that European American culture views as alcoholic. The European American concept of alcohol is further formed by the British conception of alcohol as being in a separate category from food. Thus holding the categorized traits as being separate from food and as being intoxicating, alcohol is typically served in specialized vessels in European American culture in order to visually categorize the beverages, i.e. specially shaped bottles, wine glasses, etc (Dietler 2006). As liquids, alcoholic beverages do not stand alone in their materiality, but rather depend on other objects for transportation and consumption (Dietler 2020).

Prior to the 1970s few anthropologists studied cultural patterns involved in drinking. The potential of alcohol as a means for social cohesion was not considered. In reality alcohol is often included in celebration events across all cultures and is a mechanism through which people can enhance their mood during times of communal happiness. The studies on alcohol during this time period also did not touch on the material aspects of alcohol, what drinks were consumed and how they were consumed (Douglas 2002). In the 1970s anthropologists began to focus more on alcohol and the complex social meanings associated with drinking and not simply as an everyday cultural activity (Gusfield 2002). The following summarizes more recent anthropological analysis into alcohol and how it plays a role in culture with an emphasis on American culture.

Consuming alcohol is considered a communal activity and has a complex role in social gatherings. Michael Dietler (2006; 2020) views alcohol and its role in human populations through entanglement theory. Dietler outlines separate constructions of identities that alcohol inhabits, including “spatial distinctions” or spaces set aside for the consumption of



alcohol, “temporal distinction” which includes the time alcohol is consumed or the order in which it is served, “quantitative distinctions” as in the amount that is considered acceptable to serve, and “behavioral distinctions” or behavior that is acceptable while intoxicated. A person’s identity will often dictate the distinctions they hold when consuming (or not) alcohol, most particularly gender. Women are typically expected to drink less than men (or not at all), to behave differently while drinking, sometimes to drink in separate spaces, and very often drink different types of alcoholic drinks. Class also plays a role in the consumption of alcohol because social rules will govern what drinks are acceptable for different classes to drink and when it is appropriate to drink certain forms of alcohol. This often leads to different tastes in alcohol and different styles of drinking (Dietler 2006).

Dietler also describes the entanglements of alcohol itself. It is tied to its liquid state, which means that for humans to produce, transport and consume it, it must be held within a water-tight vessel. For humans to take advantage of its ability to provide an alternate state of conscience it must be consumed and ingested into the human body, becoming incorporated into the person. Thus, alcohol must be continually produced and distributed to serve its role, as it destroyed in its use (Dietler 2020).

Joseph Gusfield describes alcohol consumption as a ritualistic action. It symbolizes the transition from work to play in the United States where the world is divided strictly by time, and where work is in a set schedule, a concept of time set by industrial capitalism. Alcohol is used as a scapegoat for improper behavior, as it is an acceptable excuse to stray from polite cultural norms. It is a marker of a fun atmosphere, in contrast to the serious atmosphere of work (Gusfield 2002). Alcohol’s spatial, temporal, and cultural spaces in the United States were heavily influenced by the national temperance movement.

### **3.3 The National Temperance Movement**

The temperance movement was a moral reformation movement that emerged from the Second Great Awakening in the northeastern United States. It was led by various Christian

organizations with the goal of outlawing alcohol during the late 19th century and early 20th century. These organizations included the National Temperance Society, the Woman's Christian Temperance Union, and the American Anti-Saloon League. Prior to the temperance movement alcohol was accepted as a cultural norm and believed to help sustain life (Foster 2002). Alcohol was commonly used recreationally, and it was the norm to offer alcoholic drinks to guests (Reckner and Brighton 1999). The temperance movement switched the equation and demonized alcohol, and the concept of alcoholism emerged. The country was rapidly changing due to factors such as the Industrial Revolution, commercialization, the immigration of people with different customs, and urbanization. Many Christians saw the rise of behavior that violated their moral beliefs. The Temperance movement sparked within the urban north-eastern elites seeking to provide their moral guidance on the world. As the middle and working classes gained more power within the country and the immigrant population rose, the higher classes sought to restrict their behavior and created a new form of class conflict by attempting to control recreational behavior. Early on beer was perceived as an acceptable beverage while liquor was perceived as a bad beverage, but over time the Temperance Movement adjusted their goals to total abstinence. Additionally, the temperance movement viewed alcohol as the root of alcoholism, and not the individual. This led to the government enacting moral legislation following the Civil War, something that the country had rarely seen up to that point (Foster 2002, Reckner and Brighton 1999).

Temperance transformed during the Victorian Era and became a symbol of middle-class respectability. It became a means through which the middle-class could claim moral superiority over the higher classes and distinguish themselves from the lower classes (Reckner and Brighton 1999). The working-class was associated with alcohol consumption in public spaces while the upper class often consumed alcohol in private spaces (Smith 2008). The burden of temperance largely was placed on women, and as a result the temperance movement was largely seen as a movement by women. Men were often the ones who consumed alcoholic beverages, while women, as the enforcers of morality, abstained. This often led to

alcohol being removed from the dinner table and placed in spaces away from the gaze of women. Saloons, which were often spaces for men, were pushed away from the public eye to hide activities that were becoming increasingly scorned. The women who entered saloons were often servers, wives of the owners, hucksters, or prostitutes. Bitters and other patent medicines with high alcohol content were consumed by those who wished to consume alcohol in secret. This behavior has been found to associate with both the working class and a few women of the middle class, who hoped to avoid the scorn of their middle class peers (Hooker 1981; Smith 2008).

Despite these attempts to suppress alcohol, many in the middle-class continued to consume alcohol in moderate amounts (Reckner and Brighton 1999). Table 3.1 shows alcohol consumption from the years 1850 to 1919 based on ethanol consumed. From 1850 to 1880 most of the alcohol consumed was from spirits, but this trend shifted and by 1891-1895 beer took over as the main source of alcohol. This may likely be related to the early Temperance Movement's attempts to stop liquor while giving beer a pass (Reckner and Brighton 1999). This may also be linked to improvements in beer storage. In the 1870s the lightening bottle stopper and the discovery of pasturization made it possible to store beer in a way that would last more than a few days. As a result, it was easier to distribute beer than it had been before (Baughner-Perlin 1982). Further, beer was advertised as a health drink that was more food than spirit. The brewing industry also took advantage of the fact that beer had a lower alcohol content than liquor, and used this to push beer as healthy drink rather than an intoxicating substance (Kerr 1998). Though beer became more common than liquor, the overall ethanol consumed did not change drastically.

Year	Beer	Wine	Spirits	All Beverages
1850	0.14	0.08	1.88	2.10
1860	0.27	0.10	2.16	2.53
1870	0.44	0.10	1.53	2.07
1871-1880	0.56	0.14	1.02	1.72
1881-1890	0.90	0.14	0.95	1.99
1891-1895	1.17	0.11	0.95	2.23
1896-1900	1.19	0.10	0.77	2.06
1901-1905	1.31	0.13	0.95	2.39
1906-1910	1.47	0.17	0.96	2.60
1911-1915	1.48	0.14	0.94	2.56
1916-1919	1.08	0.12	0.76	1.96

**Table 3.1:** Apparent per capita ethanol consumption, United States. Gallons of ethanol, based on population age 15 and older (Haughwout et al. 2015:13).

Social changes in the attitudes towards alcohol led to legal changes governing the use of alcohol. The first moral legislation against alcohol came in 1802-1832 when a series of laws were enacted to limit the sale of liquor to American Indians. The second came in 1862, when Congress abolished the spirit ration in the Navy, prevented soldiers from buying liquor in Washington D.C., prevented distilleries from operating on Sunday, and further limited the sale of alcohol to American Indians. These laws had little impact on the daily lives of the average American, who were in general against the federal government enforcing morality, but things were soon to change. The Emancipation of slavery in 1863 and the outlawing of polygamy in 1878 inspired moral lobbyists to fight further for the moral legislation they desired (Foster 2002).

National prohibition was passed in 1920. Rather than abstaining many Americans turned to illegal alcohol. This typically consisted of wine and liquor, and since these were often manufactured in questionable ways, they had the potential to give bad side effects. These drinks also tasted bad and helped fuel the soft drink industry in the demand for mixers and chasers. Furthermore, people began drinking in hidden speakeasies (Hooker 1981).

Though the LDS Church had a rocky relationship with the American government, many of its members joined the temperance movement. The religion was established in the eastern

United States, the center of the national temperance movement, and was heavily influenced by it.

### **3.4 The Temperance Movement of the Church of Jesus Christ of Latter-Day Saints**

On February 27, 1833, Joseph Smith relayed a revelation now called the “Word of Wisdom” which sits in section 89 of the Doctrine and Covenants after a prompting by his wife Emma Smith (The Church of Jesus Christ of Latter-Day Saints 1833). This revelation guides what a member of the LDS Church is allowed to ingest if they wish to live a long, happy life and if they wish to move on in the afterlife. The sections that pertain to alcohol are as follows:

The use of wine, strong drinks, tobacco, and hot drinks is proscribed. . . inasmuch as any man drinketh wine or strong drink among you, behold it is not good. . . strong drinks are not for the belly, but for the washing of your bodies. . . And all saints who remember to keep and do these sayings, walking in obedience to the commandments, shall receive health in their navel and marrow to their bones; And shall find wisdom and great treasures of knowledge, even hidden treasures; And shall run and not be weary, and shall walk and not faint. And I, the Lord, give unto them a promise, that the destroying angel shall pass by them, as the children of Israel, and not slay them. Amen.

The Word of Wisdom is clear: the LDS Church does not allow its members to consume wine and strong drinks. Additionally, members are promised to live a long and healthy life if they abstain from drinking alcoholic drinks, among other things.

The population of Salt Lake City grew rapidly after its establishment yet faced financial trouble due to the lack of money from the incoming population. As a new city run by a new religion outspoken against alcohol, the leadership fumbled with how to tackle laws regarding the substance. The laws created by the city were designed to both control public morals and to gather tax revenue to a city struggling in finances. In a series of tax reforms in 1850, Territorial leaders established a fifty percent tax on alcohol (*Deseret News* 1850). This measure was the first of many in what would become the State of Utah regarding the sale of liquor

as LDS Church leaders warned their people against the abuse of alcohol and discouraged drunkenness. Howard Stansbury commented on this tax in his report on his Great Salt Lake survey saying that the purpose of this measure was to prevent alcohol from being sold in the state. Stansbury, a “gentile,” saw this as a “burden upon industry and enterprise (Stansbury 1852:133).” In 1851, the sale of hard liquor was made illegal in Salt Lake City apart from physicians (*Deseret News* 1851), but by 1853 the city distributed liquor licenses for the sale and manufacture of liquor for \$200. In addition to the licenses, the city also set legislation for fines to those who sold liquor on Sunday and for any establishment holding a liquor license that allowed “drunkenness, riotous, or disorderly conduct” on premises (*Deseret News* 1853). By granting liquor licenses the leaders of Salt Lake City could control the number of bars within the city. The city then created a monopoly on liquor by operating a distillery, which proved to be more profitable than taxes. In 1866 the private manufacture and sale of “spirituous, vinous and fermented liquor” was banned, thus giving the city distillery a strong hold on the market (*Deseret News* 1866). However, due to loopholes in the laws some private bars were able to continue business (Alexander and Allen 1984). Overall, the city wanted control over both the revenue and morality concerning alcohol.

As the gentile population of Salt Lake City grew so did the demand for liquor. However, the city continued to demand high fees for liquor licenses and related taxes. The city council said this was for moral reasons, but the gentile community saw this as a weak excuse because the city sold liquor itself. In 1872, Territorial Chief Justice James B. McKean negotiated with the city to lower liquor license fees from \$750 per month to \$1,200 per year for retailers. In an attempt to further enforce morality, the city banned the sale of liquor between 10 PM and 6 AM (Alexander and Allen 1984).

However, even members of the LDS Church did not completely abstain from alcohol during this time. Mark Twain discusses his visit to Salt Lake City in *Roughing It* (1886) where he came across “Valley Tan,” a beverage very similar to whiskey. It was “of Mormon invention and manufactured only in Utah” and said to be “made of (imported) fire and

brimstone (p. 109).” Twain recounts that no public saloons were allowed, and that members were not allowed to drink, but members were allowed to drink Valley Tan. *In the Right Place: Fremont and Early Pioneer Archaeology in Salt Lake City* (2005) is a brief analysis of bottles from the first pioneer cemetery in Salt Lake City by Benjamin C. Pykles and Shane A. Baker. This site dates to 1847 to 1870 and contains a plethora of alcohol bottles. This discovery, in conjunction with Twain’s account, reflects a shift in LDS attitudes towards alcohol in the early days of Utah and may indicate a disconnect between the moral rules set by the LDS Church and the actions of the average member of the LDS Church in the early days of settlement in Utah Territory.

By the turn of the 20th century the United States was experiencing a loud call for prohibition from Evangelical Protestant churches, and Utah was no exception. In 1886 the Women’s Christian Temperance Society of Salt Lake County ran a petition calling for a law prohibiting the sale of liquor, and this petition was signed by 500 citizens (*Salt Lake Democrat* 1886). In 1890 the Women’s Christian Temperance Union of Utah began meeting in annual conventions (*Salt Lake Herald* 1893). In 1900 Lulu Shepard gave an address to members of the YMCA, urging them that just simply abstaining from alcohol was not enough, but they must also fight against the existence of saloons. By 1906 the LDS Church was pushing for a policy requiring abstinence from alcohol for full membership. Many high-ranking members of the LDS Church, most notably Elder Heber J. Grant, sought state-wide prohibition. In 1906 Reverend Dr. George W. Young came to Salt Lake City from Kentucky to establish a chapter of the Anti-Saloon League of America. Heber J Grant and Reverend Dr. Louis S. Fuller joined this chapter, and with the help of Protestant ministers in Salt Lake City they rallied for state-wide prohibition. However, a few Republicans opposed statewide prohibition because they believed it was an issue for local communities to decide. In 1909 and 1911, the legislature attempted to pass local option bills for prohibition but failed (Alexander and Allen 1984). The legislature re-wrote the bill in 1911 and successfully passed the local option law. This law stipulated that each city, village, and county would vote to determine if liquor

was allowed within their boundaries. Unless the whole county decided to vote for the sale of liquor, areas outside of city and village boundaries would be dry. Vessels containing alcohol were required to show the contents and volume of the container. In addition, the local sheriff or police chief was given power of search and seizure in the event of unlawful alcohol sale. As a result of this law 101 saloons went out of business on October 1, the day the law came into effect (Cherrington 1921, Grand Valley Times 1911). This law had a heavy impact on the sale of alcohol within Utah.

In 1911 Brigham F. Grant was appointed the head of the police department of Salt Lake City, and he targeted vice during his time in office. The local option bill gave Grant additional power in his regulation of alcohol in the wet city, and he focused his efforts on enforcing laws that limited alcohol. He enacted a city ordinance that required saloons to serve food with alcohol. Grant started a “purity squad” lead by Hugh L. Grant to enforce liquor laws, but this squad was soon dissolved due to resistance from the local community. Grant was forced out of office in 1915 by the business commission, who opposed his fight against vice (Alexander and Allen 1984).

In 1915 the transportation of alcohol to dry territory was made illegal with the Funk Bill proposed by Senator J. W. Funk of Cache County. This law prohibited individuals, corporations, and sellers from bringing alcohol to dry territory or requesting the transportation of alcohol to dry territory. Furthermore, manufacturers, wholesalers, and transporters were made responsible for the transportation of alcohol to anyone except pharmacists.

In February 1917 the state legislature announced that by August 1, 1917, liquor would be prohibited in the state of Utah. An article in the *Richfield Reaper* reported the news, saying that “Utah will become so suddenly arid and distressingly dry that chronics and dipsomaniacs, if they wish to quench their agonizing thirst with potations of red liquor, will need to make a trip to Nevada to gratify their unholy desire” (*Richfield Reaper* 1917:1). The night before prohibition took effect cities around the state experienced “requiem for booze” as Utahns gave a farewell to alcohol (*Salt Lake Tribune* 1917b:1).



The movement scorning alcohol fueled the desire for alternative beverages to quench thirst and tickle the taste buds. Water and carbonated beverages grew in popularity as alcohol was pushed into dingy saloons, and companies sprung up to meet these demands.

### 3.5 The Rise of Soda Water

As the nation became increasingly aware of the impacts food had on human health during the end of the 19th century, in conjunction with the national temperance movement, non-alcoholic beverages became popular. Though water was taken up as a healthy drink, in some areas water was a health hazard, so soda water took over as a safer health option. In addition to being safer than water, soda water was also believed to have medicinal properties. Soda fountains gained popularity and often had different flavor options to choose from. Soda water was also cheap, which made it a popular beverage option for people of all economic backgrounds. Herb Tea, which later was renamed Root Beer, originally faced backlash from the temperance movement. The Temperance Movement later changed its stance and incorporated Root Beer as an acceptable beverage (Hooker 1981). Establishments cropped up across the nation, including Salt Lake City, that sold non-alcoholic drinks, such as root beer, soda water, tonics, and mineral waters (*The Salt Lake Tribune* 1889). Coca-Cola gained popularity in the 1890s, originally advertised as a headache cure. As with Root Beer, Coca-Cola also faced initial criticism from the temperance movement, but eventually became a popular beverage (Hooker 1981). Another factor that aided in the boom of these carbonated beverages was the introduction of bottle technology that allowed the beverages to be bottled without breaking from the pressure, such as hutchinson stoppers and the crown cap (Jones and Sullivan 1989). Coffee and Tea were also considered acceptable alternatives to alcohol throughout the nation, but the LDS Church proscribes “hot drinks” alongside wine and “strong drinks.” Thus these beverages were not popular in the social world of Utah (The Church of Jesus Christ of Latter Day Saints 1833). Soda and soda water would take hold of the LDS world as drinks for pleasure.

### 3.6 Alcohol at Saltair

*I have been so disgusted to see so much beer-guzzling going on at Saltair. . . The Latter-Day Saints should be the leaders in all that is pure.*

-Brigham Young Jr., 1901 (Shoemaker 1983:134)

The LDS Church owned Saltair while the temperance movement and the popularity of carbonated beverages was in full swing. Therefore Saltair is a good case study in analyzing the impacts of LDS attitudes towards alcohol and alternative beverages. Alcohol was a large factor in the LDS Church's decision to create their own resort. Many LDS Church leaders disapproved of Saltair selling alcohol. Before the grand opening of Saltair the plan was to not sell alcohol, but as the investors thought of the logistics of running the resort, they grudgingly decided to sell alcohol. The bar would be open depending on what events were happening at the time and would be closed if high profile LDS groups or individuals visited the resort. To further limit the consumption of alcohol the management planned to close the bar every Sunday (McCormick and McCormick 1985). As a compromise to those struggling with the moral dilemma posed by alcohol, LDS Church President Joseph F. Smith promised to close the bar at Saltair by request (*Deseret Weekly* 1894).

The decision to sell alcohol would be a point of contention for many LDS members who considered visiting Saltair. For example, in a letter Nellie Thatcher Blair wrote to her husband George E. Blair on July 11, 1894, Nellie urges her husband to not "drink any thing strong, not even beer" if he goes to Saltair. She stresses that he is "an elder and home missionary" and that he would be a bad influence on those who know him as a member of the LDS Church. This letter speaks to personal attitudes LDS Church members had towards alcohol, but this attitude was not limited to average members of the LDS Church.

In 1901 the twelve apostles and first presidency of the LDS Church met to discuss the issue of alcohol at Saltair. George Teasedale commented during this meeting "It would have my mind that no liquor be sold but to my mind it is 1000 times worse to see the promiscuous

bathing of men and women. We used to have our tea and coffee and table beer, we dropped all this. People almost thought we were demented in not drinking anything but water. Is not our mission to save souls? What have we to do with the Saltair? Was not the object of building it to make a pure resort? (Shoemaker 1983:134)” Throughout this meeting the apostles and president echoed the same concern that serving alcohol at Saltair was morally a bad idea. These men did not want Saltair to leave a stain on the reputation of purity of the LDS Church. To further strain the situation, local newspapers reported that beer and liquor were served at Saltair on Sundays despite it being illegal to sell alcohol on Sundays in the state (*Salt Lake Herald* 1901).

Faced with internal turmoil and outside pressure, Saltair stopped selling alcohol the following year and sold non-alcoholic beverages at the bar, a move that faced both applause and criticism. Managers of the resort commented that one-third of the income at Saltair was from alcohol, and predicted that Saltair would struggle to stay afloat with the move, especially with the threat of the shore receding at the same time, which lead to an extension of the northern wing (*Salt Lake Tribune* 1901). On the other hand, local pastors favored the move and encouraged churchgoers to support Saltair (*Salt Lake Herald* 1902). Charles Ellis investigated Saltair to evaluate the impact of the new rule. He noted that the public was more well behaved, which created a more positive atmosphere, and he believed that the resort would be raking in profits in no time but warned that he noticed many people gaining entry for free. However, Ellis’ prediction proved to be incorrect, and during the 1902, 1904, and 1905 seasons where alcohol was banned Saltair did not make enough money to make ends meet and the resort came close to bankruptcy (Shoemaker 1983:138). The Joint Executive Committee of The Saltair Beach Co. and the Salt Lake and Los Angeles Railroad, consisting of John Henry Smith, N.W. Clayton, and L. John Nuttall, remarked that people who came to Saltair expected to be treated as they are treated in any other resort in the United States, and that included the ability to consume alcohol. They believed that “police regulations [would] not be any more strained than with the non-sale of beer,

and looking after those who carry the beer and intoxicating liquor in their baskets or pockets (Shoemaker 1983:151).” This indicates that Saltair may have been trying to prevent patrons from bringing alcohol from home and had employees checking for alcohol. In April 1904 the LDS Church leased Saltair to Jere Langford of the railroad to turn the pressure of selling alcohol away from the Church and with the stipulation that he enforces morality, and since profits for the railroad were tied with public attendance at Saltair, they felt compelled to ensure that Saltair was as profitable as possible. In 1905 Saltair began selling alcohol again, and in 1906 the Church sold Saltair to LDS businessmen to fully alleviate itself from the shame of owning a resort that allowed alcohol, though they maintained shares in the resort (Shoemaker 1983).

Available historical sources do not describe how alcohol was sold and handled at Saltair, or even what drinks were available. The only known historic records of what alcohol was sold show that Fisher Beer and Budweiser Beer were advertised as available at Saltair in 1893 (Saltair Beach Company) and whiskey was stocked at the bar in 1905 (Salt Lake Telegram 1905). Beyond Saltair banning alcohol on Sunday and the 1902 through 1904 seasons, the rules regarding alcohol consumption are unknown.

Though the LDS Church had sold off Saltair, the status of alcohol at the resort remained a point of contention. Saltair maintained a liquor license, which became controversial after underage boys were found drunk at the resort (*Salt Lake Tribune* 1910). In the face of the pending local option prohibition bill in Utah Joseph Nelson, president of the Saltair Beach Company, complained that prohibition would be devastating for Saltair (*Salt Lake Tribune* 1911). Saltair was outside of the boundary of Salt Lake City, where the sale of alcohol was legal, and Salt Lake County had not voted in favor of alcohol. As a result, Saltair found itself in dry territory after the local option bill passed. In 1913 Nelson proposed adding a bar at the Saltair depot, which was in the wet territory of Salt Lake City, that would only serve beer to prevent young men from bringing liquor to Saltair in their pockets. However, the liquor license was denied (*Salt Lake Telegram* 1913b). Nelson made a statement to local

newspapers that Saltair was not responsible for any liquor sales made on the premises to alleviate pressure from the controversies surrounding the resort (*Salt Lake Tribune* 1914). The Funk Bill of 1915 further limited the ability of patrons to consume alcohol as it made it illegal for them to bring alcohol to Saltair. After state prohibition in 1917 patrons of Saltair continued to bring alcohol to Saltair. A bottle of Becker Beer bottled in Evanston from 1917 to 1920 was discovered at Saltair, and likely was snuck in by a patron (Coy 2020). Men were discovered sneaking hip flasks into the resort, and the sheriff sent extra deputies to Saltair to monitor for alcohol consumption and drunkenness (*Salt Lake Telegram* 1923a). A man was discovered with a bottle of moonshine, of which he claimed to have found buried in the sand while he tied his shoe (*Salt Lake Telegram* 1923b). Saltair I burned down during the peak of national prohibition, and Saltair II was completed four years before the end of prohibition.

Despite the numerous attempts to stifle alcohol consumption within Utah and at Saltair that were followed by reluctant acceptance of alcohol, many alcoholic bottles exist at the remains of the site today. These bottles give an insight into how the alcohol question played out at the resort, and how patrons coped with the limitations placed on it. On the other hand, the bottles give an idea of how the management of Saltair handled the moral complications surrounding the sale of alcohol.

## CHAPTER 4

### Methodology

#### 4.1 Introduction

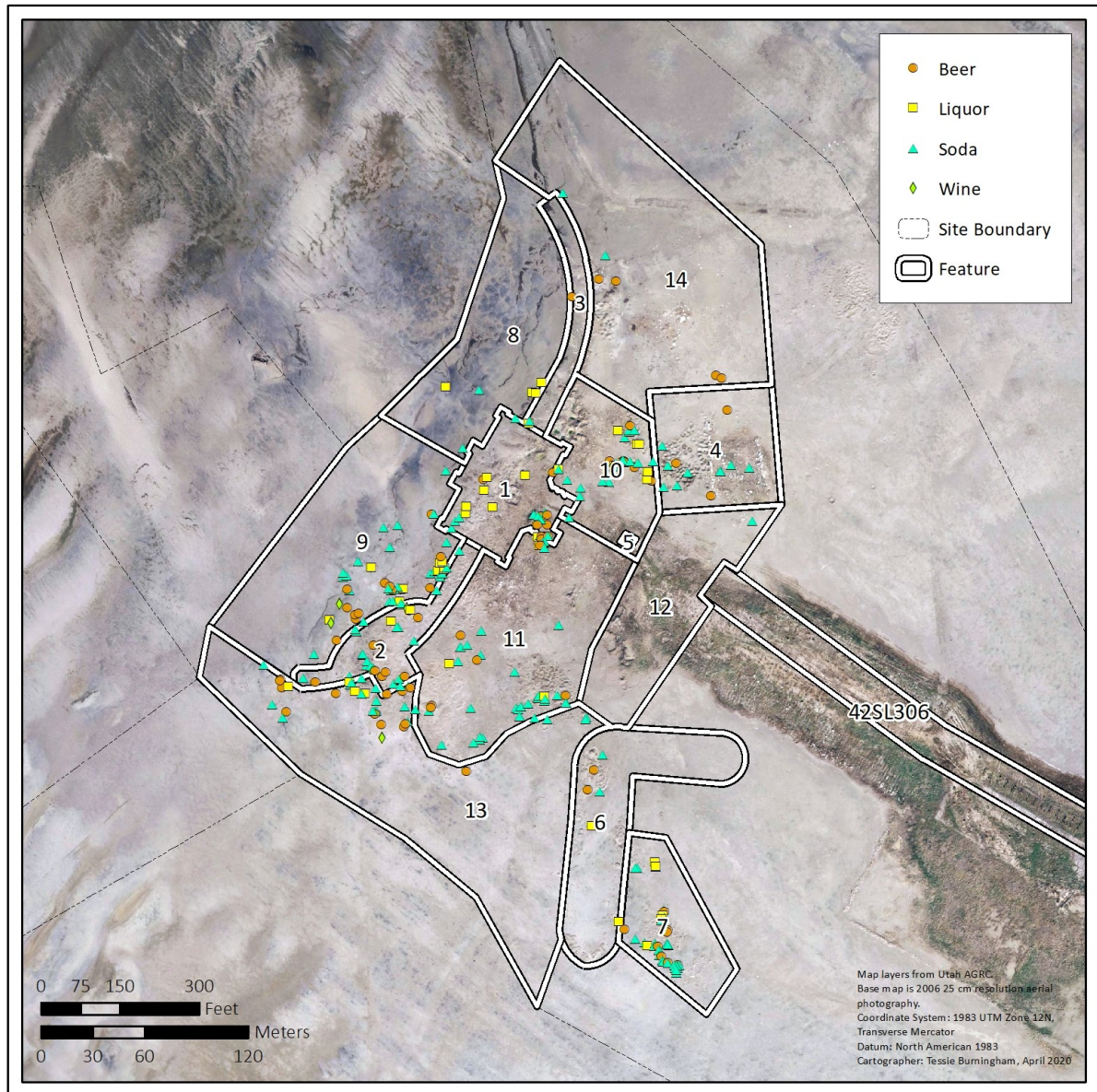
This chapter discusses the archaeological survey conducted for this thesis, previous archaeological surveys from which data is extracted for this survey, the terminology used in this report, a summary of the data, and a summary of the spatial analysis conducted with the data. An overview of two local brands, Red Seal Brand and Denhalter, is provided as these brands have not been well documented up to this point.

#### 4.2 Site Layout

Today Saltair is located just off Interstate 80 (I-80, which parallels the historic railroad line) west of Salt Lake City. The grade of the railroad spur leading to Saltair is intact, which the exception of the section cut by I-80. This spur was used as a railroad for a majority of Saltair's lifespan and was converted into a road when personal vehicles became common. This line ends with the remains of the parking lot. The historic dump is located just off the modern road and is approximately 300 meters squared. The remains of a wooden pipeline run parallel to the railroad spur. Though the buildings have long been removed, the base of the pilings that formed the foundation of the buildings, surrounding walkways, and roller coaster are still intact. The exact locations of the pavilion and wings are easy to locate with historic aerial photography. To the east of the pavilion are the remains of what appears to be a wading pool with stairs. Today the water level of the Great Salt Lake is significantly lower than it was during the time of Saltair I and II, and thus the shore is away from the archaeological site leaving the area relatively dry, though after precipitation the ground around the grade and pavilion is often muddy and slick.

Assigning features to Saltair is difficult due to both the destruction of buildings and platforms and due to the fluid nature of Saltair throughout its history. For the purpose of

this thesis, features have been assigned based on the pilings that remain and on the 1911 Sanborn which has been georeferenced to the site. This Sanborn is utilized as the mean date of the artifacts is 1913 and this Sanborn is likely the closest representation of the features that existed at the time the artifacts were utilized. These features are used to differentiate the areas where the artifacts are found, but it is important to note that the features are not perfect, especially since an excavation of Saltair has not been conducted. In the following description of features note that only pilings remain of buildings unless otherwise noted and the layout of the features around the pavilion are displayed figure 4.1.



**Figure 4.1:** Map of Saltair’s features around the pavilion in relation to documented bottles

Feature 1 is the pavilion. Feature 2 is the south wing, which was used early on by bathers to access the water and contained changing rooms but was converted to a restaurant and beer hall by 1911 (Sanborn 1911). Feature 3 is the north wing, which held changing rooms and was used by bathers to access the water. Feature 4 changed drastically throughout its history at Saltair. Today it contains the foundations and remains of stairs from the shallow plunge of Saltair II. However, in the 1911 Sanborn this area contained a skating rink, an attraction called “Pilgrims Progress”, and what appears to be a small roller coaster, and in the 1898



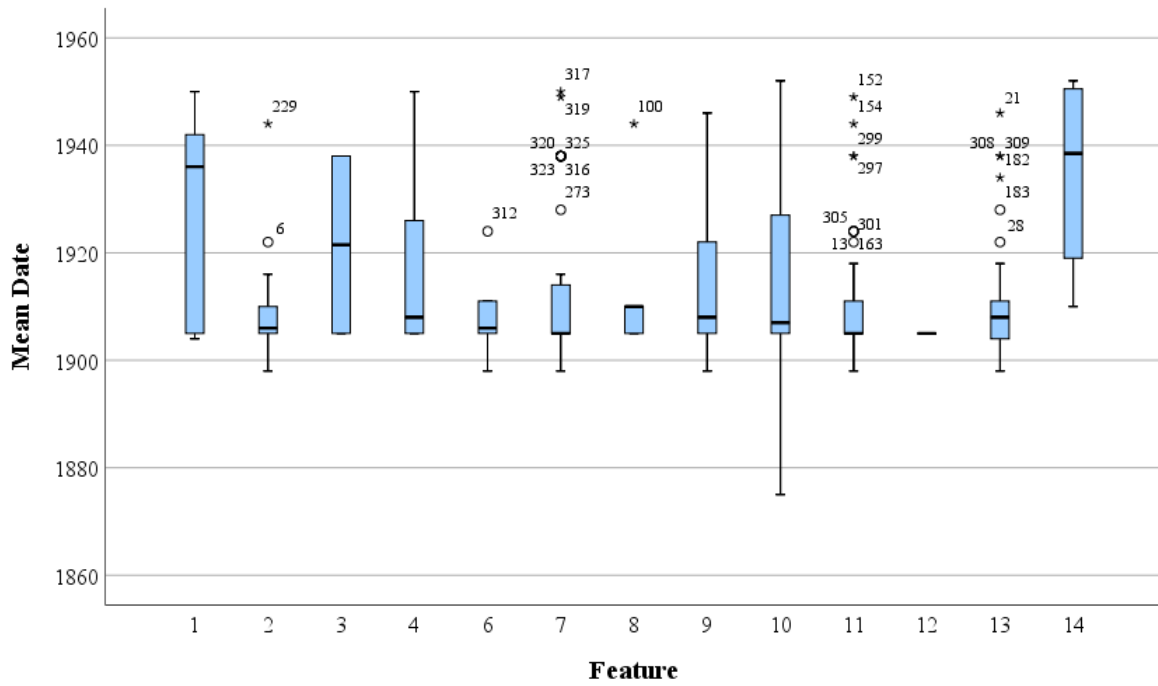
Sanborn this area only contained a wharf. Feature 5 is an electric pump, of which a brick foundation exists today. Feature 6 is the “Giant Racer” roller coaster which was constructed in 1919 (*Salt Lake Tribune*) and was destroyed by wind in 1957 (McCormick and McCormick 1985). Feature 7 is an area that has a high density of artifacts and has been heavily looted and may either be a dump or an area where items accumulated due to movement by water. Feature 8 and 9 are both the bathing area behind the pavilion, which has been split in half due to the large area it covers, the northern half being feature 8 and southern half being feature 9. Feature 10 and 11 consist of the platform and attractions in front of the pavilion, and has also been split in half, the northern half of which is feature 10 and the southern half is feature 11. Feature 12 is the entrance area of the resort. Feature 13 is the area around the back of the restaurant and Hippodrome, and which may have been used for bathing prior to the restaurant. Feature 14 is a bathing area north of the front attractions. Feature 30 is the dump at the beginning of the railroad spur leading to Saltair, which has been assigned an arbitrary number that emphasizes its distance from the rest of the features and will give space for assigning more features in the technical site report. Feature 30 is displayed in figure 4.2. 42SL306 is the causeway which once elevated the railroad and road to Saltair, which has a separate Smithsonian Trinomial due to its linear nature. The number of bottles found within each feature is displayed in table 4.1 and the mean date distribution is displayed in figure 4.3.



**Figure 4.2:** Map of Saltair's features

Feature	Name	Beer	Soda	Wine	Liquor	Total
1	Pavilion	7	11	0	6	24
2	South wing and restaurant	9	24	1	2	36
3	North wing	1	1	0	1	3
4	Shallow plunge	3	10	0	0	13
6	Roller coaster	2	2	0	2	6
7	Potential dump	8	37	0	5	50
8	Rear bathing north	0	2	0	4	6
9	Rear bathing area south	12	27	2	7	48
10	Front attractions North	7	32	1	8	48
11	Front attractions South	8	41	0	4	53
12	Entrance	0	1	0	0	1
13	Rear Restaurant	14	19	1	4	38
14	Bathing north	4	2	0	0	6
	Total	74	210	5	43	332

**Table 4.1:** Number of bottles within each feature



**Figure 4.3:** Chart displaying the range of mean dates of each feature

### 4.3 Field Methods

This research is based on surface surveys of Saltair I and II (42SL816). The first survey was conducted on November 22 and 25 of 2019, and the field crew consisted of Chris Merritt, Elizabeth Hora Cook, Whitney Seal, Nate Thomas, Anali Rappleye, and myself. The second survey was conducted on March 17, 22, 23, and 27 and the field crew consisted of Whitney Seal, Skylar Schulzke, Chris Merritt and myself. The survey transects were spaced approximately two meters apart but were broadened in the restaurant area due to both the high density of artifacts, the lack of time, and a number of the field crew diminishing due to outside circumstances. All diagnostic beverage bottles or fragments that were visible on the surface of the pavilion area and the surrounding bathing areas were recorded (with the exception of modern bottles). Diagnostic features used in identification were bottle shape and size, color, embossing, maker's marks, and indicators of diagnostic manufacturing processes (such as turn-molding). Bottle fragments that were difficult to determine in field were documented and thoroughly photographed to attempt identification during data analysis. A sample of bottle fragments was recorded in the Saltair dump near the road using simple random sampling and 2-meter diameter circular units, illustrated in figure 4.4. A Trimble Geo 7X was used to document the location of each artifact; a photo taken of each artifact; and the glass color, bottle part, bottle shape, embossing, and any other diagnostic features were documented in field notebooks. In addition to the 2019 and 2020 surveys, data is used from surveys conducted on March 9, March 30, and August 29 of 2018. After data collection the beverage type and brand were determined based on the recorded data and by using a variety of reference documentation. Each line of data was cross-checked with corresponding photograph to ensure that no errors were made during data collection. While alcohol is the focus of the research, soda bottles and mineral water bottles were also recorded to contrast the number and spatial distribution of soda and alcohol. Any bottles found to originally contain something other than a beverage have been omitted from this data but will be retained



for the technical site report. At the time of survey, the State of Utah had no repository for historical artifacts, and no artifacts were collected.



**Figure 4.4:** Map of sample units at feature 30 (dump)

Saltair is heavily looted by bottle hunters which presents several issues. The first issue is that many of the artifacts have been moved an estimated 1-3 meters during illegal digging, and as the surface is heavily pitted it is difficult to determine exactly where many of these bottles were prior to illegal excavation. However, the bottle fragments likely were not moved

far from their original location as they were discarded at the site of excavation. The second issue is that whole bottles are not common on the surface as they would have been carried off by collectors. The third issue is that many of the bottle fragments that are on the surface are there because of the looters' pits. This means that there are potentially bottles under the surface that have not been disturbed, and this sample only gives an idea of the spatial distribution of bottles in areas that have been dug up by looters. Fortunately bottle collectors do not seem interested in broken bottles, which provide archaeological data even if they have lost their aesthetic value. Additionally, since many of the soda bottles are the local brands Red Seal Brand and Denhalter, there are a few styles and embossed motifs that can easily be identified from small fragments. The data recovered from this survey is listed in table 6.1 of appendix A.

#### 4.4 Bottle Identification and Terminology

Multiple sources are used to ensure accurate identification, and primary sources are used where at all possible. Terminology is primarily taken from the Utah Archaeology Site Form Manual (Interagency Heritage Resources Work Group 2018) which is the primary resource for archaeology sites recorded in Utah as it sets the guidelines for archaeological site forms submitted to UT-SHPO. *Baffle Marks and Pontil Scars: A Reader on Historic Bottle Identification* (Schultz, Allen, Lindsey, and Schulz 2016) is a publication from the Society for Historical Archaeology and is the main source for identifying and dating bottles in this project. Supplementary sources include the "Historic Glass Bottle Identification & Information Website" (Lindsey 2020) from the Society for Historical Archaeology and the Bureau of Land Management, and *The Parks Canada Glass Glossary* (Jones and Sullivan 1989). Due to the presence of liquor bottles in a variety of colors, aqua American Bottling Co. beer bottles, prescription bottles, food bottles, and a variety of glass artifacts, color alone was not considered adequate to identify the original purpose of a glass fragment. Color was used in conjunction with other bottle features, such as size and finish, to determine the type

of beverage a bottle originally contained. Two local companies are outlined below, as the research for them is scant and none of the above reference materials have information on them likely due to their relevance to a small area.

*Red Seal Brand (Salt Lake City Water Co.)*

The Red Seal Brand is an interesting find, as it is the most prevalent bottle brand found at Saltair representing 31.6% of the sample and 6.8% of bottles at feature 30 (dump) yet has only been reported on eight archaeological sites in Utah prior to the Saltair survey in a search of UDSH digital site records. Five of these sites are also in Salt Lake County, one is part of the Lagoon amusement park in Davis county, and two in Juab county (table 4.2).

Site No.	Site Type	Site Date Range	Bottles	Citation
42DV93	Amusement park	1911-1960s	6	Seddon 2004
42JB1616	Trash dump	1890s-1930	1	Self et. al 2008
42JB1898	Mining and residential trash dump	1880s-1940s	2	Yentsch and George 2015
42SL309	Residential and commercial dump	1930-1950	2	Seddon 2001
42SL327	Residential and commercial dump	1900-1930	5	Seddon 2001
42SL355	Domestic debris	1870-1918	4	Murray El- lis 2005
42SL703	Building foundation	1870-present	1	Southworth 2017
42SL704	Building foundation	1847-present	1	Southworth 2017

**Table 4.2:** Documentation of Red Seal Brand bottles

As the archaeological and historical records for the Red Seal Brand are scant, determining the exact date range is difficult. The Red Seal Brand mark belonged to the Salt Lake City Soda Water Company. Matthew T Seddon (2001) states that the Red Seal Brand soda

appeared after 1900 and after 1904 the company changed to branding to display “Frank Hewlett Beverage Company.” However, Seddon cites a conference paper from 2000 that appears to have not been published, and these findings cannot be verified. Additionally, this appears to conflict with historical records. Advertisements in contemporary newspapers give a different date range. The first appearance of the Red Seal Brand of the Salt Lake City Soda Water Co. is in the *Davis County Clipper* on February 28, 1896. However, this advertisement does not display what is bottled beyond the inclusion of “Soda Water” in the company name. On July 3, 1896 advertisements appeared in the *Salt Lake Tribune* for Red Seal Brand Root Beer. The last advertisement shown for the Red Seal Brand appears in the *Salt Lake Telegram* on April 8, 1914. This advertisement lists soda waters, ginger beer, and root beer as bottled products (Salt Lake City Soda Water Co. 1896a, 1896b, 1914). In the August 1, 1885 Salt Lake City directory, Henry Denhalter and Charles H Denhalter were listed as the proprietors of the Salt Lake City Soda Water Co. at 28 West and 3rd South (U.S. Directory Publishing Co.) Denhalter held a separate maker’s mark consisting of a shield crossed with the name Denhalter. Seddon states that Frank Hewlett had formed the Salt Lake Soda Water Co. in 1890 after breaking off from Denhalter and Sons, but in an 1892-1893 directory of Salt Lake City (Stenhouse & Co. 1892) the Salt Lake Soda Water Co. was still under the proprietorship of Denhalter & Sons, and Frank Hewlett owned the Hewlett Bros Soda Water Co.





Figure 4.5: Red Seal Brand bottle 1

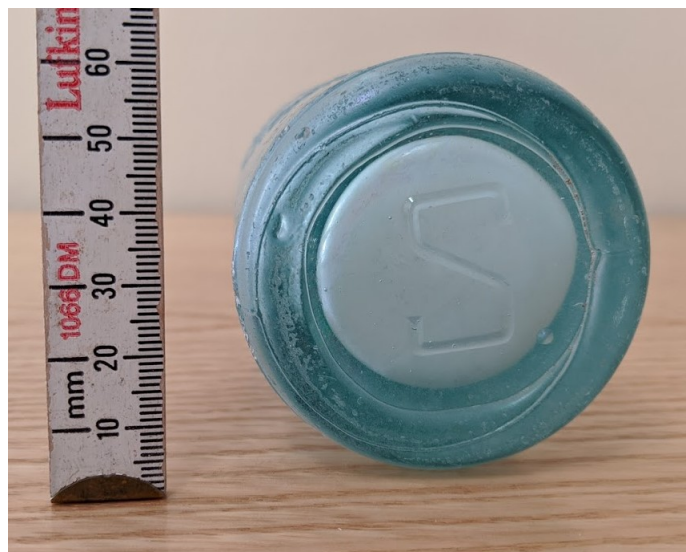


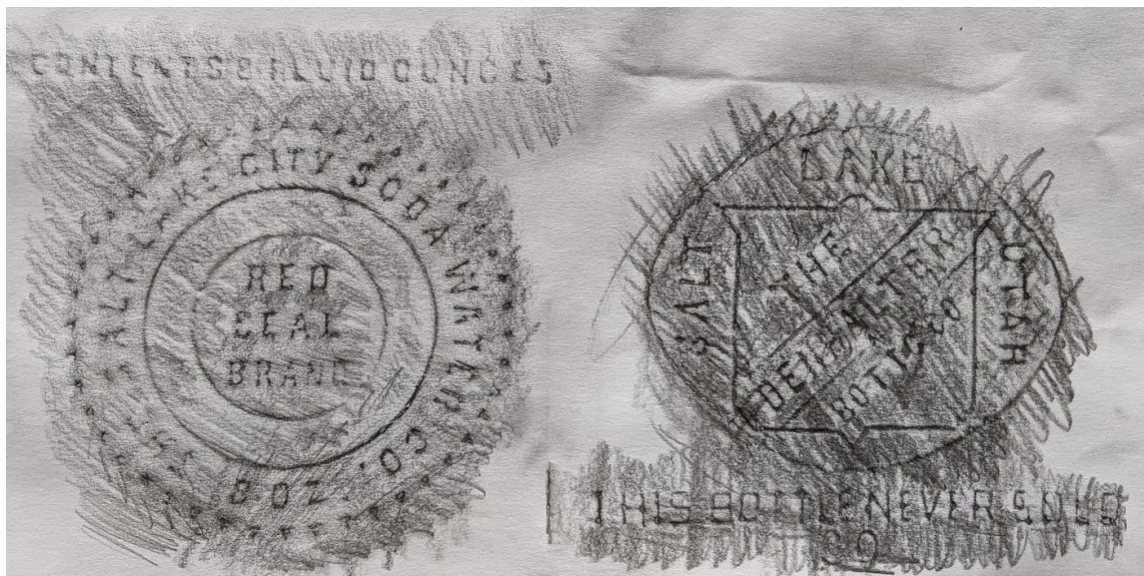
Figure 4.6: Red Seal Brand bottle 1 base



**Figure 4.7:** Red Seal Brand bottle 2



**Figure 4.8:** Red Seal Brand bottle 2 base



**Figure 4.9:** Rubbings of the logos on the Red Seal Brand and Denhalter bottles





**Figure 4.10:** Red Seal Brand bottle with “Perfectly Pure” label



**Figure 4.11:** Red Seal Brand bottle base with “Perfectly Pure” logo on the body

The two bottles pictured upright in figures 4.5 and 4.7 are representative of the types of Red Seal Brand bottles that are at Saltair. There are two variations of bases, pictured in figures 4.6 and 4.8. A rubbing of the embossing is pictured on the left in figure 4.9. The logo with “Red Seal Brand” in the center is the most common, though there are a few instances of the words “Perfectly Pure” in the center of the logo as pictured in figure 4.10. The base of another bottle with an “S” base resembling that of bottle 2 in figure 4.8 and which also has the “Perfectly Pure” logo on the body is pictured in figure 4.11.

*Denhalter Bottling Co.*



Figure 4.12: Denhalter bottle





**Figure 4.13:** Denhalter bottle base

Denhalter bottles are also common at Saltair, representing 3.6% of the sample and 9.1% of feature 30 (dump), but as with Red Seal Brand, the Denhalter Bottling Company has not been adequately researched. The company was founded as Denhalter Bottling Works in 1870 by German immigrant Henry C. Denhalter in Salt Lake City, Utah, the company changed its name to the Denhalter Bottling Company by 1897 and became incorporated in 1907 (The Press Club of Salt Lake 1914, State of Utah 1899). Denhalter Bottling Co. started out with bottling soda water, and by 1907 the company was bottling syrups, ciders, ginger ale, and root beer. The company closed by 1947 (Seddon 2001). According to other archaeological reports of sites containing Denhalter bottles, the maker's mark "H. Denhalter & Sons" was used from 1885-1893, a separate maker's mark that also reads "H. Denhalter & Sons" was used from 1893-1903, and "Trade Mark Denhalter" was used from 1910-1947. However, these reports do not show what the maker's marks look like, nor do they account from the gap between 1903-1910 (Seddon et al. 2001, Seddon 2001). Given the wide range of dates for the archaeological sites Denhalter bottles have been discovered in, it is not possible

to narrow down the exact dates each mark was used (table 4.3).

Site No.	Site Type	Date Range	Count	Citation
42BE2018	Section station	1910-1950	1	Seddon et. al. 2001
42BE2561	Trash scatter	1935-1970s	1	Montgomery 2005
42DV93	Amusement park	1911-1960s	6	Seddon 2004
42DV123	Trash scatter	1890-1940s	2	Southworth 2007
42JB842	Railroad Camp/Station	1878-1890	1	Dosh 1999
42JB1132	Artifact scatter	1908-1950	1	Gourley 2001
42JB1899	Artifact scatter	1910-1940s	1	Yentsch and George 2015a
42MD1584	Section station	1875-1962	1	Seddon et. al. 2001
42SL309	Artifact Deposit	1930-1950	12	Seddon 2001
42SL327	Artifact Deposit	1900-1930	1	Seddon 2001
42SL327	Artifact Deposit	1900-1930	3	Seddon 2001
42TO738	CCC Camp	1920-1930	1	Karpinski 2007
42TO4986	Ranching artifact scatter	1890-1930	1	Montcalm 2011
42TO6281	Artifact scatter	1910-1940s	1	Yentsch and George 2015b
42TO6524	Artifact scatter	1900-1960	1	Seymour 2016

**Table 4.3:** Documentation of Denhalter bottles

In 1915 Denhalter announced that they took ownership of the marks “Denhalter Bottling Co.”, “Denhalter”, and “D.B. Co. (*Salt Lake Telegram* 1915:10).” One bottle fragment was found at Saltair with panels resembling the classic Coca-Cola bottle panels, though lacking the hobble-skirt shape. A full bottle with similar panels was discovered at 42TO4986 and does not appear to be related to Coca-Cola, as this bottle lacks any reference to Coca-Cola (Montcalm 2011). At 42SL704 a Salt Lake City Denhalter bottle was discovered with the 1929-1960 Owens Illinois trademark, indicating a shift in the manufacture of Denhalter bottles between 1929 and 1947 (Southworth 2017).



A Denhalter bottle is shown in figure 4.12 and its base in figure 4.13. The shield logo is visible on the body, though the logo on the base is difficult to make out in the image as it was weathered and the patina in the interior of the bottle further obscures it. A rubbing of the embossing on the body of the bottle is pictured on the right in figure 4.9.

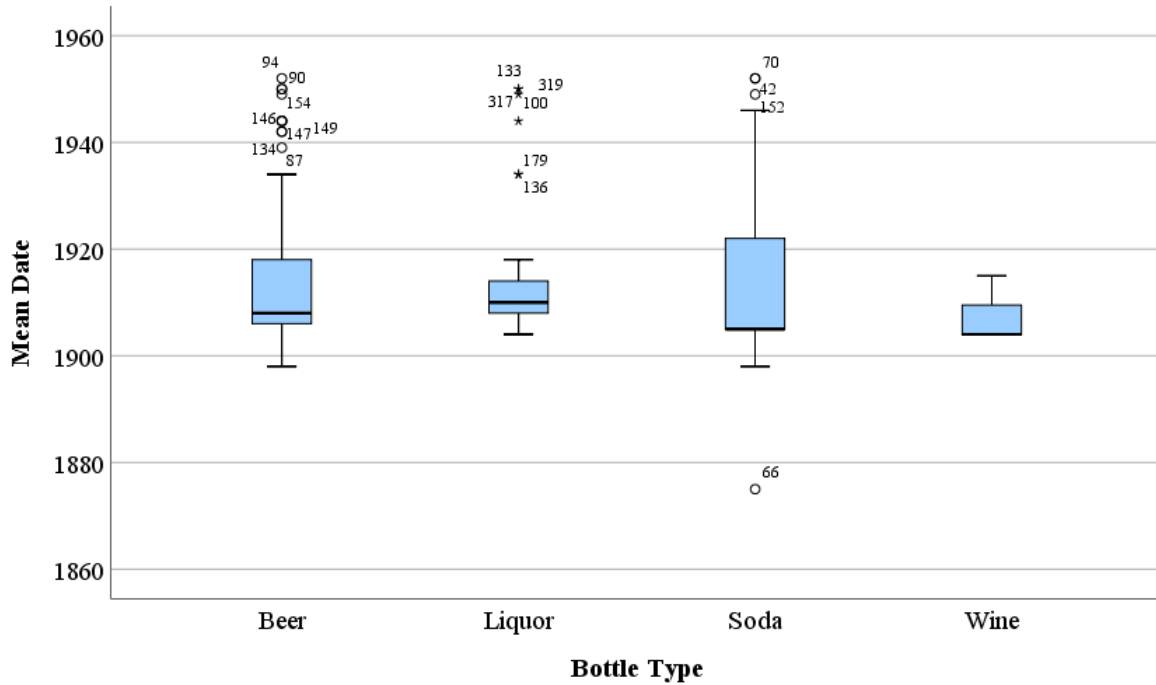
Contemporary newspapers also link these brands to Saltair. One of the prizes included in contests at “Home Industry Day” at Saltair on July 12, 1894 was a case of Denhalter & Son soda water (*The Salt Lake Herald* 1894:12). Both Denhalter and Salt Lake Soda Water Co. cases were given at “Real Estate Day” on June 28, 1906 (*Inter-Mountain Republican* 1906:15).

## 4.5 Data Summary

A total of 332 bottles were documented in the area around the pavilion. An overview of the total number of bottles and the mean and median dates is found in table 4.4 and a chart of the date distributions is found in 4.14. The bottles are separated into four categories: beer, liquor, soda, and wine. Generally, the exact contents of the bottles could not be determined, so this thesis does not account for the different types of beer, liquor, soda, and wine that may have been imbibed at Saltair. Soda here may refer to soda, soda water (also known as sparkling water), or mineral water. Bottlers such as the Salt Lake City Soda Water Co. bottled all the above and it cannot be determined if they had different bottles for different types of beverages.

Type	Total	%	Mean Date	Median Date
Beer	75	22.5%	1915.1	1907.5
Soda	209	63.0%	1903.7	1905
Liquor	43	13.0%	1913.6	1910
Wine	5	1.5%	1907.7	1904
Total	332	100.%	1913.7	1906.5

**Table 4.4:** Bottle totals



**Figure 4.14:** Mean date distribution of the different bottle types

### *Brands*

Due to the fragmentation of the bottles discovered, and the lack of paper labels, brands could only be determined if the bottles were embossed with the label or if the shape of the bottle was specific to the brand, as is the case with hobble skirt Coca-Cola bottles. In table 4.5 it is clear that soda bottles had the most identifiable branding, as most of the discovered brands at Saltair are Red Seal Brand, Coca-Cola, and Denhalter. The Read Bros. bottle is likely grape juice and has been lumped under soda as it is not alcoholic. Garrett & Co. was a wine company that created intricately embossed bottles.

Brand	Count	%
Coca-Cola	33	9.9%
Denhalter	12	3.6%
Garrett & Co.	1	0.3%
Read Bros. LTD	1	0.3%
Red Seal Brand	105	31.6%
Unknown	180	54.2%
Total	332	100.0%

**Table 4.5:** Brands of bottles at Saltair*Manufacturers*

Manufacturers here may refer to either the company that manufactured the bottles or the bottler who filled and distributed the bottles, or both. These were easier to identify than brands as bottle bases made up a large portion of the data and because the maker's mark is typically embossed on bottles. The brands listed in table 4.5 were of known manufacture. As can be seen in table 4.6, a large portion of bottles were of either local manufacture or manufactured by major bottlers in the United States.

Manufacturer	Beer	Liquor	Soda	Wine	Total
Adolphus Busch Glass Mfg. Co.	1	0	0	0	1
American Bottle Co.	26	1	9	0	36
Ball Brothers	1	0	0	0	1
Birrell Bottling Company	0	0	1	0	1
Coca-Cola	0	0	32	0	32
Denhalter	0	0	12	0	12
Garrett & Co.	0	0	0	1	1
Hart Glass Mfg. Co.	1	0	0	0	1
Knox Glass Bottle Co.	1	0	0	0	1
Northern Glass Works	11	0	8	0	19
Owen's Illinois	7	9	11	0	27
Read Bros. LTD	1	0	0	0	1
Reed & Co.	1	0	2	0	3
Salt Lake City Soda Water Co.	0	0	105	0	105
Unknown	24	33	28	4	89
Western Glass Mfg. Co.	1	0	1	0	2
Total	75	43	209	5	332

**Table 4.6:** Count of bottles by type and manufacturer

*Feature 30 (dump)*

The totals for feature 30 are displayed in table 4.7. The mean date of this distribution is 1908, which is lower than the mean date of 1913 of the bottles of the pavilion. Brands were more difficult to determine at feature 30, as illustrated in table 4.8. 81.8% of the brands could not be determined. Fortunately, 32 of these bottles were sun-colored amethyst (SCA) and therefore can at least be dated to 1880-1917 (Lindsay 2020). For this thesis the date range was trimmed to 1893-1917. This represents 72.7% of the sample. In contrast, 72 of the 332 artifacts around the pavilion were SCA, which represents only 21.7% of the sample. The full list of bottles recorded at feature 30 are listed in table 6.2 of appendix A.

Type	Total	%	Mean Date	Median Date
Beer	3	6.8%	N/A	N/A
Liquor	8	18.2%	1905	1905
Soda	33	75.0%	1909.1	1906.5
Wine	0	0%	N/A	N/A
Total	44	100%	1908.2	1905

**Table 4.7:** Distribution of bottles and dates of feature 30 (dump)

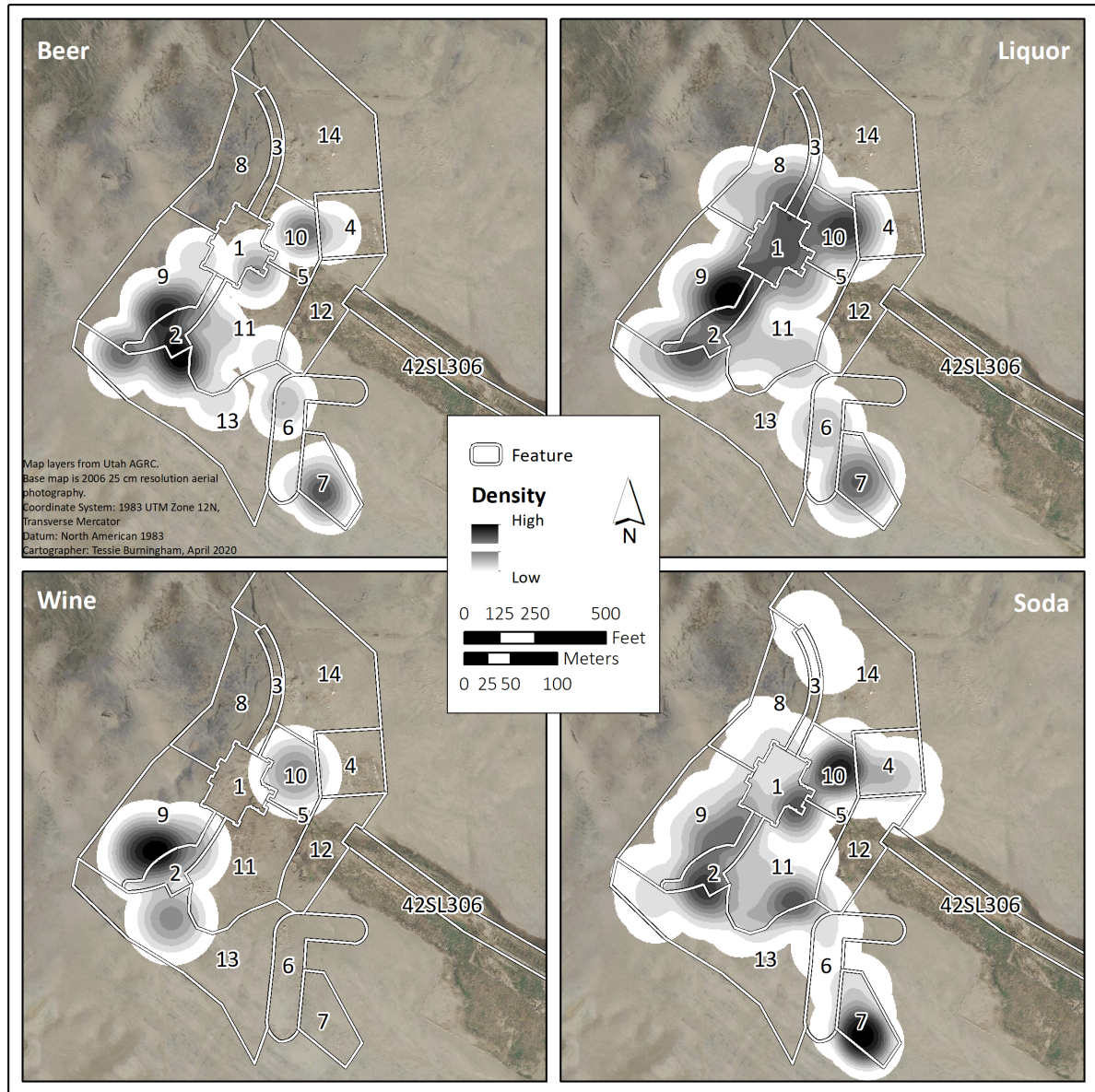
Brand	Total	%
Denhalter	4	9.1%
Salt Lake City Soda Water Co.	3	6.8%
Streator Bottle & Glass Co	1	2.3%
Unknown	36	81.8%

**Table 4.8:** Bottle manufacturers of feature 30 (dump)

## 4.6 Spatial and Statistical Analysis

Spatial analysis methods used by Justin Eichelberger (2018) were applied to the spatial distribution at Saltair. Eichelberger’s research focused on alcohol consumption as an illicit activity at Fort Yamhill in Oregon and compared deviant drinking behavior with conformist tobacco smoking. Though alcohol consumption was not necessarily an illicit activity at

Saltair, the distribution of alcohol is compared with that at Fort Yamhill to determine if it was consumed away from the public eye. At Fort Yamhill there was a clear distinction between alcohol related items being discarded mainly in closed spaces while tobacco related items were mainly disposed of out in the open. To illustrate this activity Eichelberger used comparisons of kernel density distributions for tobacco and alcohol products which revealed a stark difference in where the different categories of items were disposed. Kernel density in Geographic Information Systems (GIS) is a tool for displaying the density of spatial features. For this thesis, kernel density distributions of bottles dating to Saltair I were created to give an idea of where different beverage bottles were disposed. The results of this kernel density distribution test are in figure 4.15.



**Figure 4.15:** Kernel density of bottles at Saltair dating to Saltair I

The kernel density analysis is necessary to display the data from this research because it gives an overview of the spatial distribution of the different bottles types at Saltair that is independent of the layout of the features used for this thesis. Further, it goes beyond a simple point map by emphasizing areas of high density, which can easily be obscured when points are close together in space. A simple overview of the density of artifacts per feature risks obscuring the nuances of the spatial distribution. A dense area of artifacts may be clipped by a narrow feature such as the piers, or may be lost in a large features such as the

bathing areas. As illustrated in figure 4.15, some artifact densities are clipped by smaller features or inhabit a small area of large features. Without the kernel density analysis, these nuances would not be apparent. An issue with kernel density analysis is that it risks visually misrepresenting the data since the edges of dense areas are visually smoothed out (Baxter and Cool, 2010). As a result, it is important to combine the kernel density analysis with other analyses of the data in order to ensure the data is properly represented. Thus, the kernel density maps are a useful visual aid for analyzing the data but do not stand alone in data interpretation.

Eichelberger followed his analysis with a Pearson's chi-squared test to determine if the discrepancy was significant, and the same procedure was used for this thesis. The hypothesis of this test is that there is a relationship between the type of beverages at Saltair and their spatial distribution. To complete this test, the data from table 4.1 was run through a Pearson's chi-squared test, giving a p-value of 0.031. Using an alpha of 0.05, we can reject the null hypothesis of no relation between the type of beverage and its location. This analysis will be interpreted in the next chapter.

## CHAPTER 5

### Interpretation

#### 5.1 Introduction

The spatial distribution of beverage bottles at Saltair provide an idea into where patrons were discarding bottles and potentially where they were consuming these beverages. This gives insight into how the LDS church was handling the alcohol question at the resort, and how this impacted the patrons' experience. As the historic record mainly discusses whether or not alcohol was sold and not how it was sold or consumed at the resort, the archaeological record helps provide a more nuanced framework for how alcohol was handled at Saltair.

#### 5.2 Bottle Density

The results of the kernel analysis of the different types of bottles at Saltair is pictured in figure 4.15. Beer is much more prevalent at the restaurant (feature 2) and the adjacent bathing area (feature 9), while soda has a more even distribution with smaller concentrations at the potential dump (feature 7) and and the northern portion of the front attractions (feature 10). Liquor, on the other hand, is denser where the southern pier (feature 2) meets the pavilion (feature 1), which is further northeast than the locus for beer that is concentrated around the restaurant (feature 2), and liquor also has a strong locus at the northern portion of the front attractions (feature 10). This visual analysis is supported by the Pearson's chi-squared test, which revealed that there is a significant difference in the spatial distribution of the different types of bottles at Saltair. This section discusses the spatial distribution and bottle density, the temporal distribution, and how this relates to the LDS ownership is discussed in section 5.4.

An issue that is apparent in both the kernel analysis and the distribution of artifacts is that there is a high concentration of artifacts underneath the pavilion, the piers, and the platform in front of the pavilion. No evidence has been found of people bathing underneath



the resort, so the presence of bottles in this area is may be due to either items falling into the water as a result of the fire, or due to shift of the artifacts' original locations as a result of movement by water. If this is a result of movement by water, it is likely that the artifacts stopped in the pilings underneath these features. The presence of artifacts underneath the structures may also be a marker of human activity, such as patrons or employees throwing bottles under the resort. In the 1911 Sanborn map there is an opening in the pier within the northern half of the front attractions (feature 10) which may account for the concentration of artifacts within that area as people likely threw items into the opening.

Another issue is that wine has a small sample size of five. It is unclear if this is a result of wine being scarce at the resort, of being discarded properly, or if surveyors of the Saltair project unintentionally bypassed wine bottle fragments due to the lack of obvious diagnostic markers. The distribution of wine is not included in this interpretation, considering the small sample size. Future work may analyze the stemware found at Saltair to collect relevant data regarding the consumption of wine.

This distribution reveals that the presence of a bar and beer hall in feature 2 helped segregate beer to this area, including the neighboring features 9 (the souther portion of the rear bathing area) and feature 13 (the area behind the restaurant). While beer is present all around the resort, it is clearly most concentrated in this area. Thirty-four of the 55 beer bottles (61.8%) dating to Saltair I are within 25 meters of the restaurant (the pier leading up to the restaurant was omitted from this calculation). Seven (12.7%) of the beer bottles dating to Saltair I were found in the probable dump, feature 7. The remaining 14 (25.5%) beer bottles were spread throughout the rest of the resort. In contrast, 11 of 31 liquor bottles (35.5%) and 55 of 193 soda bottles (28.5%) dating to Saltair I are within 25 meters of the restaurant. 3 (9.7%) of the liquor bottles and 37 (19.2%) of the soda bottles were in the dump feature. The remaining 17 (54.8%) liquor bottles and 101 (52.3%) soda bottles are found throughout the rest of the resort. There are various factors that may come into play here. First, this could mean that the management of Saltair encouraged or required patrons to

consume beer within this area. Second, bottles may have been poured into separate glasses (a variety of glassware is also found in this area) resulting in the bottles being discarded within this area. Third, this area may have been a socially acceptable space to consume beer. Additionally, beer may have been relegated to a beverage to consume with a meal, causing its consumption to primarily take place at the restaurant. The spread of beer into the surrounding water may be attributed to people tossing bottles into the water from the restaurant, or it may be attributed to people limiting their beer consumption in the water to the area surrounding the restaurant. However, the changing rooms of the southern wing (feature 2) were removed when the restaurant was built and patrons would have had to make a long trip in water that is difficult to swim in to reach the bar. Regardless of the reason, it is clear that beer was primarily consumed within the restaurant or beer hall.

Liquor has a more even spread in the density distribution than beer. While the dense locus of liquor is located near the restaurant, it rests adjacent to it in contrast to the beer locus which is centered directly on it. All of the liquor bottles found are flasks indicating that patrons were likely carrying the liquor to the resort rather than purchasing it at the bar. Only five of the 74 (6.8%) liquor bottles, of which 3 could be dated to Saltair I (9.7% of the Saltair I distribution) were located at the potential dump (feature 7). This may indicate that liquor bottles were much more likely to be disposed in the water rather than in a proper receptacle.

The distribution of soda is much more even than those of the alcoholic beverages. Its largest locus is in feature 7 (potential dump) where it represents 37 of 50 bottles (71.1%) and 37 of the total 210 soda bottles found around the pavilion area (17.6%). Additionally, at feature 30 (dump) soda represents 33 of the total 44 bottles recorded in the sample (75%). This may be an indication that it was more acceptable to dispose of soda in the proper receptacles than the other types of beverages as patrons were less likely to improperly dispose of soda bottles.

Overall, this data shows that the different beverages were relegated to certain spaces,

whether this was enforced by the establishment or by social pressure is unclear. The density map clearly delineates areas where the different types of beverages were discarded. Beer was concentrated heavily around the restaurant, though it also was also discarded throughout the resort in smaller quantities. Liquor was discarded further from the restaurant, indicating that patrons likely were not consuming it in the restaurant, but rather were consuming it while in other areas of the resort and possibly in the water. Soda, which had no moral restrictions at this time, is more heavily concentrated in areas believed to be dumps and was less concentrated around the pavilion and piers.

### 5.3 Temporal Distribution

There is an interesting trend in the date ranges at Saltair. Feature 1, the pavilion and feature 14, the northern bathing area, had mean dates in the late 1930s, much later than the mean dates of the other features (see figure 4.3). Feature 3, the north wing, also had a relatively late mean date of 1921. This indicates a shift in where patrons were discarding their bottles at Saltair, and the resort may have improved its waste disposal system. The mean dates of all other features fall within 1905-1910. This is likely largely due to the presence of the Red Seal Brand bottles of which the estimated mean date is 1905 and due to the presence of a significant number of SCA bottles. In addition, the mean dates of the different types of bottles also fall within the 1905-1910 range (see figure 4.14).

As mentioned in the previous chapter, feature 30 (the dump) dates to 1908 which is slightly earlier than the rest of the site. This likely means that this location was used early on as a dump for Saltair, and at some point the resort moved on to either dumping at another location or to utilizing municipal trash collection. The latest date range of bottles of this distribution is 1910-1917, and all bottles from feature 30 date to Saltair I. The mean dates found for the bottles at Saltair indicate that the data is a good representation of the time period during which the LDS Church owned the resort (1893-1906) and the following period when they maintained a strong influence over it (1906-1925), and therefore is a good

sample to test the purpose of this thesis.

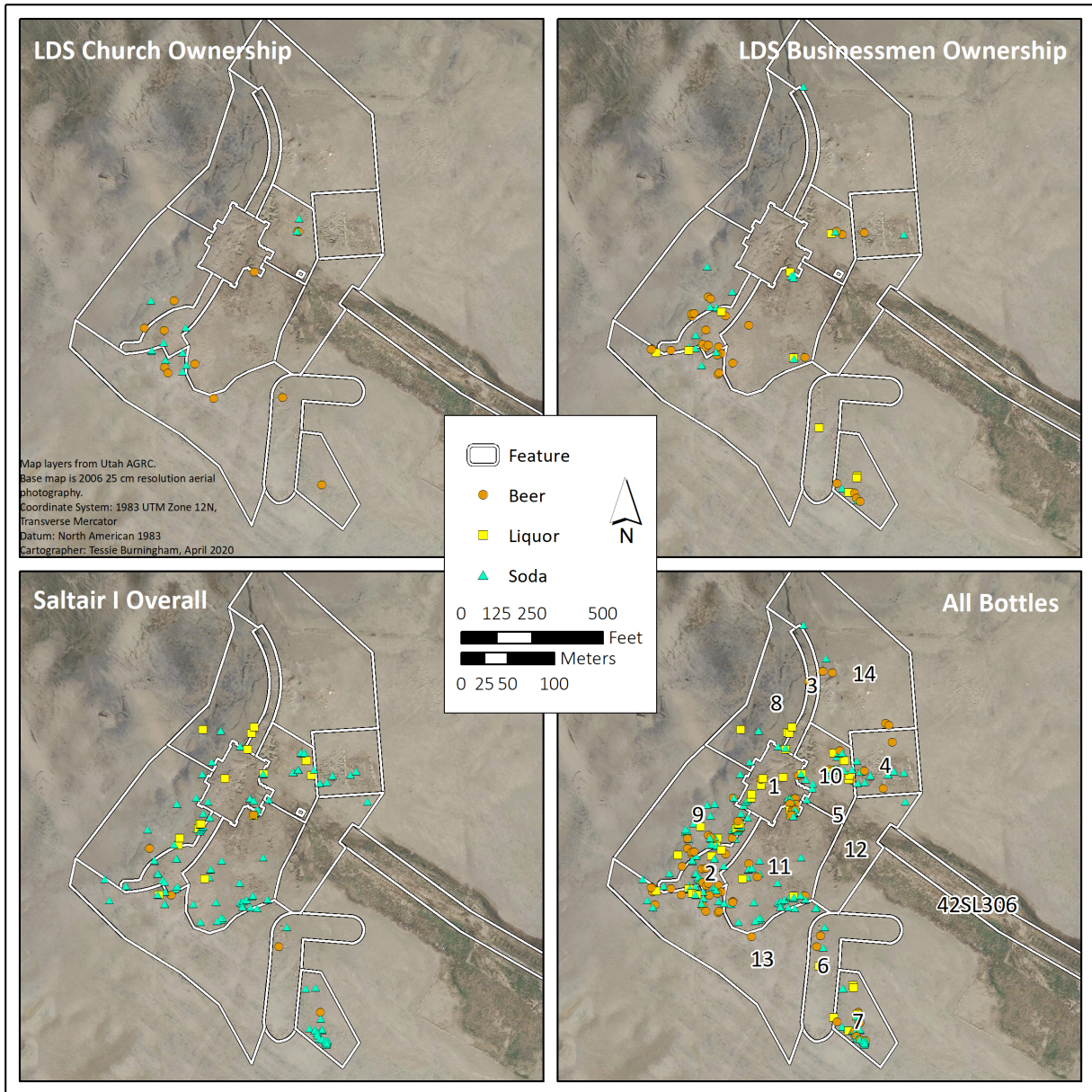
The date ranges of the artifacts were also considered for this thesis. The bottles that date to either the ownership of Saltair by the LDS Church from 1893-1906 or the ownership by LDS businessmen from 1906-1925 were analyzed to determine if any patterns could be discerned. The count of bottles within each period is listed in table 5.1. The main issue is that the date range for the LDS Church period is quite small, only 13 years, and given the often wide range of dates any given bottle could fall under it is hard to confidently date bottles to this narrow time range. Additionally, bottles could have been utilized after their manufacturing had stopped, so bottles that date to one period may have been used in a following period. Another issue that arises is that by splitting the data this way the sample sizes become quite small, but this is a hazard of documenting only artifacts that exist on the surface.

Bottle Type	Period	Count	Percent
Beer	LDS Church Ownership	12	18.2%
	LDS Businessmen Ownership	29	43.9%
	Both of the above	5	7.6%
	Unknown	9	13.6%
	Saltair I or II	11	16.7%
	Total	66	100.0%
Liquor	LDS Church Ownership	0	0.0%
	LDS Businessmen Ownership	10	22.2%
	Both of the above	19	42.2%
	Unknown	12	26.7%
	Saltair I or II	4	8.9%
	Total	45	100.0%
Soda	LDS Church Ownership	12	5.9%
	LDS Businessmen Ownership	20	9.9%
	Both of the above	122	60.1%
	Unknown	6	3.0%
	Saltair I or II	43	21.2%
	Total	203	100.0%

**Table 5.1:** The count of bottles that could be dated to the listed periods. Bottles were assigned to a single period and are not repeated in other periods in the data. Bottles dating to Saltair II have been omitted.

In general, more bottles fall within the period when Saltair was owned by LDS businessmen than the period when it was owned by the LDS Church. This is likely due to increased popularity of Saltair as the resort built improvements over time to attract more patrons. The number of bottles that could be counted in either the LDS Church period or the LDS businessmen period is quite high, which makes interpretation of time changes in alcohol consumption difficult. Figure 5.1 displays the spatial distribution of the artifacts dated to Saltair I, separated by the two periods of ownership (listed as “LDS Church Ownership” and “LDS Businessmen Ownership”), bottles that could fall under either period of ownership (listed as “Saltair I Overall”), and all bottles recorded. There is no clear pattern between the different time periods, likely due to the high number of artifacts with date ranges that are too broad to fit into one category. Only two alcohol bottles have date ranges completely within the prohibition period at Saltair (1915-1933), a liquor bottle and a beer bottle. This is a small bit of archaeological evidence that confirms the historical record (as outlined in chapter 3) that shows that individuals were bringing alcohol to Saltair during this time. Both of these bottles have date ranges that begin before national prohibition and may have been brought to the resort during the time alcohol was illegal at Saltair but not the nation.

No clear patterns emerge when separating the bottles by ownership period. Given the wide range of possible dates and the relatively small sample size of a surface survey, this data is not adequate to make clear distinctions between bottle disposal during the period of ownership by the LDS Church and the period of ownership by LDS businessmen. However, there is a much higher amount of artifacts dating to Saltair I than to Saltair II, showing that this distribution is a good representation of Saltair I and that Saltair II likely had a more effective means of collecting trash.



**Figure 5.1:** Map displaying the artifact distribution by time period

## 5.4 The Influence of the LDS Church

As discussed in chapter 3, the LDS Church put a lot of effort into limiting the consumption of alcohol at Saltair. However, the details of what was served in the bar and how the rules and regulations of the resort impacted alcohol consumption have not been found in the historic record. Given the spatial distribution of alcohol and the type of alcohol found at Saltair is

likely that the LDS Church had an impact in how people were consuming alcoholic beverages at the resort.

As the historical record (chapter 3) and the archaeological record show, Saltair's relationship with alcohol was tied to its status as a leisure resort. The LDS Church wanted to redefine what a place of leisure looks like by restricting access to alcohol and creating a space where families who wished to separate themselves from the substance could fully enjoy themselves. However, with the unprofitable dry seasons of 1902 through 1904 and the heavy presence of personal liquor flasks throughout the resort, it is clear that resorts at the turn of the century were tied to alcohol. This is mirrored in Atlantic City (Paulsson 1994) where those running places of leisure would turn a blind eye to alcohol consumption on Sundays, as this was part of what made their venture possible. Additionally, this fits with Joseph Gusfield's (2002) idea that alcohol consumption is a ritual activity that symbolizes the transition from work to play. For those visiting Saltair to relax and who were not morally opposed to consuming it, alcohol would have been an essential item in feeling that they had separated themselves from their work life. This is similar to the use of food at the Chicago's World Fair (Graff and Edwards 2018), which was not simply a source of nourishment but also an item that helped elevate the experience of relaxing at the fair. For the social life in New York alcohol was linked heavily to recreational activities, such as dancing (Peiss 1986). This sentiment was likely echoed in Saltair by those who wished to abide by the social standards of the nation. By attempting to limit alcohol at Saltair, the LDS Church was disrupting the spatial and temporal distinctions (Dietler 2006) that were set for alcohol in the social realm of the United States, and were unable to change these distinctions to fit the morals of a small segment of the population.

The concentration of beer around the restaurant (feature 2) at Saltair shows that the LDS Church was partially successful at segregating beer to this area and keeping it away from the eyes of patrons walking around the various attractions. Rather, patrons wandering Saltair largely would have been seen drinking from bottles bearing a logo of a local soda

bottler, or even from bottles with the distinct Coca-Cola logo (figure 5.2) or classic hobble skirt shape. Beer would have been the most visible of the alcoholic beverages when consumed from a bottle, as the unmistakable shape and often amber color made the contents of the bottle apparent, and it is not surprising that the LDS Church would potentially limit it to the restaurant as a way of maintaining an atmosphere of wholesomeness in other parts of the resort.

However, the twelve apostles of the LDS Church expressed discontent with the sale of beer at Saltair during their 1901 meeting about the resort. In this discussion the apostles complained about both liquor and beer being sold at the bar, and give both equal weight in morality. John Henry Smith's comments give the most insight into the status of beer and concerns about profit, as he stated that "beers used in America are intoxicating" but he also worried about the LDS Church's debt. He interpreted the Word of Wisdom as allowing virtuous LDS members to "make mild drinks of barley" and wonders if this, in combination with the LDS Church's debt, was enough reason to allow the sale of beer (Shoemaker 1983:134). Brigham Young Jr. complained that he was "so disgusted to see so much beer-guzzling at Saltair." George Teasdale mentions how the LDS Church dropped table beer (though John Henry Smith also contemplates the Word of Wisdom to possibly justify the sale of beer). These statements show that the LDS Church was not happy to sell beer, but felt compelled to do so in order to alleviate the Church's debt.

Nellie Thatcher Blair's letter to her husband (1894) also gives insight into the controversy of alcohol at Saltair, but from the point of view of the average member of the LDS Church rather than the church leaders. She stresses that she does not want him to "drink any thing strong, not even beer" when he visits Saltair, to drive home her idea that beer is considered a "strong drink" on par with liquor. This also hints that she had either witnessed or heard of the consumption of alcohol at Saltair, possibly even by her own husband. This letter shows that even in its early years Saltair was struggling to achieve the goal of becoming a wholesome resort, and that its image to the eyes of members of the LDS Church was not of



purity.



**Figure 5.2:** Early Coca-Cola bottle with the logo on the heel (1900-1917)

Judging by the distribution of liquor flasks (one example pictured in figure 5.3) drunkenness was potentially making an appearance despite the LDS Church's wishes to manage a wholesome resort. These bottles would have been easy to drink from in a place where Saltair workers could not see. Given the management's emphasis on how much of a problem beer was, and Nellie Thatcher Blair emphasizing beer when asking her husband to behave, it is plausible that these flasks were escaping the attention of the public eye. The liquor bottles have ended up all over the resort, in contrast to beer which was concentrated around the restaurant. This is an indication that patrons were discarding the bottles by convenience,

and likely in a way to not draw attention. Further, this would shed the physical evidence of their alcohol consumption from their person. It is possible that trash receptacles were placed in highly visible locations, making them a risky place to dispose of liquor when attempting to keep its consumption out of the public eye.

The LDS Church promised to close the bar by request (chapter 3.6), however no newspaper articles were found that announced closure of the bar outside of Sunday. This may mean that either Saltair did not live by this promise, or that patrons would not know prior to arriving at the resort if the bar would be open. If the latter is true it is possible that patrons got in the habit of bringing their own alcoholic beverages as a precaution. Many of these bottles could even have been brought to the resort during seasons when the bar was closed, from 1902 to 1903, and snuck past the employees checking for alcoholic beverages (discussed in chapter 3.6). Another factor may be the cost of alcohol and the economic situation of the patrons who attended the resort. Saltair was affordable for people from the working class (chapter 2.4) and working class patrons may have wished to bring their own beverages to save money on their excursion.

The LDS Church had an impact on the visibility of alcohol at Saltair giving an air of wholesomeness, but as a result patrons resorted to drinking liquor out of the public eye. This may have impacted the behavior of patrons, and those who had been consuming liquor may have been visibly or audibly drunk even though their liquor consumption was far less visible than the consumption of beer within the restaurant. This would have trickled into the atmosphere of wholesomeness, as did the presence of beer bottles at the restaurant, and likely contributed to management's despair over not being able to fund the resort without the sale of alcohol (discussed in chapter 3.6), a substance that they tried so hard to rid themselves of but found that they could not make disappear.



**Figure 5.3:** The heel of a liquor flask with "HALF PINT / FULL MEASURE" embossed on the side



## CHAPTER 6

### Conclusion

An archaeological site plagued by looting, Saltair has revealed itself as an important location for learning about the dynamics and tensions between the LDS Church and those in Utah who did not follow their religion, and between the LDS leaders and LDS members who did not abide by the moral standards of the Church. It provides a look into the past social life of Utah at a resort that was a joyful part of the lives of the people in the surrounding areas. It shows us a part of history that does not exist in historic documentation, but rather in the artifacts that were left behind. Hopefully by showing the value in the artifacts that remain at Saltair I can help bring attention to the resort and help preserve it in the face of metal detectorists and bottle hunters who threaten our ability to further study the fascinating location.

Saltair was built on the Great Salt Lake to solidify the lake's place as a destination for health and recreation, and also to bring Salt Lake City to the minds of those outside the West. In a country that had a newfound obsession with recreation, Saltair would fit in as Utah's own little haven from stress. It was an ambitious project, large and extravagant, yet too much to maintain with the funds that came in. Its existence was tumultuous, popular to locals yet plagued by bad luck that ultimately lead to its deterioration.

The LDS Church had hoped to join national trends in recreation with their own lavish resort yet found that the expectations for a resort could not be met while abiding by the moral standards the Church expected its followers to meet. The LDS Church flip flopped between selling alcohol and not selling alcohol and could not find the right equation that felt proper for their religion. Saltair was the LDS Church's experiment in creating a wholesome area for social gatherings, but by failing to fund its ventures without alcohol the LDS Church decided to back out of its project and allow others to take control.

The Utah State Historic Preservation Office (SHPO) began documenting Saltair 50 years after the fire that finally put Saltair II to rest. In the basic survey and documentation

questions arose about why an LDS centered resort contained so many alcoholic bottles, thus setting the stage for this thesis. To explore these questions, a survey focusing on beverage bottles was conducted to potentially find answers that the historic record does not tell.

Looking at the data presented in this thesis with an anthropological framework shows that the influence of the LDS Church was felt at Saltair in how alcohol was managed and consumed. The LDS Church could not fully rid themselves of the substance but rather they managed to create a pattern of behavior that may have otherwise not happened. While beer was successfully limited to the restaurant to a degree, liquor trickled into every corner and was only spatially restrained by visibility to the public eye. Flasks of liquor would have made fleeting appearances at the resort as they were pulled from pockets after a quick glance over the shoulder. This is contrasted with soda, which would have been very visible throughout Saltair. To the unwitting patron it would appear that they were surrounded by soda drinkers, when in fact individuals were sprinkled around the pavilion who were participating in a more illicit activity. Further documentation of the various resorts around the Great Salt Lake, if the remains exist today, would provide a deeper look into how the LDS Church impacted the consumption of alcohol at Saltair, and how this made Saltair different from the other resorts on the Great Salt Lake. What this thesis shows is that the attempts by the LDS Church “to make a pure resort” were futile.

## References

- Alexander, Thomas G. and James B. Allen  
 1984 *Mormons & Gentiles: A History of Salt Lake City*. Pruett Pub. Co, Boulder, Colorado.
- Arrington, Leonard J.  
 2005 *Great Basin Kingdom: An Economic History of the Latter-Day Saints, 1830-1900*. University of Illinois Press, Urbana and Chicago, Illinois.
- Ashby, LeRoy  
 2006 *With Amusement for All: A History of American Popular Culture since 1830*. The University Press of Kentucky, Lexington, Kentucky.
- Baughner-Perlin, Sherene  
 1982 Analyzing Glass Bottles for Chronology, Function, and Trade Networks. In *Archaeology of Urban America: The Search for Pattern and Process*. Roy S. Dickens, editor. Academic Press, Cambridge, Massachusetts.
- Baxter, M. J. and H. E. M. Cool  
 2010 Detecting modes in low-dimensional archaeological data. *Journal of Archaeological Science* 37:2379-2385.
- Blair, Nellie Thatcher  
 1894 Letters of Nellie Thatcher Blair to George E. Blair, 1890-1899. Manuscript, J. Willard Marriott Digital Library, The University of Utah, Salt Lake City, Utah. <<https://collections.lib.utah.edu/ark:/87278/s6sx6hqv/1008286>> Accessed March 11, 2020.
- Cherrington, Ernest H.  
 1921 *Anti-Saloon League Yearbook: An Encyclopedia of Facts and Figures Dealing With the Liquor Traffic and the Temperance Reform*. The Anti-Saloon League of America, The American Issue Press, Westerville, Ohio.
- Coleman, Quint R., and Dale R. Gourley  
 1999 A Cultural Resource Inventory of the Level (3) Communications Fiber Optic Cable Located Between Salt Lake City, Salt Lake County, and Lynndyl Millard County, Utah (U98BS0768). Archaeological report by Baseline Data Inc.
- The Church of Jesus Christ of Latter-Day Saints  
 1830 *The Book of Mormon: Another Testament of Jesus Christ*. The Church of Jesus Christ of Latter-Day Saints, Palmyra, New York. Reprinted 2013 by The Church of Jesus Christ of Latter-Day Saints, Salt Lake City, Utah. <<https://www.churchofjesuschrist.org/study/scriptures/bofm/title-page?lang=eng> >, Accessed 21 March 2020.  
 1833 Section 89, Doctrine and Covenants. The Church of Jesus Christ of Latter-Day Saints <<https://www.churchofjesuschrist.org/study/scriptures/dc-testament/dc/89?lang=eng> >, Accessed 4 December 2019.

Cromar, Todd

- 2016 Archaeologists discover proof of wetlands, ancient life on the Utah Test and Training Range. *75th Air Base Wing Public Affairs*, 22 July. Hill Air Force Base, Utah. <<https://www.hill.af.mil/News/Article-Display/Article/853362/archaeologists-discover-proof-of-wetlands-ancient-life-on-the-utah-test-and-tra/>> Accessed January 2020.

Coy, Melissa

- 2020 "An Enchanted Place": The First Saltair Pavilion, 1893-1925. Utah Division of State History, Utah Department of Heritage and Arts, Salt Lake City, Utah. <<https://utahstatehistory.omeka.net/exhibits/show/saltair/introduction>> Accessed March 2020.

Dao, Dan Q.

- 2018 How Utah's Old-School Liquor Laws Forced Bartenders to Get Creative. *Vice* 23 August. Brooklyn, New York. <[https://www.vice.com/en\\_us/article/paw457/utah-cocktails](https://www.vice.com/en_us/article/paw457/utah-cocktails)> Accessed January 2020.

Deseret Evening News

- 1893 Great is Saltair! *Deseret Evening News* 9 June, XXVI(161):4. Salt Lake City, Utah.

Deseret News

- 1850 Ordinance Concerning Revenue. *Deseret News* 5 July, 1(4):7. Salt Lake City, Utah.  
 1851 An Ordinance. *Deseret News* 28 June, 1(36):6. Salt Lake City, Utah.  
 1853 An Ordinance. *Deseret News* 10 July, 3(16):3. Salt Lake City, Utah.  
 1866 An Ordinance. *Deseret News* 10 May, XV(23):7. Salt Lake City, Utah.

Deseret Weekly

- 1894 With the Old Folks. *Deseret Weekly* 21 July, XLIX(2):2. Salt Lake City, Utah.

Dietler, Michael

- 2006 Alcohol: Anthropological/Archaeological Perspectives. *Annual Review of Anthropology* 35: 229-249.

Dietler, Michael

- 2020 Alcohol as Embodied Material Culture: Anthropological Reflections on the Deep Entanglement of Humans and Alcohol. In *Alcohol and Humans: A Long Social Affair*. Kimberley J. Hockings and Robin Dunbar, editor. Oxford University Press. DOI: 10.1093/oso/9780198842460.003.0008

Dosh, Deborah

- 1999 Old Railroad Reseeding (U99KI0560). Report to the Bureau of Land Management by Kinlani Archaeology, Ltd., Flagstaff, Arizona.

Douglas, Mary

- 2002 A distinctive anthropological perspective. In *Constructive Drinking* editor Mary Douglas. Pp. 3-15. Routledge.

Duncan, Clifford

- 2000 The Northern Utes of Utah. In *A History of Utah's American Indians* editor Forrest S. Cuch. pp. 167-224. Utah State History University Press, Logan, Utah.

Eichelberger, Justin E.

- 2018 US Army Regulations and Spatial Tactics: The Archaeology of Indulgence Consumption at Fort Yamhill, Oregon, United States, 1856-66. In *Archaeologies of Rules and Regulations: Between Text and Practice*, Barbara Hausmair, editor, location 3069-3428. Berghahn, New York, NY. Kindle edition.

Escalante, Silvestre Velez de, and Francisco Atanasio Dominguez

- 1792 *The Dominguez-Escalante Journal: Their Expedition Through Colorado, Utah, Arizona, and New Mexico in 1776*. University of Utah Press, Salt Lake City, Utah. Edited 1995 by Ted J. Warner and translated to English by Fray Angelico Chavez.

Foster, Gaines M.

- 2002 *Moral Reconstruction: Christian Lobbyists and the Federal Legislation of Morality, 1865-1920*. University of North Carolina Press, Chapel Hill.

Gadd, John D. C.

- 1968 Saltair, Great Salt Lake's Most Famous Resort. *Utah Historical Quarterly* 36(3): 198-221.

Gourley, Dale R.

- 2001 A Cultural and Paleontological Resources Inventory of the Proposed Eureka to Dugway Fiber-optic Corridor, Juab and Tooele Counties, Utah. Report to Mid-State Consultants, Bureau of Land Management, and Utah Department of Transportation, by Baseline Data Inc.

Graff, Rebecca S., and Megan E. Edwards

- 2018 Fair-as-Foodway: Culinary Worlds and Modernizing Tastes at Chicago's 1893 World's Columbian Exposition. *Historical Archaeology* 52(2). June:420-437.

Grand Valley Times

- 1911 Local Option Bill Passed. *Grand Valley Times* 24 March, 30(19):1. Moab, Utah.

Grayson, Donald K.

- 2011 *The Great Basin: A Natural Prehistory*. University of California Press, Berkeley and Los Angeles, California.

The Great Saltair

- 2009 "Saltair." The Great Saltair. <thesaltair.com> Accessed March 14, 2020.

Gusfield, Joseph R.

- 2002 Passage to play: rituals of drinking time in American Society. In *Constructive Drinking* editor Mary Douglas. Pp. 3-15. Routledge.

Haughwout, Sarah P., Robin A. LaVallee, and I-Jen P. Castle

- 2015 *Apparent Per Capita Alcohol Consumption: National, State, and Regional Trends, 1977-2013*. National Institute on Alcohol Abuse and Alcoholism, Surveillance Report #102. Arlington, Virginia.

Hooker, Richard J.

- 1981 *Food and Drink in America: A History*. The Bobbs-Merrill Company, Inc. Indianapolis /New York.



Hunt, Kristin

- 2014 Deciphering Utah's insanely strict and very weird liquor laws. *Thrillist* 16 January. New York, NY. <<https://www.thrillist.com/drink/nation/utah-s-weird-liquor-laws-3-2-beer-zion-curtains-no-happy-hours-thrillist-nation>> Accessed January 2020.

Interagency Heritage Resources Work Group (IHRWG)

- 2018 Utah Archaeology Site Form Manual. Interagency Heritage Resources Work Group, Salt Lake City, Utah.

Inter-Mountain Republican

- 1906 Complete List of Prizes to be Given Away by the Salt Lake Real Estate Association, Real Estate Day, Saltair, June 28. *Inter-Mountain Republican* 24 June, 11(44):15. Salt Lake City, Utah.

Jones, Olive and Catherine Sullivan

- 1989 *The Parks Canada Glass Glossary for the description of containers, tableware, flat glass, and closures*. Minister of Supply and Services Canada, Ottawa, Ontario.

Jones, Sondra G.

- 2019 *Being and Becoming Ute: The Story of an American Indian People*. The University of Utah Press, Salt Lake City, Utah.

Karpinski, Mark

- 2007 A Cultural Resources Survey of 512 Acres within the Big Hollow WUI Area, Tooele County, Utah (U06LI1453). Report for the United States Department of the Interior, Bureau of Land Management by Logan Simpson Design Inc., Salt Lake City, Utah.

Kerr, K. Austin

- 1998 The American Brewing Industry, 1865-1920. In *The Dynamics of the Modern Brewing Industry*, Terry Gourvish and Richard G. Wilson, editors. Routledge, Abingdon, Oxfordshire.

Kerstetter, Todd M.

- 2015 *Inspiration and Innovation: Religion in the American West*. John Wiley & Sons, Inc., Chichester, West Sussex, UK.

Lindsey, Bill

- 2020 Historic Glass Bottle Identification and Information Website. Society for Historical Archaeology and Bureau of Land Management. <<https://sha.org/bottle/>>. Accessed February 2020.

Madsen, David B.

- 1983 *Black Rock Cave Revisited (42TO64)*. Bureau of Land Management, Cultural Resource Series, No. 14, Salt Lake City, Utah.

Madsen, David B.

- 2002 The Human Prehistory of the Great Salt Lake Region. In *Great Salt Lake: An Anthology* editor Gary Topping. P. 26-42. Utah State University Press, Logan, Utah.

McCormick, Nancy D. and John S. McCormick

- 1985 *Saltair*. University of Utah Press, Salt Lake City, Utah.

Montcalm, Jessica

- 2011 Lofgreen Fuels Cultural Resource Inventory, Tooele County, Utah (U11ZP0798). Report to the Bureau of Land Management by EMR, Inc. and Project Engineering Consultants, Salt Lake City, Utah.

Montgomery, Keith

- 2005 Cultural Resource Inventory for Utah Department of Transportation's Minersville State Route 130 Maintenance Project (RP 36.35 to RP 41.69), Beaver and Iron Counties, Utah. Report to the Utah Department of Transportation, by Montgomery Archaeological Consultants, Moab, Utah.

Morgan, Dale L.

- 2002 The Mountain Sea. In *Great Salt Lake: An Anthology* editor Gary Topping. Pp 12-22. Utah State University Press, Logan, Utah.

Murray Ellis, Sheri

- 2005 Cultural Resource Monitoring Report for the South Temple Street Reconstruction (Main Street to Virginia Street) Project, Salt Lake County, Utah (U02ST0319). Report to RB&G Engineering and the Utah Department of Transportation, Region Two by SWCA Environmental Consultants, Salt Lake City, Utah.

Murray Ellis, Sheri

- 2016 A Cultural Resource Assessment for the Great Salt Lake Marina Dredging Project, Salt Lake County, Utah (U16HY1054). Report to Bowen Collins & Associates by Certus Environmental Solutions, LLC., Salt Lake City, Utah.

O'Mack, Scott

- 2012 Aligned with History: Mitigative Documentation of Historic Linear Sites (U11SQ1012). Data Recovery Along the Unev Pipeline: Utah Segment—Davis, Salt Lake, Tooele, Juab, Millard, Beaver, Iron, and Washington Counties: Vol. V. Report to UNEV Pipeline, LLC, Artesia, New Mexico by WSA, Inc. Tucson, Arizona.

Paulsson, Martin

- 1994 *The Social Anxieties of Progressive Reform: Atlantic City, 1854-1920*. New York University Press, New York, New York.

Peiss, Kathy

- 1986 *Cheap Amusements: Working Class Women and Leisure in Turn-of-the-Century New York*. Temple University Press, Philadelphia, Pennsylvania.

The Press Club of Salt Lake

- 1914 *Men of Affairs in the State of Utah*. Western Printing Co., Salt Lake City, Utah.

Pykles, Benjamin C. and Shane A. Baker

- 2005 Historic Glass. *The Right Place—Fremont and Early Pioneer Archaeology in Salt Lake City*. Brigham Young University Museum of Peoples and Cultures Technical Series, No. 03-07: 265-281.

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.

## Richfield Reaper

- 1917 Prohibition Bill is Passed. *Richfield Reaper* 3 February, XXIX(9):1. Richfield, Utah.

## Saltair Beach Company

- 1893 *Saltair Beach Official Programme: Season 1893*. Salt Lake Lithographing Co., Salt Lake City, Utah.

## Saltair Investment Corporation

- 1926 Promissory note from the Saltair Investment Corporation promising payment for shares transferred from the Church of Jesus Christ of Latter-day Saints. Saltair Beach Resort Records, Legal Documents, 1911-1942: Accu 1025, box 1 folder 2. Marriott Library Special Collections, University of Utah, Salt Lake City, Utah.

## Salt Lake City Soda Water Co.

- 1896 The Red Seal Brand (Advertisement). *Davis County Clipper* 28 February, V(51):2. Salt Lake City, Utah.
- 1896 Drink Red Seal Brand Root Beer. *Salt Lake Telegram* 3 July, XLVI (49):8. Salt Lake City, Utah.
- 1914 Red Seal Soda Water. *Salt Lake Telegram* 8 April, XIII(59):8. Salt Lake City, Utah.

## Salt Lake Democrat

- 1886 The Legislature. *Salt Lake Democrat* 15 February, II(141):4. Salt Lake City, Utah.

## Salt Lake Herald

- 1881 Utah and Nevada Railway. *Salt Lake Herald* 17 February, XL(216):2. Salt Lake City, Utah.
- 1893 W. C. T. U. *Salt Lake Herald* 5 October, XLVIII(104):8. Salt Lake City, Utah.
- 1894 Home Industry Day. *The Salt Lake Herald* 12 July, L(38):7. Salt Lake City, Utah.
- 1901 Beer Openly Sold at Saltair Bar. *Salt Lake Herald* 5 August, 62:8. Salt Lake City, Utah.
- 1902 Pastors Favor Saltair Beach. *Salt Lake Herald* 15 April, N/A:5. Salt Lake City, Utah.

## Salt Lake Telegram

- 1905 Saltair Saloon Robbed. *Salt Lake Telegram* 31 March, IV(994):8. Salt Lake City, Utah.
- 1913a Would "Check" Beer on Saltair Trains. *Salt Lake Telegram* 27 May, XII(101):3. Salt Lake City, Utah.
- 1913b Commission Opposes Saltair Liquor Plan. *Salt Lake Telegram* 28 May, XII(102):14. Salt Lake City, Utah.
- 1915 Notice. *Salt Lake Telegram* 28 September, XIV(237):10. Salt Lake City, Utah.
- 1923a Strict Ban on Hip Flasks to Rule Saltair. *Salt Lake Telegram* 27 April, XXII(88):21. Salt Lake City, Utah.
- 1923b "Moonshine" Supply Was Cached in Sand. *Salt Lake Telegram* 2 June, XXII(124):2. Salt Lake City, Utah.

## The Salt Lake Tribune

- 1889 New England Root Beer. *The Salt Lake Tribune* 16 June, XXXVII(52):6. Salt Lake City, Utah.
- 1901 Temperance Will be Costly. *Salt Lake Tribune* 12 December, XLIII(60):8. Salt Lake City, Utah.
- 1910 Liquor License is Granted at Saltair. *Salt Lake Tribune* 28 June, LXXXI(75):16. Salt

- Lake City, Utah.
- 1911 Liquor and Saltair. *Salt Lake Tribune* 18 February, LXXXII(127):6. Salt Lake City, Utah.
- 1914 Denies Connection with Liquor Sales. *Salt Lake Tribune* 26 June, LXXXIX(74):2. Salt Lake City, Utah.
- 1915 Dry Territory Bill Signed by Governor. *Salt Lake Tribune* 17 March, XC(154):14. Salt Lake City, Utah.
- 1917a Salt Lake Songsters to Make Merry at Saltair Tonight. *Salt Lake Tribune* 21 June, XCV(68):11. Salt Lake City, Utah.
- 1917b Utah's Wet Requiem is Changed by Thousands. *Salt Lake Tribune* 1 August, XCV(109):1. Salt Lake City, Utah.
- 1919 "Race through the Clouds" New Thrill for Saltair Visitors; Gigantic Coaster Ready for Season Opening Decoration Day. *Salt Lake Tribune* 21 May, XCIX(37):11. Salt Lake City, Utah.
- Sanborn Map Co.
- 1911 Saltair Bathing Resort and Pavilion. Sanborn Map Co.
- Schultz, Peter D., Rebecca Allen, Bill Lindsey, and Jeanette K. Schulz (editors)
- 2016 *Baffle Marks and Pontil Scars: A Reader on Historic Bottle Identification*. The Society for Historical Archaeology Special Publication Series, No. 12. Germantown, Maryland.
- Seddon, Matthew T.
- 2001 Consumer Choice in Salt Lake City During the Early 20th Century: Report of Excavation and Analysis of Sites 42SL309 and 42SL327, Salt Lake County, Utah (U00ST0695). Report to Utah Department of Transportation, Salt Lake City, Utah, from SWCA, Inc., Salt Lake City, Utah.
- Seddon, Matthew T., Sonia Hutmacher, Ken Lawrence, Rachael Gruis, Krislyn Taite, and Scott B. Edmisten
- 2001 History and Prehistory Along the San Pedro, Los Angeles, and Salt Lake Railroad: Results of Archaeological Investigations for the Level (3) Communications Fiber Optic Line from Salt Lake City, Utah to the Utah/Nevada Border (U00ST0351). Report to the Bureau of Land Management, Salt Lake City, Utah, from SWCA, Inc., Salt Lake City, Utah.
- Seddon, Matthew T.
- 2004 Industrial Debris and the Bottle Louse: Data Recovery at the Lagoon Drive Discovery Site (42DV93) on the Legacy Parkway Project, Farmington, Davis County, Utah (U02ST0594).
- Self, William, Paul Farnsworth, Melanie Medeiros, and John Ravesloot
- 2008 Class III Cultural Resources Survey UNEV Pipeline Project - Utah Segment (U06SQ1530). Report to Holly Energy Partners, Artesia, New Mexico, from WSA, Inc., Tucson, Arizona.
- Seymour, Elizabeth
- 2008 Class III Cultural Resource Inventory of the Faust ESR Tooele, Utah (U15BL0966). Report by the Bureau of Land Management, Salt Lake City, Utah.

Shepard, Lulu

- 1900 Make War On Saloons. *The Salt Lake Herald*, 4 June, 366. Salt Lake City, Utah.

Shoemaker, S. Todd

- 1983 Saltair and the Mormon Church, 1893-1906. Master's Thesis. Department of History. University of Utah, Salt Lake City, Utah.

Smith, Anne M, and Alden C Hayes

- 1993 *Shoshone Tales*. University of Utah Press, Salt Lake City, Utah.

Smith, Frederick H.

- 2008 *The Archaeology of Alcohol and Drinking*. University Press of Florida, Gainesville, Florida.

Southworth, D. and A. Garrison

- 2007 Cultural Resource Monitoring of Segment 3 of the Legacy Parkway (U07SJ0636). Report to the Utah Department of Transportation by Sagebrush Consultants, LLC, Ogden, Utah.

Southworth, Donald

- 2017 Cultural Resource Monitoring and Excavation for the Independent Order of Odd Fellows Hall Relocation and the United States Courthouse for the District of Utah in Salt Lake City, Utah (U13SJ0259). Report to Naylor, Wentworth, and Lund, Salt Lake City, Utah, from Sagebrush Consultants, Ogden, Utah.

Spurling, Amy, and Sheamus Yeiter

- 2009 Class III Cultural Resources Inventory of the Jordan Valley Water Conservancy District Wells EA Project, Salt Lake County, Utah (U05ST0011). Report to Jordan Valley Water Conservancy District, West Jordan, Utah, from SWCA Environmental Consultants, Salt Lake City, Utah.

Stansbury, Howard

- 1852 Exploration and Survey of the Valley of the Great Salt Lake of Utah Including a Reconnaissance of a New Route Through the Rocky Mountains. Report to the Senate of the United States from the Corps Topographical Engineers, U.S. Army. Lippincott, Grambo & Co., Philadelphia, Pennsylvania.

State of Utah

- 1899 Public Documents. State of Utah, Salt Lake City, Utah. Google Books. <[https://www.google.com/books/edition/Public\\_Documents\\_State\\_of\\_Utah/jn5DAQAAMAAJ?hl=en&gbpv=0](https://www.google.com/books/edition/Public_Documents_State_of_Utah/jn5DAQAAMAAJ?hl=en&gbpv=0)>. Accessed April 2020.

Steele, Peter

- 2018 An Archaeological Investigation of the I-80 Fiber Optic Project (U18HX0575). Prepared for Utah Department of Transportation, Region 2, Salt Lake City, Utah, from Horrocks Engineers, Pleasant Grove, Utah.

Stenhouse & Co.

- 1892 *Utah Gazetteer 1892-93*. Stenhouse & Co. Salt Lake City, Utah.

Topping, Gary

- 2002 *Great Salt Lake: An Anthology*. Utah State University Press, Logan, Utah.

Toulouse, Julian Harrison

- 1972 *Bottle Makers and Their Marks*. Thomas Nelson Inc, Nashville, Tennessee.

Twain, Mark

- 1886 *Roughing It*. American Publishing, Hartford, Connecticut. Reprinted in 2001 by Digital Scanning, Incorporated, Scituate, Massachusetts.

U.S. Directory Publishing Co.

- 1885 *Salt Lake City Directory for the Year Commencing Aug. 1, 1885*. San Francisco, California.

Utah State Historic Preservation Office and Antiquities Section

- 2019 Archaeological Compliance Guidance. Utah Division of State History, State of Utah, Salt Lake City, Utah. <[https://history.utah.gov/wp-content/uploads/2019/07/ARCH\\_UTSHPO-Archaeological-Guidance\\_July2019.pdf](https://history.utah.gov/wp-content/uploads/2019/07/ARCH_UTSHPO-Archaeological-Guidance_July2019.pdf)>. Accessed January 24, 2020.

Utah Western Railway Company

- 1875 Utah Western Railway (advertisement). *Salt Lake Herald-Republican* 6 February, V(208):4. Salt Lake City, Utah.

Williams, Carter

- 2018a Archaeologists warn public about digging on state lands after large hole found at Saltair. *KSL* 22 June. Salt Lake City, Utah. <<https://www.ksl.com/article/46347590/archaeologists-warn-public-about-digging-on-state-lands-after-large-hole-found-at-saltair>>. Accessed 22 January 2020.
- 2018b Digging for treasures on Saltair ground is illegal, but hobbyists argue for it. *KSL* 27 June. Salt Lake City, Utah. <<https://www.ksl.com/article/46350993/digging-for-treasures-on-saltair-ground-is-illegal-but-hobbyists-argue-for-it>> Accessed 22 January 2020.

Yentsch, Andrew T. and Naia George

- 2015a A Cultural Resources Inventory for the Tintic Junction Bullhog Project, Juab County, Utah (U15EO0593). Report to Utah Division of Wildlife Resources, from Environmental Planning Group, LLC, Salt Lake City, Utah.
- 2015b A Cultural Resources Inventory for the West Vernon Phase V: Lion Hill Project, Tooele County, Utah (U15EO0441). Report to Utah Division of Wildlife Resources, from Environmental Planning Group, LLC, Salt Lake City, Utah.

## Appendix A: Bottle Data

This appendix contains table 6.1 which lists notable features of each bottle documented around the pavilion, and table 6.2 which lists notable features of each bottle documented at feature 30 (dump).

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
1	Beer	Amber	Base	Cylindrical	Round			Unknown	Unknown	tb069
1	Beer	Amber	base	Cylindrical	Round	1929-1960	1944	Unknown	Owen's Illinois	tb111
1	Beer	Amber	Threaded machine finish	Cylindrical	Round	1910-1958	1934	Unknown	Unknown	tb120
1	Beer	Amber	Base	Cylindrical	Round	1940-1945	1942	Unknown	Unknown	tb123
1	Beer	Amber	Base	Cylindrical	Round	1929-1960	1944	Unknown	Owen's Illinois	tb124
1	Beer	Amber	Whole bottle with crown finish	Cylindrical	Round	1923-1960	1942	Unknown	Ball Brothers	tb126
1	Beer	Amber	Base	Cylindrical	Round	1932-1968	1950	Unknown	Knox Glass Bottle Co.	tb132
1	Liquor	Amber	base, heel	Cylindrical	Round	1900-1920	1910	Unknown	Unknown	tb107
1	Liquor	Amber	Base, heel	Cylindrical	Round			Unknown	Unknown	tb106
1	Liquor	Amber	base	Cylindrical	Round	1893-1915	1904	Unknown	Unknown	tb112
1	Liquor	Aqua	Base	Flask	Rectangular	1905-1930	1918	Unknown	Unknown	tb105
1	Liquor	Colorless	body	N/A	N/A	1935-1964	1950	Unknown	Unknown	tb109



Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
1	Liquor	Olive	Stacked ring finish, shoulder	Cylindrical	Round	1910-1958	1934	Unknown	Unknown	tb113
1	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb100
1	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb104
1	Soda	Aqua	body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb108
1	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb121
1	Soda	Aqua	Body	Cylindrical	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb122
1	Soda	Colorless	Body	Cylindrical	Round	1910-1947	1928	Denhalter	Unknown	tb128
1	Soda	Aqua	Crown finish, shoulder	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb072
1	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb119
1	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb103
1	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb125
1	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb133
2	Beer	Amber	Base	Cylindrical	Round	1905-1915	1910	Unknown	Unknown	tb161

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Glass	Field ID
2	Beer	Amber	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Works	tb181	
2	Beer	Amber	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot- tle Co.	tb195	
2	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	A021	
2	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	A023	
2	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	tb182	
2	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	tb191	
2	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	tb192	
2	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	tb193	
2	Liquor	Colorless	Machine brandy finish	Flask	N/A			Unknown	Unknown	tb176	
2	Liquor	SCA	Base	Flask	Rectan- gular	1915-1917	1916	Unknown	Owen's Illinois	tb175	

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
2	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb099
2	Soda	Aqua	Base, shoulder	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb177
2	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb187
2	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb190
2	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb194
2	Soda	Colorless	base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb158
2	Soda	Colorless	Heel	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb184
2	Soda	SCA	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb180
2	Soda	SCA	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb183
2	Soda	Aqua	Base	Cylindrical	Round			Unknown	Unknown	A077

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
2	Soda	Aqua	Tooled crown finish	Cylindrical	Round	1898-1915	1906	Unknown	Unknown	tb178
2	Soda	Aqua	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot- tle Co.	tb185
2	Soda	Aqua	Base	Cylindrical	Round			Unknown	Unknown	tb186
2	Soda	Aqua	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot- tle Co.	tb188
2	Soda	Aqua	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot- tle Co.	tb203
2	Soda	Aqua	Base	Cylindrical	Round	1929-1960	1944	Unknown	Owen's Illinois	tb204
2	Soda	Colorless	Base	Cylindrical	Round			Unknown	Unknown	A004
2	Soda	Colorless	Base	Cylindrical	Round	1915-1929	1922	Unknown	Owen's Illinois	A017
2	Soda	Colorless	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	A024
2	Soda	SCA	Base	Cylindrical	Round	1900-1909	1904	Unknown	Western Glass Mfg. Co.	A047
2	Soda	SCA	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb189
2	Wine	Colorless	Body	Cylindrical	Round	1910-1920	1915	Garrett & Co.	Garrett & Co.	tb174

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
3	Beer	Amber	Crown finish, Shoulder	Cylindrical	Round			Unknown	Unknown	tb078
3	Liquor	SCA	Body, base	Flask	N/A	1893-1917	1905	Unknown	Unknown	tb073
3	Soda	Aqua	Base	Hobble skirt	Round	1919-1958	1938	Coca-Cola	Coca-Cola	tb074
4	Beer	Amber	Finish	Cylindrical	Round			Unknown	Unknown	tb002
4	Beer	Amber	Base	Cylindrical	Round	1943-1958	1950	Unknown	Owen's Illinois	tb061
4	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bottle Co.	tb048
4	Soda	Aqua	Base	Hobble skirt	Round	1919-1930	1924	Coca-Cola	Coca-Cola	tb047
4	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb054
4	Soda	SCA	Base	Cylindrical	Round	1910-1917	1914	Denhalter	Denhalter	tb056
4	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb045
4	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb046
4	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb055
4	Soda	Colorless	Panel	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb018

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
4	Soda	SCA	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb003
4	Soda	Colorless	Machine crown finish	Cylindrical	N/A	1898-1958	1928	Unknown	Unknown	tb043
4	Soda	SCA	Tooled crown finish	Cylindrical	N/A	1898-1917	1908	Unknown	Unknown	tb044
6	Beer	Amber	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb287
6	Beer	Amber	Tooled crown finish	Cylindrical	Round	1898-1915	1906	Unknown	Unknown	tb289
6	Liquor	Amber	Base	Flask	Oval			Unknown	Unknown	tb227
6	Liquor	SCA	Base	Flask	Oval	1905-1917	1911	Unknown	Unknown	tb290
6	Soda	Aqua	Body	Hobble skirt	Round	1917-1930	1924	Coca-Cola	Coca-Cola	tb288
6	Soda	SCA	Base, Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb286
7	Beer	Olive	Base	Cylindrical	Round	1909-1920	1914	Read Bros.	Read Bros.	tb234
									LTD	

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
7	Beer	Amber	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot- tle Co.	tb228
7	Beer	Amber	Base	Cylindrical	Round	1918-1938	1928	Unknown	Hart Glass Mfg. Co.	tb249
7	Beer	Amber	Tooled crown finish	Cylindrical	Round	1898-1915	1906	Unknown	Unknown	tb298
7	Beer	Amber	Body	Cylindrical	Round			Unknown	Unknown	tb305
7	Beer	Amber	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb306
7	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	tb240
7	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	tb244
7	Liquor	Amber	Base	Cylindrical	Round	1940-1960	1950	Unknown	Unknown	tb294
7	Liquor	Amber	Base	Cylindrical	Round	1940-1958	1949	Unknown	Unknown	tb296
7	Liquor	SCA	Base	Flask	Oval	1905-1917	1911	Unknown	Owen's Illinois	tb231
7	Liquor	SCA	Base	Flask	Oval	1905-1917	1911	Unknown	Owen's Illinois	tb300
7	Liquor	SCA	Base	Flask	Oval	1905-1917	1911	Unknown	Unknown	tb302
7	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb241
7	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb251

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
7	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb252
7	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb256
7	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb293
7	Soda	Aqua	Base	Cylindrical	Round	1919-1958	1938	Coca-Cola	Coca-Cola	tb297
7	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb301
7	Soda	Aqua	Base	Cylindrical	Round	1919-1958	1938	Coca-Cola	Coca-Cola	tb303
7	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City	tb237
7	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Soda Water Co.	tb239
7	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Soda Water Co.	tb245
7	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Soda Water Co.	tb246
7	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Soda Water Co.	tb247
7	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Soda Water Co.	tb248
7	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Soda Water Co.	tb250



Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
7	Soda	Aqua	Body, base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb253
7	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb255
7	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb257
7	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb260
7	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb310
7	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb230
7	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb232
7	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb233
7	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb235
7	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb238

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
7	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb242
7	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb254
7	Soda	Colorless	Base & Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb258
7	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb259
7	Soda	Colorless	Body, shoulder	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb292
7	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb295
7	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb304
7	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb307
7	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb309
7	Soda	Aqua	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot- tle Co.	tb229
7	Soda	SCA	Base	Cylindrical	Round	1915-1917	1916	Unknown	Owen's Illinois	tb243

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
7	Soda	SCA	Base	Cylindrical	Round	1893-1917	1905	Unknown	Unknown	tb308
8	Liquor	Amber	Body	Cylindrical	Round	1900-1920	1910	Unknown	Unknown	tb077
8	Liquor	Amber	Body	Cylindrical	Round	1900-1920	1910	Unknown	Unknown	tb083
8	Liquor	Colorless	Base	Flask	Oval	1900-1920	1910	Unknown	Unknown	tb076
8	Liquor	Green	Base, Body	Flask	Rectan- gular	1929-1960	1944	Unknown	Owen's Illinois	tb075
8	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb080
8	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb082
9	Beer	Amber	Crown finish and neck	Cylindrical	Round	1898-1958	1928	Unknown	Unknown	A005
9	Beer	Amber	Base and body	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	A085
9	Beer	Amber	Base and body	Cylindrical	Round	1906-1914	1910	Unknown	American Bot- tle Co.	A086
9	Beer	Amber	Base	Cylindrical	Round			Unknown	Unknown	tb097
9	Beer	Amber	Machine crown finish	Cylindrical	Round	1910-1958	1934	Unknown	Unknown	tb101

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
9	Beer	Amber	Base	Cylindrical	Round	1905-1930	1918	Unknown	Owen's Illinois	tb145
9	Beer	Amber	Tooled crown finish, shoulder	Cylindrical	Round	1898-1915	1906	Unknown	Unknown	tb157
9	Beer	Amber	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot- tle Co.	tb163
9	Beer	Amber	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb168
9	Beer	Amber	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot- tle Co.	tb169
9	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	A008
9	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	tb162
9	Liquor	Amber	Shoulder	Cylindrical	Round			Unknown	Unknown	tb094
9	Liquor	Colorless	Base, Heel	Flask	Oval	1900-1920	1910	Unknown	Unknown	tb096
9	Liquor	Colorless	Base	Flask	Oval			Unknown	Unknown	tb147
9	Liquor	Colorless	Machine brandy finish	Flask	N/A	1910-1958	1934	Unknown	Unknown	tb156

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
9	Liquor	Colorless	Base	Flask	Oval	1900-1920	1910	Unknown	Unknown	tb165
9	Liquor	SCA	Tooled brandy finish	N/A	N/A	1893-1917	1905	Unknown	Unknown	A016
9	Liquor	SCA	Base	Flask	Rectan- gular	1893-1917	1905	Unknown	Unknown	tb088
9	Soda	Aqua	Base and body	Hobble skirt	Round	1929-1960	1944	Coca-Cola	Owen's Illinois	A090
9	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb170
9	Soda	Aqua	Body	Cylindrical	Round	1910-1947	1928	Denhalter	Unknown	tb167
9	Soda	Colorless	Base	Cylindrical	Round	1910-1930	1920	Denhalter	Denhalter	A007
9	Soda	Colorless	Body	Cylindrical	Round	1910-1947	1928	Denhalter	Unknown	tb166
9	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb087
9	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb164
9	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb081
9	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb089

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
9	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb098
9	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb102
9	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb154
9	Soda	Colorless	Base, crown finish	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb172
9	Soda	SCA	Base, Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb084
9	Soda	SCA	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb090
9	Soda	SCA	Body, Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb095
9	Soda	Aqua	Body	Cylindrical	Round	1917-1958	1938	Unknown	Unknown	tb085
9	Soda	Aqua	Tooled crown finish	Cylindrical	Round	1898-1915	1906	Unknown	Unknown	tb091
9	Soda	Aqua	Base	Cylindrical	Round	1905-1930	1918	Unknown	Owen's Illinois	tb149

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
9	Soda	Aqua	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot- tle Co.	tb171
9	Soda	Colorless	Base and body	Cylindrical	Round	1934-1958	1946	Unknown	Birrell Bottling Company	A089
9	Soda	Colorless	Base	Cylindrical	Round	1915-1929	1922	Unknown	Owen's Illinois	tb086
9	Soda	Colorless	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb144
9	Soda	Colorless	Base	Cylindrical	Round	1919-1930	1924	Unknown	Owen's Illinois	tb153
9	Soda	Colorless	Machine crown finish	Cylindrical	Round	1910-1958	1934	Unknown	Unknown	tb155
9	Soda	Colorless	Base	Cylindrical	Round	1915-1929	1922	Unknown	Owen's Illinois	tb173
9	Soda	SCA	Threaded finish	Cylindrical	Round	1893-1917	1905	Unknown	Unknown	tb092
9	Wine	Olive	Body	Cylindrical	Round	1893-1915	1904	Unknown	Unknown	tb146
9	Wine	Olive	Body	Cylindrical	Round	1893-1915	1904	Unknown	Unknown	tb148
10	Beer	Amber	Base	Cylindrical	Round			Unknown	Unknown	tb004
10	Beer	Amber	Base	Cylindrical	Round			Unknown	Unknown	tb008
10	Beer	Amber	Base	Cylindrical	Round	1905-1916	1910	Unknown	American Bot- tle Co.	tb015
10	Beer	Amber	base	Cylindrical	Round	1893-1904	1898	Unknown	Reed & Co.	tb024

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
10	Beer	Amber	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb028
10	Beer	Amber	Threaded finish	Cylindrical	N/A	1920-1958	1939	Unknown	Unknown	tb059
10	Beer	Aqua	Body	Cylindrical	Round	1906-1909	1908	Unknown	American Bot-tle Co.	tb027
10	Liquor	Amber	Front Panel	Flask	Rectan-gular	Unknown		Unknown	Unknown	tb005
10	Liquor	Amber	Panel	Flask	Rectan-gular			Unknown	Unknown	tb050
10	Liquor	Amber	Body	Cylindrical	Round	1900-1920	1910	Unknown	Unknown	tb053
10	Liquor	Aqua	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot-tle Co.	tb011
10	Liquor	Colorless	base	Flask	Rectan-gular			Unknown	Owen's Illinois	tb025
10	Liquor	SCA	Panel	Flask	Rectan-gular	1893-1917	1905	Unknown	Unknown	tb016
10	Liquor	SCA	Base	Flask	Oval	1893-1917	1905	Unknown	Unknown	tb052
10	Liquor	SCA	Base	Flask	Oval	1900-1917	1908	Unknown	Unknown	tb114
10	Soda	Aqua	Body	Hobble skirt	Round	1915-1937	1926	Coca-Cola	Coca-Cola	tb006
(coke)										



Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
10	Soda	Aqua	Base	Hobble skirt	Round	1919-1958	1938	Coca-Cola	Coca-Cola	tb007
10	Soda	Aqua	body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb023
10	Soda	Aqua	Base	Cylindrical	Round	1900-1917	1908	Coca-Cola	Coca-Cola	tb029
10	Soda	Aqua	Base	Cylindrical	Round	1900-1917	1908	Coca-Cola	Coca-Cola	tb035
10	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb116
10	Soda	Aqua	Heel	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb117
10	Soda	Colorless	Base	Cylindrical	Hobble skirt	1910-1947	1928	Denhalter	Denhalter	tb039
10	Soda	Colorless	Base	Cylindrical	Round	1910-1947	1928	Denhalter	Unknown	tb118
10	Soda	SCA	Base	Cylindrical	Round	1910-1917	1914	Denhalter	Denhalter	tb037
10	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb010
10	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb013
10	Soda	Aqua	body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb026
10	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb030
10	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb032

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
10	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake Soda Water Co.	City tb049
10	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake Soda Water Co.	City tb060
10	Soda	Colorless	Round base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake Soda Water Co.	City tb020
10	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake Soda Water Co.	City tb034
10	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake Soda Water Co.	City tb036
10	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake Soda Water Co.	City tb058
10	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake Soda Water Co.	City tb064
10	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake Soda Water Co.	City tb115
10	Soda	Amber	Base	Cylindrical	Round	1860-1890	1875	Unknown	Unknown	tb038
10	Soda	Aqua	Base	Cylindrical	Round			Unknown	Unknown	tb031
10	Soda	Colorless	Base	Cylindrical	Round	1940-1964	1952	Unknown	Owen's Illinois	tb009
10	Soda	Colorless	Base	Cylindrical	Round			Unknown	Owen's Illinois	tb040

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
10	Soda	Colorless	Machine crown finish	Cylindrical	N/A	1898-1958	1928	Unknown	Unknown	tb041
10	Soda	Colorless	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb051
10	Soda	Colorless	Tooled crown finish	Cylindrical	N/A	1898-1915	1906	Unknown	Unknown	tb057
10	Soda	Green	Base	Cylindrical	Round	1940-1964	1952	Unknown	Unknown	tb042
10	Soda	SCA	Crown finish	N/A	N/A	1898-1917	1908	Unknown	Unknown	tb012
10	Wine	Green	Body	N/A	N/A	Unknown		Unknown	Unknown	tb014
11	Beer	Amber	Base	Cylindrical	Round	1905-1930	1918	Unknown	Unknown	A034
11	Beer	Amber	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb130
11	Beer	Amber	Base	Cylindrical	Round	1929-1960	1944	Unknown	Owen's Illinois	tb131
11	Beer	Amber	Tooled crown finish	Cylindrical	Round	1898-1915	1906	Unknown	Unknown	tb142
11	Beer	Amber	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb220

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
11	Beer	Aqua	Base	Cylindrical	Round	1905-1916	1910	Unknown	American Bot- tle Co.	A027
11	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	A044
11	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	tb276
11	Liquor	Amber	Base	Cylindrical	Round	1893-1915	1904	Unknown	Unknown	tb263
11	Liquor	Colorless	Base	Flask	Oval	1905-1920	1912	Unknown	Unknown	tb127
11	Liquor	Colorless	Base	Flask	Oval	1905-1920	1912	Unknown	Owen's Illinois	tb274
11	Liquor	SCA	Tooled brandy finish	Flask	N/A	1893-1917	1905	Unknown	Unknown	tb141
11	Soda	Aqua	Base	Cylindrical	Round	1919-1930	1924	Coca-Cola	Coca-Cola	A031
11	Soda	Aqua	Base, body	Hobble skirt	Round	1919-1930	1924	Coca-Cola	Coca-Cola	tb140
11	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb271
11	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb273
11	Soda	Aqua	Body	Hobble skirt	Round	1917-1930	1924	Coca-Cola	Coca-Cola	tb279
11	Soda	SCA	Base	Cylindrical	Round	1910-1917	1914	Denhalter	Unknown	tb139
11	Soda	SCA	Body	Cylindrical	Round	1910-1917	1914	Denhalter	Unknown	tb143
11	Soda			Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb264

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
11	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb138
11	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb219
11	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb221
11	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb265
11	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	A029
11	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	A030
11	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb137
11	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb223
11	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb224
11	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb225

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
11	Soda	Colorless	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb261
11	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb262
11	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb267
11	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb267
11	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb267
11	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb267
11	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb267
11	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb277
11	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb278
11	Soda	Colorless	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb280
11	Soda	SCA	Base and body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	A041

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
11	Soda	SCA	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb134
11	Soda	SCA	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb222
11	Soda	SCA	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb270
11	Soda	SCA	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb272
11	Soda	Aqua	Base	Cylindrical	Round			Unknown	Unknown	A033
11	Soda	Aqua	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot-tle Co.	tb135
11	Soda	Colorless	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	A062
11	Soda	Colorless	Base, body	Cylindrical	Round	1940-1958	1949	Unknown	Unknown	tb129
11	Soda	Colorless	Base	Cylindrical	Round	1915-1929	1922	Unknown	Owen's Illinois	tb275
11	Soda	SCA	Blob finish	Cylindrical	Round	1893-1917	1905	Unknown	Unknown	A052
11	Soda	SCA	Blob finish	Cylindrical	Round	1893-1917	1905	Unknown	Unknown	tb136
11	Soda	SCA	Blob finish, body, heel	Cylindrical	Round	1893-1917	1905	Unknown	Unknown	tb268

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
11	Soda	SCA	Tooled crown finish	Cylindrical	Round	1893-1917	1905	Unknown	Unknown	tb269
12	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb001
13	Beer	Amber	Base	Cylindrical	Round	1905-1916	1910	Unknown	American Bot-tle Co.	A043
13	Beer	Amber	Base and body	Cylindrical	Round	1905-1930	1918	Unknown	Unknown	A079
13	Beer	Amber	Base	Cylindrical	Round	1905-1930	1918	Unknown	Unknown	A082
13	Beer	Amber	Base	Cylindrical	Round	1915-1929	1922	Unknown	Owen's Illinois	A083
13	Beer	Amber	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot-tle Co.	tb152
13	Beer	Amber	base, body	Cylindrical	Round	1910-1958	1934	Unknown	Unknown	tb159
13	Beer	Amber	Base	Cylindrical	Round	1900-1909	1904	Unknown	Western Glass Mfg. Co.	tb200
13	Beer	Amber	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb214
13	Beer	Amber	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb216



Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
13	Beer	Amber	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot- tle Co.	tb218
13	Beer	Amber	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb226
13	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	tb197
13	Beer	Aqua	Base	Cylindrical	Round	1906-1909	1908	Unknown	American Bot- tle Co.	tb198
13	Liquor	Colorless	Base	Flask	Oval	1905-1930	1918	Unknown	Owen's Illinois	tb207
13	Liquor	SCA	Base	Flask	Oval	1905-1917	1911	Unknown	Owen's Illinois	tb150
13	Liquor	SCA	Base	Flask	Oval	1905-1917	1911	Unknown	Owen's Illinois	tb205
13	Liquor	SCA	Base	Flask	Oval	1900-1917	1908	Unknown	Unknown	tb208
13	Soda	Aqua	Body	Hobble skirt	Round	1917-1958	1938	Coca-Cola	Coca-Cola	tb284
13	Soda	Aqua	Base	Hobble skirt	Round	1919-1958	1938	Coca-Cola	Coca-Cola	tb285
13	Soda	Colorless	Heel	Cylindrical	Round	1910-1947	1928	Denhalter	Unknown	tb160
13	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb201
13	Soda	Aqua	Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb209
13	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb211

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
13	Soda	Aqua	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb212
13	Soda	Colorless	Base, Body	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb282
13	Soda	SCA	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.	tb151
13	Soda	Aqua	Base	Cylindrical	Round	1893-1904	1898	Unknown	Reed & Co.	A074
13	Soda	Aqua	Complete bottle	Cylindrical	Round	1893-1920	1906	Unknown	Unknown	A084
13	Soda	Aqua	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot-tle Co.	tb199
13	Soda	Aqua	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot-tle Co.	tb202
13	Soda	Aqua	Base	Cylindrical	Round	1893-1904	1898	Unknown	Reed & Co.	tb206
13	Soda	Aqua	Base	Cylindrical	Round	1899-1905	1902	Unknown	Adolphs Busch Glass Mfg. Co.	tb213
13	Soda	Aqua	Base	Cylindrical	Round	1906-1914	1910	Unknown	American Bot-tle Co.	tb215
13	Soda	Colorless	Body	Cylindrical	Round	1934-1958	1946	Unknown	Unknown	A061
13	Soda	Colorless	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb196

Feature	Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.	Field ID
13	Soda	Colorless	Body	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb210
13	Soda	Colorless	Base	Cylindrical	Round	1896-1900	1898	Unknown	Northern Glass Works	tb217
13	Wine	Colorless	Base	Cylindrical	Round			Unknown	Unknown	A065
14	Beer	Amber	Base	Cylindrical	Round	1940-1958	1949	Unknown	Unknown	tb062
14	Beer	Amber	Base	Cylindrical	Round	Unknown		Unknown	Unknown	tb063
14	Beer	Amber	Base	Cylindrical	Round	1940-1964	1952	Unknown	Owen's Illinois	tb067
14	Beer	Amber	Base	Cylindrical	Round			Unknown	Unknown	tb068
14	Soda	Colorless	Base	Cylindrical	Round	1910-1947	1928	Denhalter	Unknown	tb066
14	Soda	Aqua	Body, base	Cylindrical	Round	1905-1914	1910	Red Seal Brand	Salt Lake City Soda Water Co.	tb079

**Table 6.1:** Data collected for this thesis

Field ID	Test Unit	Artifact Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.
OU01_A1	1	Soda	SCA	Base	Cylindrical	Round	1910-1917	1913.5	Denhalter	Denhalter
OU01_A1	1	Soda	SCA	Base	Cylindrical	Round	1910-1917	1913.5	Denhalter	Denhalter
OU01_A2	1	Liquor	SCA	Base	Flask	Rectangular	1893-1917	1905	Unknown	Unknown
OU01_A2	1	Liquor	SCA	Base	Flask	Rectangular	1893-1917	1905	Unknown	Unknown
OU01_A2	1	Liquor	SCA	Base	Flask	Rectangular	1893-1917	1905	Unknown	Unknown
OU01_A3	1	Soda	SCA	Base	Cylindrical	Round	1893-1917	1905	Unknown	Unknown
OU01_A4	1	Soda	SCA	Blob finish	Cylindrical	Round	1893-1917	1905	Unknown	Unknown
OU01_A5	1	Soda	Aqua	Base	Cylindrical	Round	1893-1905	1899	Unknown	Streator
OU01_A6	1	Soda	Aqua	Base	Cylindrical	Round	1905-1930	1917.5	Unknown	Bottle & Glass Co
OU01_A7	1	Soda	Aqua	Base	Cylindrical	N/A	1898-1915	1906.5	Unknown	Unknown
OU01_A8	1	Beer	Amber	Base	Cylindrical	Round			Unknown	Unknown
OU02_A1	2	Soda	SCA	Base	Cylindrical	Round	1893-1917	1905	Unknown	Unknown
OU02_A2	2	Soda	SCA	Base	Cylindrical	Round	1910-1917	1913.5	Unknown	Unknown
OU02_A3	2	Soda	SCA	Base	Cylindrical	Round	1910-1917	1913.5	Denhalter	Denhalter
OU02_A4	2	Soda	Aqua	Base	Cylindrical	Round			Unknown	Unknown
OU03_A1	3	Soda	SCA	Base	Cylindrical	Rectangular	1901-1917	1909	Unknown	Unknown
OU03_A2	3	Soda	SCA	Base	Cylindrical	Round	1893-1917	1905	Unknown	Unknown
OU03_A3	3	Soda	SCA	Base	Cylindrical	Oval	1893-1917	1905	Unknown	Unknown

Field ID	Test Unit	Artifact Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.
OU03_A4	3	Soda	SCA	Tooled crown finish	Cylindrical	N/A	1898-1917	1907.5	Unknown	Unknown
OU03_A5	3	Soda	SCA	Tooled flared finish	Cylindrical	N/A	1893-1917	1905	Unknown	Unknown
OU03_A6	3	Soda	Aqua	Base	Cylindrical	Round			Unknown	Unknown
OU03_A6	3	Soda	Aqua	Base	Cylindrical	Round			Unknown	Unknown
OU04_A1	4	Beer	Amber	Base	Cylindrical	Round			Unknown	Unknown
OU04_A1	4	Beer	Amber	Base	Cylindrical	Round			Unknown	Unknown
OU04_A2	4	Soda	Aqua	Base	Cylindrical	Rectangular			Unknown	Unknown
OU04_A4	4	Soda	SCA	Twist top finish	Cylindrical	N/A	1910-1917	1913.5	Unknown	Unknown
OU04_A4	4	Soda	SCA	Tooled crown finish	Cylindrical	N/A	1910-1917	1913.5	Unknown	Unknown
OU04_A5	4	Soda	Aqua	Tooled crown finish	Cylindrical	Rectangular	1893-1915	1904	Unknown	Unknown
OU05_A1	5	Liquor	SCA	Base	Flask	Rectangular	1893-1917	1905	Unknown	Unknown
OU06_A1	6	Soda	SCA	Body	Cylindrical	Rectangular	1893-1917	1905	Unknown	Unknown
OU06_A2	6	Liquor	SCA	Body	Flask	Round	1893-1917	1905	Unknown	Unknown
OU06_A3	6	Soda	SCA	Base	Cylindrical	Round	1910-1917	1913.5	Denhalter	Denhalter
OU07_A1	7	Soda	SCA	Body	Cylindrical	Round	1893-1917	1905	Unknown	Unknown
OU08_A1	8	Liquor	SCA	Base	Flask	N/A	1893-1917	1905	Unknown	Unknown
OU09_A1	9	Soda	SCA	Threaded finish	Cylindrical	N/A	1910-1917	1913.5	Unknown	Unknown
OU09_A1	9	Soda	SCA	Threaded finish	Cylindrical	N/A	1910-1917	1913.5	Unknown	Unknown
OU09_A2	9	Liquor	SCA	Body	Flask	Rectangular	1893-1917	1905	Unknown	Unknown

Field ID	Test Unit	Artifact Type	Color	Part	Body Shape	Base Shape	Date Range	Mean Date	Brand	Mfr.
OU10_A1	10	Soda	SCA	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.
OU10_A2	10	Liquor	SCA	Base	Flask	Rectangular	1893-1917	1905	Unknown	Unknown
OU10_A3	10	Soda	SCA	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.
OU10_A3	10	Soda	SCA	Base	Cylindrical	Round	1896-1914	1905	Red Seal Brand	Salt Lake City Soda Water Co.
OU10_A4	10	Soda	SCA	Applied brandy finish	Cylindrical	N/A	1893-1917	1905	Unknown	Unknown
OU10_A5	10	Soda	SCA	Crown finish	Cylindrical	N/A	1898-1915	1906.5	Unknown	Unknown
OU10_A6	10	Soda	Aqua	Crown finish	Cylindrical	N/A	1898-1915	1906.5	Unknown	Unknown

**Table 6.2:** Bottles recorded at feature 30 (the dump)