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Late Homestead Period Householding at Benmore and Tintic Junction: Comparing Rural and Sub-Rural Communities in Tooele and Juab Counties, Utah

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LATE HOMESTEAD PERIOD HOUSEHOLDING AT BENMORE AND TINTIC JUNCTION: COMPARING RURAL AND SUB-RURAL COMMUNITIES IN TOOELE AND JUAB COUNTIES, UTAH.

by

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GRADUATE COMMITTEE APPROVAL

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BRIGHAM YOUNG UNIVERSITY

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ABSTRACT

LATE HOMESTEAD PERIOD HOUSEHOLDING AT BENMORE AND TINTIC JUNCTION: COMPARING RURAL AND SUB-RURAL COMMUNITIES IN TOOELE AND JUAB COUNTIES, UTAH.

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Department of Anthropology

Master of Art

Historical archaeologists are turning more and more attention to the study of capitalism in post-Industrialist nations. Rhoda Halperin's concept of householding considers networks of families or other groups that operate outside of the mainstream capitalist economy. The concept is most often applied in anthropological contexts, but may be a useful tool in the study of homesteading in the American West. At Benmore, a small homesteading community in southern Rush Valley, Tooele County, Utah, 20 families sought to survive by dry farming in a marginal environment. The enthusiasm of such residents as Israel Bennion, whose journal provides deep insight into the town's short existence, may have united the community under the ideology of self-sufficiency and resulted in an example of householding in early twentieth century Utah.

This thesis utilizes surface data from Benmore, compared to surface and excavation data from Tintic Junction—a railroading town approximately 20 miles away from Benmore—to consider whether Benmore fits Halperin's concept of householding and the extent to which the community operated outside of the mainstream economy. The data is considered both in order to better define the community of Benmore and to determine

whether Halperin's concept may be applicable to future homesteading studies throughout the American West. I argue that the specific questions considered in identifying householding are useful but that a broader theoretical approach is necessary to fully consider the dynamics of homesteading towns in Utah and the West.

ACKNOWLEDGEMENTS

One of the most personally gratifying elements of this thesis is the opportunity it provides to tell the story of the Bennions, Skidmores and many other families that contributed to Benmore. Many seasons of fieldwork and countless hours of research have made Benmore a significant part of my life. It is for this reason that each chapter and some sub-chapters begin with a quotation from Bennion's journal. It is my way of honoring the individual effort—the blood, sweat and tears—that so many residents invested in a tiny town and its short-lived dreams. I owe a great debt to Elizabeth Mitchell, in particular, and all the Bennion family for providing me with a personal copy of the unpublished journal and allowing Israel Bennion to become a very real part of my life and my research.

This thesis has been a work both of sweat and of love. It has stretched me academically far more than I believed I could stretch, all the while creating and increasing my love for archaeology and the Vernon Unit of the Uinta National Forest. As such, it can best be said to be the collaborative work of countless individuals. The data could not have been utilized without the effort of so many Passport in Time volunteers (notably Harold Frodge and his flipper stick) and the community of Vernon at large. The historical record would have been sorely incomplete without the use of the unpublished journals of Israel Bennion provided by Elizabeth Mitchell and the Bennion Family.

My passion for historic archaeology, and the beginning concepts for this thesis, is the product of dedicated and tireless tutelage by Charmaine Thompson. If all cultural resource managers had her skill in public outreach, I am convinced there would be far too many archaeologists for the jobs that exist! She is truly amazing. And of course, an amazing committee, who have given far more time than they had to give, have taken that

original concept and helped it develop into something useful. I owe particular thanks to Dr. James Allison for putting up with my resistance to theory and to Joel Janetski for many, many years of quiet mentoring.

To my wonderfully supportive family and my darling husband, John, I owe a great debt of gratitude for all of the patient reassurances when my faith wavered. The process may have taken longer than expected, but I will be eternally grateful for the delay.

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1 INTRODUCTION

Helped David to pick potatoes. In the field were David, Owen, Archie, and I, brothers; and my three boys, Mervyn, Howard, and Glynn. Keeping the work in our own family and exchanging work is an important factor of success on the farm… [Israel Bennion, journal, October 11, 1894, Bennion Family Trust, Vernon Utah; subsequent citation = (IBJ, May 10, 1914)]

This thesis is a close look at the archaeology of two towns in Utah—Benmore, a farmstead, and Tintic Junction, a railroad town (Figure 1). As the West was settling into its own, the mainstream economy of America was firmly cemented in capitalism. The residents of these two towns approached this economy in very different ways, however. Both groups were, perhaps, searching for the elusive American dream, but their dreams were different and their approaches to fulfillment ones which viewed capitalism very differently. For homesteaders, like those at Benmore, the elusive prospect of free land to be personally owned, worked, and reaped was a grand call, and the United States government was more than happy to encourage the move, knowing that industrious agriculturalists would delve into areas yet untapped, bringing to light this new frontier's hidden wealth. Indeed, it was often the homesteaders who discovered areas with good potential for mining and other activities, necessitating such railroading towns as Tintic Junction.

At Benmore, many farming and ranching jobs were done by exchanging labor within the community. At Tintic Junction, foremen and laborers alike were paid in currency and were, therefore, very much plugged into the mainstream economy. The nearness

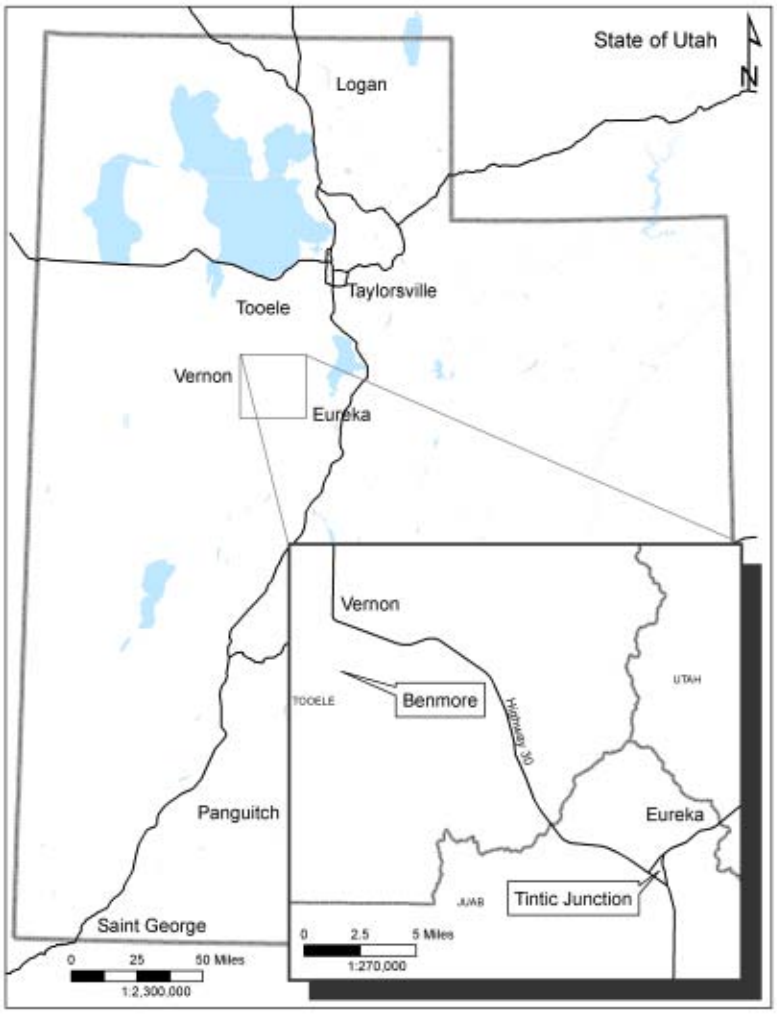


Figure 1. Location of Benmore and Tintic Junction.

of the two towns to Salt Lake City, already an urban center, and the marked differences in lifestyle and subsistence make these towns the ideal locations for a consideration of differing approaches to capitalism. The goal of this thesis is to look at the economic and organizational information that exists for these locations in order to determine to what extent householding, as defined by Rhoda Halperin (1994), occurred in the two towns.

Householding is the practice of relying on informal economic activities in order to survive on the margin of or resist the formal capitalist economy. It often involves utilizing extended family or community to provide mutual support, thereby allowing

individuals and families to successfully survive while avoiding participation in a traditional lifestyle operating within the mainstream. I expect that Benmore's more isolated location and focus on farming and ranching led to greater reliance on informal economic activities in order to allow the town's residents to survive in a desert climate with limited resources. In contrast, I expect to find that Tintic Junction's less isolated location and greater access to wage labor led to a greater emphasis on money and the mainstream economy. I expect differences in local economies to be reflected in a variety of ways, including dietary variety, occupational variety, re-use of materials, and extent of food and resource storage versus discarding and replacing.

This chapter provides the theoretical background, environmental and historical context, a review of previous research, and a summary of basic homesteading law to provide a framework for the data presented and the arguments made. While data from previous research at Tintic Junction, a railroad town, are used heavily, the primary purpose of this thesis is to consider the importance of householding at Benmore and, further, to identify the use of householding theory in studying the archaeology of the American West. Emphasis is, therefore, placed on providing the background to understand homesteading and householding in Utah.

THE ARCHAEOLOGY OF CAPITALISM AND MAINSTREAM ECONOMIES

> *I raise the need for historical archaeology to be more involved with the politics that sustains it…Such political involvement will provide a more coherent justification for our concern with forgotten, anonymous, and unknown peoples and groups, who are the exploited and suppressed members of classes….[P]olitics not only suppresses the exploited themselves, but their histories as well, leaving historical archaeology as their means of finding a voice. [Leone 1995:251]*

In today's world where any profession that does not clearly contribute to world

peace may be defamed, Mark Leone's call for historic archaeologists to study the history of capitalism and ordinary peoples' involvement with it provides one justification for archaeological research. Particularly in the United States, anthropologists and archaeologists alike are turning their gaze to the study of capitalism as a way to understand the development of their own nation and life. Many scholars have contributed to a growing body of literature on the archaeology of capitalism (Burke 1999; Hamilakis and Duke 2006; Johnson 1996; Leone and Potter 1999; Leone 1995; Purser 1999; Wylie 1999), which is often less abstract than studies of the more incomplete prehistoric record and if we hold with Leone's argument above, it is also an archaeology that actively and clearly contributes to our own political environment and answers our need to make a difference in others' lives.

Historic archaeology also carries a distinct advantage in that it is, by its very nature, a multi-disciplinary approach enveloping historical records, oral history, and many artifacts which modern people recognize more easily than many prehistoric artifacts. Sanitary cans may be less glamorous than a Clovis point, but ultimately there is something comforting about researching a way of life that is as close to home as the stories we're told by our grandparents.

HOUSEHOLDING THEORY

One of the more obvious areas of study within a capitalist society is economic organization and function. The differences between the mainstream economy and alternate economies that operate outside the norm was Karl Polanyi's (1944:53-54) focus when he reintroduced the concept of householding originally noted in Aristotle's work. Polanyi (1944:54) writes, "Aristotle insists on production for use as against production

for gain as the essence of householding proper" and suggests that householding only occurs in societies with an advanced level of agriculture. Halperin (1994) accessed both Polanyi's published and unpublished works, and her discussion of Polanyi's householding provides a framework for studying informal economies among rural communities within a capitalist society.

Halperin (1994:193-194) defines informal economies as "locational and appropriational movements outside of the mainstream economy." Locational movements, or changes of place (Halperin 1994:58), are exchanges of goods across space. For example, a crop of potatoes is grown in the country and then transported to a city where they are consumed. Appropriational movements, or changes of hand (Halperin 1994:58), are exchanges of goods to a different user. For example, a crop of potatoes is grown by a farmer and then given to a blacksmith for consumption or sale. These exchanges are conducted outside of the formal, most often capitalist, economy and are therefore defined as part of an informal economy that operates within, but separate from that formal economy. Householding is a common feature of informal economies in rural agrarian communities. Polanyi (1944:53) defined householding as production for personal or own group use:

> Its pattern is the closed group, whether the very different entities of the family or the settlement or the manor formed the self-sufficient unit, the principle was invariably the same, namely, that of producing and storing for the satisfaction of the wants of the members of the group.

Halperin (1994:145) further defines householding as "the provisioning of a group by means of circular flows of resources, goods, and services." Robert Netting (1993) notes that there is a core of activities consistent among most householding groups, consisting of production, distribution, transmission, biological and social reproduction, and co-

residence. Householding may serve to increase survivability or may be evidence of purposeful resistance to the mainstream economy, notably capitalism.

Householding studies in the western United States are rare compared to the Appalachians and other parts of the east. The anthropology of householding is limited in scope, while the archaeology of householding is nearly non-existent. Householding studies are infrequent in general, perhaps because Polanyi himself dropped it from his forms of economic integration in some of his works, although Halperin (1994) notes that in Polanyi's unpublished notes he maintained that householding was an important concept. More general economic studies of the western frontier, however, are common among the social and literary sciences (Anderson 1994; Arrington 1958; Bergon and Papanikolas 1978; Bruce 1990; Mann 2007; Martin 1983; Maynard 1974; Smith 1971).

APPLICATION OF HOUSEHOLDING THEORY TO BENMORE

The informal economy established when Latter-day Saint settlers (Mormons) entered Utah relied heavily on self-sufficiency (Arrington 1993(1958):323) and was, in part, a product of Utah's initial isolation from the rest of the United States. The Homestead Act of 1862 was the first of several settlement and land acquisition acts that increased settler awareness of lands outside Utah's growing population centers. Many of the townsites established by homesteaders from 1862 to the early part of the 20th century reflect a continuation of householding despite increased transportation and communication among growing populations statewide.

The town of Benmore, Utah was a small homesteading community consisting of about 20 families who all participated in farming and/or ranching. The community appears to meet the characteristics of Halperin's (1994) rural householding community

because historical records and oral history suggest that the residents were largely united in an effort to support one another. A number of questions present themselves with regards to the Benmore community. Does Benmore actually fit Halperin's model for rural householding? Is there greater socioeconomic variation than is initially expected for the community? Did the ideology of self-sufficiency common at the time contribute to the community's rapid downfall?

In order to answer these and other questions, I compare Benmore to Tintic Junction, a railroading station town approximately 20 miles away. Tintic Junction was on the same railroad supply line as Benmore but was part of a multiple-town community with a significantly higher population than Benmore. Tintic Junction does not appear to meet the characteristics of a rural householding community largely because the town's population was constantly changing and because the majority of residents received wages and spent them actively as participants in the mainstream economy.

This thesis addresses the archaeological evidence from Benmore as a possible example of Halperin's rural householding and as a community which therefore differed significantly from more mainstream, sub-rural or urban communities in the same geographic area. I consider the archaeological evidence of socioeconomic level and the extent of rural householding within the community and contrast these findings to data from excavations and research conducted at Tintic Junction (Hutmacher and Lawrence 2001; Seddon, et al 2001). I support these data with information from historical records and journals, as well as oral interviews, about the people in each community.

If homesteaders at Benmore used householding to remain unincorporated from the mainstream economy that, by the start of the 20th century, was well established in Utah, we would expect a number of indicators in the archaeological record. These indicators, discussed below, become evident in comparing homestead households to households in

populations that were more closely tied to the mainstream capitalist economy. Because Tintic Junction was part of a larger community whose residents had easy access to railroading and mining jobs, I expect that it was relatively well incorporated into the mainstream economy. In comparison, Benmore was a much smaller, relatively isolated community with an economy based on ranching and dry farming whose residents had less easy access to wage labor. Therefore, informal economic behavior, and specifically householding, should have been more prevalent at Benmore. If this is true, then the archaeological record at Benmore, when compared to Tintic Junction, should show:

1. Less variety in store-bought foods such as canned goods, reflected in the variety of foodstuff containers at sites associated with residences.
2. Greater reliance on storage and utilization of home or local grown crops and other resources (Blanton 1994; Halperin 1994; Netting 1993), reflected in an increase of storage buildings and more home packaging items (i.e. canning jars) in comparison to store-bought cans and other goods. Since canned goods were frequently re-used, evidence of home storage and local resource use is best considered with such recycling in mind (see below).
3. Lag in adoption or absence of popular, "trendy" styles in household goods and technology, demonstrated by less variety in goods that were prone to frequent change, such as household ceramics, and in equipment innovations that may have been introduced during the period of site occupation (Purser 1999). This relates closely to the question of cash access since new and popular items were primarily available through shops and catalogs rather than through trade, local production, or other popular methods.
4. Frequent instances of repair and reuse of items, both for continued original use, as

well as for use of a different nature (Purser 1999).

All these indicators of lesser incorporation into mainstream economy at homesteads should be visible in the archaeological record. In addition, there are social characteristics that indicate householding is an important part of community organization that may also be visible in non-householding communities. As a result, the following characteristics may be at both Tintic Junction and Benmore.

1. Maintenance of local schools, churches or other community buildings to increase resident unity and provide a social network within the householding organization.
2. Additional social unity among community household members, reflected in similarity of architecture, common subsistence practices, and similar religious and political beliefs.
3. A similar socioeconomic level among all, or most, residents, reflected in roughly equal amounts and styles of personal and store-bought goods, as well as in common architecture and number of buildings on each family property. This equality contributes to contentment among residents and, in a householding society, reflects the interrelationship of all those within the householding group who work together to generate that which is necessary for survival rather than for profit.

Journals and other historical records from the area will contribute information about specific practices and provide additional data about the individuals and families who occupied the sites.

If Benmore was a rural householding community and Tintic Junction was not, the

contrast of the two communities should demonstrate the differences between rural householding and more mainstream economic practices in Utah and the American West toward the end of the homesteading movement.

In order to determine the extent of householding at Benmore, in comparison with Tintic Junction, it is important to understand the physical and political environments in which the communities were established and the homestead laws that enabled settlers to claim land. The remainder of this chapter presents that background information for Benmore (a description of Tintic Junction and its environs is provided in Chapter 4). Previous research is included for the purpose of providing a context for Benmore within the broader framework of homesteading in Utah. It does not appear that previous research at homestead towns has addressed the question of householding.

RUSH VALLEY ENVIRONMENT

Rush Valley, Tooele County, Utah lies southwest of Salt Lake City on the edge of Utah's West Desert. The largest city, both historically and at present, is Tooele at the north end of the valley which in 1910 had a population of 2,753. A number of small towns surround Tooele. Benmore lies 38 miles away on the valley's southern border. This southern Rush Valley area lies at approximately 5,400 feet above sea level and is surrounded by a number of small mountain ranges, with Black Crook Peak (sometimes called Bennion Peak) being the highest point at 9,274 feet above sea level. Benmore itself sits at about 5,970 feet above sea level.

Several drainages run through the general Benmore area, including Vernon Creek, Bennion Creek, Dutch Creek, North Oak Brush Creek, and Government Creek. These water sources originate in the Sheeprock Mountains to the south and carry water from

both springs and snow run-off. Each of these creeks ran either annually or perennially during the time that Benmore was occupied (IBJ 1914-1915). In fact, one of the reasons for Israel Bennion's push to see Benmore settled (see below and Chapter 2) was that it was nearer the source of these creeks than was the town of Vernon, 5 miles to the north (IBJ May 10, 1914). Thus, the residents would be better able to take advantage of the life-giving water both for crops and livestock rather than allowing that water to evaporate before reaching their Vernon farms.

Present-day vegetation in the area surrounding Benmore reflects the heavy agricultural use of the land. Sagebrush covers most areas where once there were lush native grasses (Astroth and Frischknecht 1984:41). Moving up the foothills into the Sheeprock Mountains—a southern continuation of the Onaqui mountain range—the sagebrush makes way for pinyon-juniper woodland, with some areas of scrub oak, aspen, and even cottonwood, where water allows. Today, grasses are dominated by crested wheatgrass as well as other native species, including bluebunch wheatgrass, Indian ricegrass, and Great Basin wildrye (Astroth and Frischknecht 1984:4). Cheatgrass, a non-native invader common to heavily-used agriculture lands is present, but not invasive due to present management strategies. Rabbitbrush, prickly pear cactus, and various forbs, like desert globemallow, are also present.

When Israel Bennion's grandfather Samuel Bennion first began grazing his cattle in the south end of Rush Valley in 1858, however, the vegetation in the lower flatlands was dominated by western wheatgrass rather than sagebrush. Astroth and Frischknecht (1984:41) write that "according to early records, native grasses were vigorous and occupied both the valleys and benchlands so exclusively and grew so abundantly that it was frequently cut and stacked as hay for winter feed." They go on to state that "early settlers reported that sagebrush was not prevalent in the valley bottoms but, like pinyon

and juniper, was largely restricted to the foothills" (Astroth and Frischknecht 1984:41).

By the turn of the century, livestock herds had been consolidated into the hands of a few owners, including Samuel Bennion. Now, however, interest in Rush Valley was focused on dry farming rather than ranching. Charles H. Skidmore and his brother Justin established the Rush Valley Farming Company, dry farming 10,000 acres of land, and others followed suit. Former grasslands, turned sagebrush-covered fields, were now plowed, and winter wheat was planted (Astroth and Frischknecht 1984:41). In wet years, the wheat yielded fairly well, but in dry years, the crops struggled and failed. Astroth and Frischknecht (1984:41) report that "from 1920 on, the cultivated area in Rush Valley declined in size, especially because the demand for wheat had fallen off drastically after World War I," though economic improvement did result in one more dry farming attempt in the mid 1920s. The result of Benmore's failure as a dry farming community was the abandonment of formerly cultivated lands, which subsequently returned to the sagebrush and grass fields now visible throughout Rush Valley, described again by Astroth and Frischknecht (1984:41) as "so densely [overgrown] that a person had difficulty even walking through the area."

Rainfall in Rush Valley is unpredictable with an annual average precipitation of approximately 13 inches, but with great extremes, from a low of 6.8 inches in 1956 to a high of 19.01 inches in 1913 (Astroth and Frischknecht 1984:4). Only 40 percent of this precipitation falls during the growing season, and there are frequent drought years.

In response to failed farms, the Great Depression, and "dustbowl" conditions in several Western states, between 1934 and 1936, the Federal Government created the Central Utah Purchase Project. Land in at least two old dry farm areas, Rush Valley and Widtsoe, near Panguitch (Astroth and Frischknecht 1984), were resettled. After a number of years of experimental range studies, the Benmore area was acquired by the Forest

Service in 1954 and management, including additional seeding and controlled cattle grazing, was begun. It was this southern Rush Valley environment, with its marginal rainfall levels for dry farming, which was opened to homestead claims and viewed by the residents of the area as a newfound chance at farming and ranching success. The homestead laws provided the opportunity, while the Benmore residents provided the hope for survival.

DISCUSSION OF THE HOMESTEAD MOVEMENT AND ITS LAWS

By 1862, the fervent desire of both recent immigrants and many multi-generational Americans was to realize the dream of private land ownership. With the encouragement of the American government, the move west was now in full sway. It had been nearly 60 years since Lewis and Clark headed their historic expedition. The area that would become the western states was organized into territories, including the Washington, Dakota, and Utah Territories. The nation's attention was primarily focused on the southeast, with the Civil War in full swing, but settlement of the West continued to be an important topic—one of growing concern to Congress.

Congress realized the need to regulate western settlement. In 1841, the Preemption Act (27 Cong., Ch. 16; 5, Stat. 453) was passed, which permitted squatters who were heads of household and had been residing on government land to purchase 160 acres of that land for a very low price. By 1862, however, the move west had increased, and Congress now passed the Homestead Act of 1862 (37 Cong., Ch. 75; 12, Stat. 392). This act enabled American citizens who were heads of household to claim up to 160 acres, or a quarter of a square mile, of unappropriated public lands—provided they remained living on the property for five years with no more than six months of consecutive absence.

The entries had to be made "for the purpose of actual settlement and cultivation," and the claimant had to prove "by two credible witnesses that he, she, or they [had] resided upon or cultivated the [land] for the term of five years…" (37 Cong., Ch. 75; 12, Stat. 392). The register of the local land office was to record all claims and provide them to the General Land Office. After five years, and upon necessary proof of requisite use, the claimant received full ownership of the land.

Additional settlement acts followed, including the Desert Land Act of 1877 (44 Cong. Ch. 107; 19 Stat. 377), the Enlarged Homestead Act of 1909 (60 Cong. Ch. 160; 35 Stat. 639), and the Taylor Grazing Act of 1934 (43 USC 315-316, June 28, 1934). There is no evidence to suggest that residents of Benmore acquired land under any but the Desert Land Act, and to a much lesser extent, the original Homestead Act. Some of the families that lived at Benmore did hold out in the area long enough to potentially utilize the Taylor Grazing Act to receive homestead lands that had been abandoned by less persistent families. Each piece of legislation provided access to an area of the West that had not yet been fully utilized and upon each act's claims hung the dreams of thousands of people. Benmore was established toward the latter end of this homesteading period. Most of its residents purchased or traded for their land, though there were some who maintained their family's original claim.

PREVIOUS RESEARCH ON HOMESTEADING IN UTAH

Since abandoned homesteads are obviously visible and often involve multiple standing structures, foundations, or very large artifact scatters, many have been recorded. Homesteaded townsites such as Benmore are less frequent, but not unique (Bowen 1994; and notably Perry et al. 2001). In fact, the Latter-day Saint settlement pattern (Arrington

1993 [1958]; Leone 1973) typically emphasizes community organization rather than isolated settlement, and the desire of most Latter-day Saints to worship frequently together and to form community bonds, in addition to solely religious ones, is clearly evident at townsites like Benmore.

Previous research in townsites has addressed a number of research questions and has been conducted for various reasons. Marshall Bowen (1994:xi), a historian analyzing the interaction of different processes that resulted in the formation of a community of Latter-day Saint settlers in the Nevada desert, describes "the economic and social life that developed in the new settlements, and identifies the migration streams that these people followed when things did not work out in Nevada." He draws from newspapers, tax records, and other historical records, as well as oral interviews, to make his argument that "human mosaics created in marginal Western lands were remarkably diverse" (Bowen 1994:102). Bowen (1994) calls for additional research into any comparable settlements, noting that studies which reveal details of ordinary life are necessary for a true understanding of homesteaders.

Another previous study relating to homestead research was conducted by The Desert Research Institute in Las Vegas, Nevada, at Widtsoe, Utah (42GA4617), for a State Institutional Trust Lands Administration (SITLA) plan to sell lots within the townsite. Widtsoe townsite lies along Highway 22 in western Garfield County and was established in the 1910s after homesteading was established in the area. It was originally named Winder, but in April 1917 the name was changed to Widtsoe (Curry 1999) in honor of LDS Church Apostle and dry farming expert John A. Widtsoe, whose 1911 book, *Dry Farming, A System of Agriculture for Countries Under Low Rainfall,* is still the definitive reference on the subject (Powell 2007). An experimental farm was located nearby, sister farm to that established at Benmore later on. Census records from 1920 indicate that a

total of 365 people lived in the town. Curry (1999:5) notes that "seventy percent of the town's households were linked to at least one other household by intermarriage and/or the close settlement of the valley by extended families." Precipitation varied by year, but averaged 10.53 inches per year, according to the Utah Agricultural Experimental Station (1932). This average is under the needed 12-14 inches per year for dry farming (Astroth and Frischknecht 1984). Residents found that surface water had been over-estimated, and forage was insufficient for livestock grazing (Curry 1999). By 1934 only forty families remained, and Brian Cannon (1986:144) notes that the area was "perhaps the most destitute of any area in the state." The townspeople requested federal aid, realizing their desperate state, and in 1935, federal officials from the Resettlement Administration held a town meeting. The land was purchased by the government with an agreement that the families would be resettled, and within a few years all but one family were gone (Curry 1999). Because of its significance at the federal level as a New Deal Rural Resettlement Program, Widtsoe is probably the most studied dry farm homestead townsite in Utah. The entire town was mapped and extensive survey and testing was conducted. Research questions focused on settlement patterns and community structure as well as social organization and economics.

In addition to these homestead townsites, most present-day communities in Utah had their beginning in small aggregates of settlers who were committed to developing a united environment in which to live, work, and raise their families (see Lowell C. Bennion's 1991 discussion of San Pete County as an excellent example; also, Peterson 1978). In fact, the patterns of Latter-day Saint settlement (Bennion 1991), including the compact village, the dispersed village, and the mixed settlement, were all designed in part to permit "farm operators [to live] in [the village while] going out and back to work the land" (Nelson 1985:24-25). Although settlement patterns varied more by the 1900s

than they had during initial, early settlement, the idea of the small settlement is frequently consistent with Israel Bennion's desire to build a small town nearer the mountain water sources (IBJ May 10, 1914). Even Brigham Young, the Latter-day Saint leader who directed much of Utah's initial settlement, advised one town settler:

> The sooner streams are let upon crops after they leave the canyons the more produce can be raised with a given amount of water…By concentrating streams at much expense of labor and waste of water under a hot sun and in loose soil, a larger settlement can be made at a given point; but not near so many persons can be sustained in a given valley as by the mode of making smaller settlements…at the nearest points where water can be applied to tillable soil…[Andrew Jenson, Mt. Pleasant Ward Manuscript History, September 10, 1859, Archives, Church of Jesus Christ of Latter-day Saints, Salt Lake City *in* Bennion 1991:127]

Individual homesteads have been recorded in many areas of Utah, wherever land was made available for claim under the several homesteading acts. These individual homesteads were frequently in areas that were either near enough to an established town or isolated enough that no townsite was ever attempted. Homesteads in Diamond Fork Canyon just over the mountain from Spanish Fork and Mapleton, Utah, for example, have been recorded (Healy 2000) but there is no evidence (archaeologically or orally) of community organization. While these individual homesteads share many characteristics with the homesteads at Benmore, they cannot provide the same level of data regarding householding economy because they lack the necessary evidence for community organization.

CONCLUSION

Benmore's archaeological significance lies both in its similarity to other dry farming communities, like Widtsoe, and in its difference to other communities in the region.

While dry farming was possible in many years, and even profitable during the First World War's wheat demand, southern Rush Valley was only marginally effective for the technique. As a result, Benmore seemed doomed to fail as a dry farming community. The six years in which it did comparatively flourish, however, and the several subsequent years of gradual decline, provide a brief snapshot look at the economic and social organization of rural early-Twentieth Century homesteading in Utah.

The purpose of this thesis is to identify the degree to which householding occurred at Benmore—compared to the nearby railroading town of Tintic Junction—by looking closely at archaeological data from these two towns. It is through the archaeological evidence visible on the surfaces of the long-abandoned Benmore sites that I expect to evaluate the reliance of Benmore's residents on informal economic activities. By considering the economic data available, and by comparing the two towns, I will attempt to determine the extent to which the ideology of self-sufficiency and informal economic activities contributed to the town's rapid failure. I will further discuss the relative utility of householding studies of homesteads in the American West.

In Chapter 2, I discuss the forms of historical information that are available for Benmore, including General Land Office Land Patent Records, histories and oral data, Benmore Ward religious records and Israel Bennion's journal. Each of these historical sources provide locational and economic data that supplement the archaeological record and greatly contributes to our overall understanding of the history of Benmore. The chapter is concluded with a brief narrative summary of Benmore and a few of its key residents.

In Chapter 3, I present the bulk of the archaeological data from Benmore. I describe the methods by which data were collected and consider community and socioeconomic indicators in addition to householding data. Chapter 4 is a parallel presentation of data

collected at Tintic Junction by SWCA Environmental Consultants, Inc (Seddon et al. 2001). This chapter includes a historical narrative of Tintic Junction.

Chapter 5 constitutes the primary discussion of my research questions, including a comparison of data from both towns and further discussion of the nature of socioeconomic organization at Benmore. I then address the utility of householding theory as a way to study homesteading in the American West and conclude with a consideration of Benmore's place in the history of Utah settlement and the broader schema of the American West.

2 HISTORICAL RESEARCH

I...hear reading of history of early settlement of Vernon. I corrected the following: "Vernon is surrounded by a vast stretch of barren country which cannot be used for agricultural purposes." I insisted that at this date (17 years after the above historical misstatement was written) the land adjacent to Vernon is being successfully used for agricultural purposes. [IBJ May 5, 1918]

One of historical archaeology's great strengths is the ability to combine historical records and oral histories with physical evidence to produce a more complete picture of an area's past (Deagan 1996; Galloway 2006; Little 2007). Studying the archaeology of Benmore involves the use of a number of different historical sources, as well as additional archaeological data from nearby Tintic Junction. Tintic Junction was a railroad section station and its population consisted entirely of wage-paid railroad employees and their families. As such, the town was heavily tied into the mainstream economy and is an excellent contrast to the farming community of Benmore, just 20 miles to the northwest. Although Tintic Junction existed longer than Benmore, the towns are roughly contemporary and date to the 1910s through 1930s. In this chapter I present the primary sources of historical information from which I have drawn insights into the town of Benmore and its people. I further provide a historical summary of Benmore. This timeline of events establishes a context for the archaeological data on the economy of homesteading and householding at Benmore presented in subsequent chapters.

GENERAL LAND OFFICE AND RECORDER'S OFFICE LAND PATENT/OWNERSHIP DATA

Two main sources contain information about the changing ownership of land in the western United States—the records of the General Land Office (GLO) and those of individual county recorder's offices. Both were used to track land transfers at Benmore. The GLO surveyed and mapped the 30 public land states that made public land available to individuals through the homestead acts, tracked homestead applications and fees, and issued land patents, which transferred land title from the Federal government to approved individuals. GLO maps were based on the public land survey system—a way of dividing land into 6-mile square townships, subdivided into 36 one square mile sections—and land was surveyed to establish this grid system. Most of the records have been scanned or transcribed so that they can be searched by name of patentee or warrantee, or by location, and they are now managed by the Bureau of Land Management in an online format. For Benmore, I examined all of the available townships within the area managed by the Forest Service in the Vernon Unit.

Data from the GLO and LDS Church records (below) provided the main basis for drawing a boundary around the town of Benmore, and the Lofgreen extension (Figure 2). No official map delineating the town boundary exists, but this approximates the immediate community within which householding activities may have occurred and is the boundary for the study, although not all of the homesteads that lie within it are listed in the GLO patent records and some of the homesteads have not yet been identified.

The Tooele County Recorder's Office is located in Tooele, Utah, the county seat. As with the GLO patent records, land patent and ownership records at the recorder's office are organized by township. As a result, it is relatively easy to follow the transfer of a

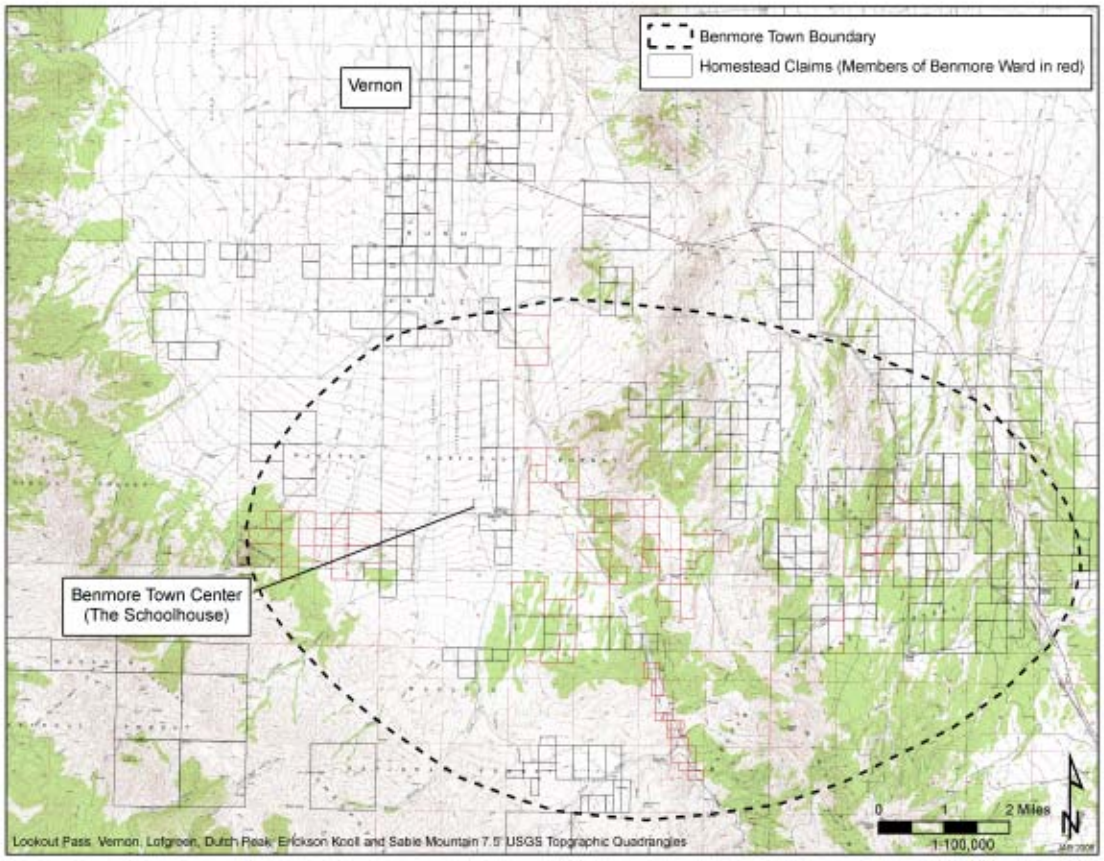


Figure 2. Approximate boundary of Benmore, Utah.

section or sub-section of land. Numerous land sales and exchanges occurred during the Benmore area in the first half of the twentieth century, most of which are documented in the recorder's office. In some cases, the original holder of a homestead claim maintained ownership throughout the Benmore period. In most instances, however, land changed hands from one to many times. For example, Israel Bennion lived at his homestead called Ben Lomond until 1917 when he sold the house and land to Niels P. Jensen and moved closer to Benmore. Jensen kept the land until 1920 when he apparently sold it to the Vorwaller family, who had recently arrived in the valley. The site is now locally known as Samuel Kaiser's.

Tracking such land sales and exchanges not only allows archaeologists to know the name and basic demographics (such as nationality) of the residents of the historic sites

they study, but it also paints a picture of the stability, or lack thereof, of the settlement itself. A community in which most people are succeeding financially and are content with their circumstances will typically have a greater number of stable families and individuals, with growth and change primarily occurring because additional settlers are acquiring land and the settlement is growing. In contrast, when a community struggles to survive, like Benmore, there will be more frequent exchange and sales of land as settlers seek to acquire better locations, either within the community or elsewhere.

ORAL HISTORY

Even with land ownership records and homestead claims, a good deal of basic information about Benmore is missing. Fortunately, there is still a living memory of Benmore. Former residents, now residing primarily in Vernon, Utah, have both written their stories and shared them with their community and with Forest Service employees. One outing, in particular, was conducted on August 2, 2005, as part of an Eagle Scout project for Collin Mitchell, great-grandson of Israel Bennion. During this outing many of the community members who either lived at or visited Benmore as children, by then quite elderly, drove in and around Benmore and pointed out locations and ownership, told stories, and shared insight into some of the individuals who worked to make Benmore a success.

One of these stories, documented in several local history books and journals, seems to be a particular favorite. The Yates family owned the first threshing machine with a windstacker (blower), which they purchased while living in Lake Point, near Tooele in about 1898. On September 11, 1916, the machine exploded, burning two large grain stacks with it. Hyrum Yates jumped off the thresher with the intent to pull the machine

away from the stacks, but Norman Oborn, who was looking after the engine, stopped it. As a result, they lost both the engine and the grain (Stemmons 1998:97). The occurrence was witnessed by Israel Bennion who was tending cattle in the hills above Greenjacket, several miles away (IBJ September 11, 1916). Hyrum's father-in-law Henry Oborn bought a new thresher, and the Yates and Oborns threshed for families all over the valley in subsequent years. While this may seem like just a story, it provides a few valuable details for archaeologists. First, it locates the site of the event as associated with Benmore, telling us that Benmore extended at least two and a half to three miles up the road to the location, which was specifically pointed out during the August 2005 tour.

Since Vernon is only five miles north of Benmore's main street and the two communities were closely related, identifying such associations at properties between the two communities is an important part of establishing an approximate boundary for Benmore. Second, it identifies a nearby homestead site and the owner of the home on that property. Third, Israel's account of seeing the explosion from his vantage point where he was tending cattle can assist in confirming the location of Bennion's ranchland. The oral history data that have been collected over the years and compiled for use in building and studying the history of Benmore are a valuable source of historical context and have been most useful in identifying the primary occupants of the homesteads that play a key role in this thesis.

CHURCH RECORDS AND FOREST SERVICE DATA

One of the sure indications that Benmore identified itself as a town apart from Vernon, at least for a few short years, is the formation of a separate congregation of The Church of Jesus Christ of Latter-day Saints (LDS Church). On July 12, 1914, the

Benmore Branch of the Vernon Ward (or community congregation) was established, and about a year later, on November 28, 1915, the branch was converted to a free-standing ward. Approval for organization of a new ward was at the discretion of individual stake presidencies during this time (LDS Church Archives, personal communication December 21, 2007), but likely depended on having enough priesthood holders (adult males in good standing) to establish an independent bishopric and large enough membership to warrant a separate congregation.

The records of the Benmore Ward (and branch) are housed on microfilm at the LDS Church Archives in Salt Lake City, Utah, and additional copies of some of the records are available at the Family History Library within the Harold B. Lee Library at Brigham Young University. The data from these records helped to define the boundary of Benmore, particularly on the north and east edges where separation from Vernon and connection with Lofgreen are not clear from GLO records alone. The records also proved invaluable in approximating the demographic composition of Benmore, since an individual U.S. Census was never completed there.

Additional information about Benmore came from data housed at the Supervisor's Office of the Uinta National Forest. In particular, range studies have noted some historical details of Benmore that may have been otherwise lost (such as specific plant ratios and average annual rainfall), and Forest Service archives contain copies of many small publications out of Vernon or references to Benmore in the Tooele Transcript Bulletin, the local newspaper of Tooele City. This information would not have been extracted or may even have been missed entirely without many hours of work by Charmaine Thompson and other Forest Service employees and volunteers.

THE JOURNAL OF ISRAEL BENNION

Another valuable source of information on Benmore is the journal of Israel Bennion, primary founder of the town. This journal was transcribed by the Bennion family and made available to Forest Service employees by Elizabeth Mitchell, whose family currently lives on and operates the farming and ranching operation that belonged to Israel Bennion. The ranch is now known as Greenjacket. The journal remains unpublished at the request of the Bennion family.

Bennion (Figure 3) kept his journal from 1894 to 1943. During that time, most of his entries are detailed notes on day-to-day events. Some days he simply writes "Choring around," but on others he records such specifics as depths reached while digging wells, advice he has given to neighbors, speaker topics from Sunday church meetings, or his musings on politics. The Benmore period includes a great deal of commentary on the town's organization and the impact of the First World War on both domestic life (he had two sons in the Army) and American society.

I studied Bennion's journals, paying particular attention given to the Benmore years, and extracted locational and economic data. This information helped define the town, and identify specific inhabitants, document economic activities in the community, and identify the varying socioeconomic levels of the families and individuals he mentions. Of course, the journal is a very personal account and there is obvious bias in many of Bennion's entries, but it nonetheless provides further insight into the attitudes and practices of the community.

A BRIEF HISTORICAL NARRATIVE OF BENMORE, UTAH

The name Benmore is not specially selected because of its reference to these families but

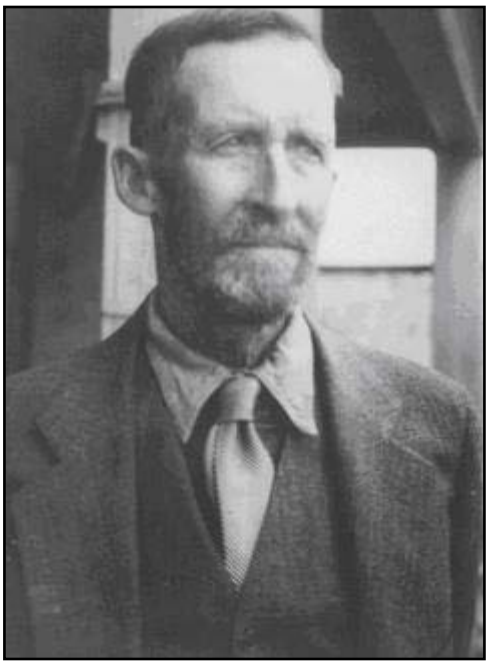


Figure 3. Photograph of Israel Bennion. Courtesy of Elizabeth Mitchell.

because it is an easy, pleasant, and possible-to-be-famous, name. [IBJ July 12, 1914]

Benmore, Utah, may have never gained the fame which its founder clearly considered possible, but for a few years, from 1914 to 1924 at least, the community was recognized as separate by residents of both Benmore and the rest of Tooele County. The first mention of Benmore in the Tooele Transcript Bulletin (established 1894) was in August 1914. This first mention was a notice for contractor bids to build the schoolhouse at Benmore. According to Bennion (IBJ November 26, 1914), the Vernon School District put up $1,800.00 for the schoolhouse and by November 1914, it was built and ready for use. Church services in the building began November 22, 1914. The school opened on November 30th with Israel's son Kenneth as teacher and over 20 pupils from eight families.

The construction of the schoolhouse and establishment of a separate church congregation (Benmore had its own ward by November 1915) marks the early, optimistic

period of Benmore's short existence. According to Benmore Ward Records, over the six years that the Benmore Branch/Ward existed, there were a total of 187 ward members on the roles, with 20 births, three marriages (all within the congregation), and four deaths. Actual attendance levels for the ward varied by season and year. United States Census data do not divide Benmore from Vernon so estimating the population of the town in general is more difficult; however, population data for the entire Vernon Precinct may be helpful (Figure 4). During the Benmore period, the population in the Vernon Precinct fluctuated between 197 and 367, with the largest change occurring between 1900 and 1910 with the initial settlement push.

Benmore was primarily an agricultural town. Census data from 1920 suggest that while there were a variety of professions represented, 37 percent of persons over 18 in the Vernon Precinct (including Benmore) were farmers by trade (Table 1). Other occupations noted in Table 1 include school teachers, miners, railroad employees, government officials (including one postman and one forest ranger), an assistant undertaker employed in Vernon, and a dressmaker, though the miners were not typically associated with the local community except in times of emergency (Over the years, Bennion notes several miners rescued during severe winter storms.). The nearest doctors, lawyers and other professionals may have been in Tooele, 40 miles north. The average household size in 1920 was 4.66 persons, with 162 adults over the age of 18 (59 heads of household) and 113 children.

The town's sense of community appears to have centered around the ward, though there were many individuals in the area who were never listed as members of the congregation. It is possible that a few attended the Vernon Ward. In particular, those residents who worked in the railroad and mining industries and who were not local land-owners rarely became involved in the local ward or community organization, in

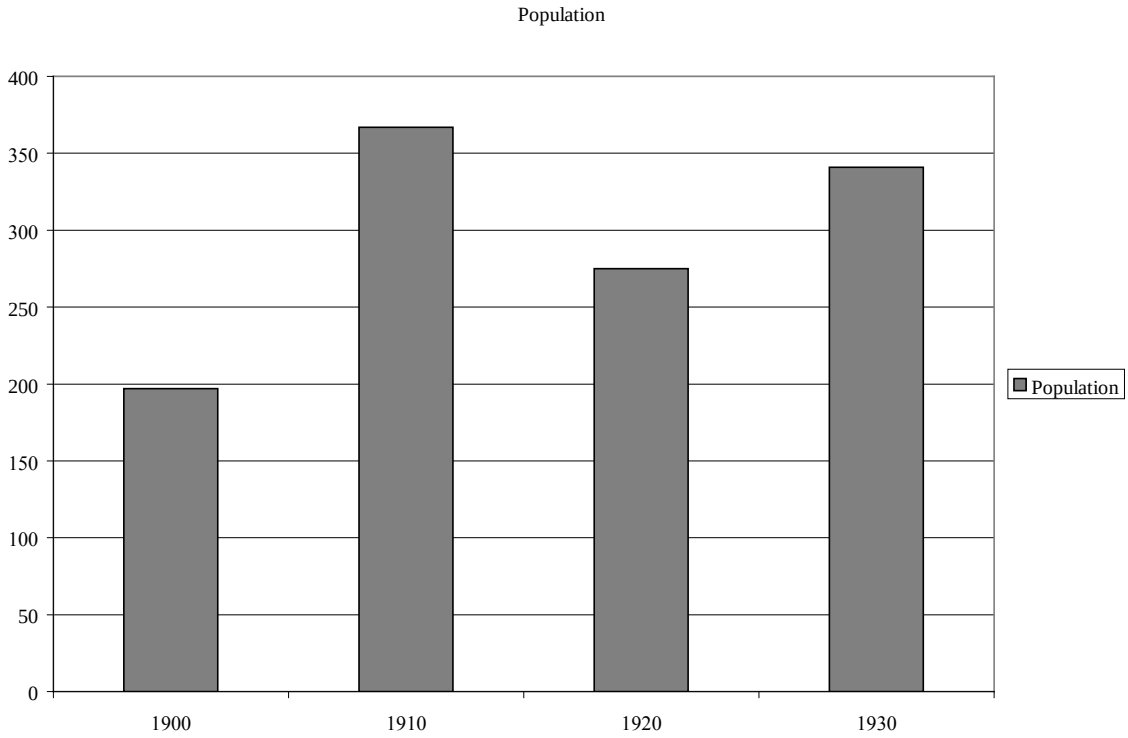


Figure 4. Population data from the Vernon Precinct of the U.S. Census.

Table 1. Tally of professions from the Vernon Precinct of the 1920 U.S. Census.

INDUSTRY/PROFESSION	COUNT	% OF TOTAL
FARM	60	37.04
SCHOOL	2	1.23
HOME	1	0.62
MINE	13	8.02
RAILROAD	9	5.56
GOVERNMENT	2	1.23
UNDERTAKER	1	0.62
NONE	74	45.68
TOTAL:	162	100

part because they were much less likely to be Latter-day Saints. These individuals were probably not in the Vernon and Benmore area long enough to put down roots.

Bennion's hope for Benmore's growth and success drove him to invest in ordering the

layout of the town and organizing the community. The main road coming into town from the north (now FS Road Number 005) was considered for improvement as a county road at Bennion's repeated requests between 1914 and 1916. He donated water to Benmore for a park area which was half on school grounds and half on church grounds. He also donated 115 trees of varying species to both Vernon and Benmore in 1915. In April 1915, Bennion (IBJ April 23-24, 1915) wrote:

> My motives are about thus: I want this waste place of Zion redeemed; I want the poor Saints provided with homes; I want living here made tolerable *now*; (not 10 yrs hence) these certain steps in advancement must come to fruition, or, we—slide back. (When on slippery ground keep a going, till you reach a resting place) These steps to take are: School, post office, Ward organization. These, --or down we go; these, ---and we win. Hence my strenuous efforts, and hence my deep annoyance at the pessimistic "knocking" of my brethren; who yet profit by the rise in value of their land, selling none till they think the price has reached the limit.

There are also several ambiguous references to construction of a town cemetery, though no recent oral histories have suggested that one was ever established. Only four members of the Benmore Ward died, according to the ward record and it is probable that Vernon's close proximity made use of its cemetery logical and more convenient than setting aside an area for a Benmore cemetery.

Goods and services were available to Benmore from multiple sources. The nearest railroad sidings were Dunbar and Lofgreen, 5.4 miles and 5.8 miles, as the crow flies, from the center of town. The Salt Lake, San Pedro, and Los Angeles Railroad (later the Union Pacific Railroad) ran from Salt Lake City to Los Angeles. Goods from the east coast and international locations could be brought in on the line in addition to the merchandise which could be ordered from the nearer large towns along the line. Sears Roebuck catalogs were probably common and Bennion notes (IBJ February 12, 1917)

that he grew weary of traveling salesmen "who train themselves as pickpockets to get a living out of other people's earnings". It appears that Benmore enjoyed the same access to goods, in its time, as did neighboring towns along the railroad line. Cash was available to some extent, since land and labor cash transactions are recorded in the County records and Bennion's journal.

Land claims around Benmore continued into the 1930s, though by then Benmore had all but faded completely away and residents were again associated with the Vernon community. Bennion clearly attributes a large portion of the town's eventual failure to World War I. In 1918, he writes:

> This has been a hard year for Benmore. Most Utah towns have something to sell, at war prices; and therefore have money. We have been hit by drouth; and besides, for various reasons, (mine, building) no crops have been raised this year. Thus we have bought, at war prices. The remedy is to sell, not buy. The result: nearly all Benmore people moved to city or mining camp, for work, for the winter. [IBJ January 11, 1918]

And in 1921, he updated his entries for January 1919 with the following:

> In the stress of war, and the unsatisfactory peace that followed, Benmore Ward just disintegrated. One family after another moved away. The crops were not good, help was scarce, the work couldn't be done; and all the while the easier life, shorter hours of labor, and bigger pay of the city, was an irresistible lure. [IBJ January 1921(1919)]

Between the poor crops and the tendency of many residents to prefer wage jobs in larger towns, Benmore's brief existence came to an end. There was a short population rise in 1920, but the formal town organization died sometime in that year when the ward was dissolved. In the Benmore Ward Record, Israel and Lowell Bennion note, "So many members of the ward have become discouraged and moved away because of the apparent lack of resources for gaining a livelihood, that the Stake Presidency has deemed it best

for the ward organization to be discontinued and the stake clerk has given directions for settling up the Ward account and transferring the membership to Vernon Ward with the close of the year." The last entry in the Benmore Ward record is October 1920, although a Sunday School class possibly continued through 1932 when Bennion (IBJ July 4, 1932) records a discussion of "closing up of Benmore Ward, and accts; [and] the selling and dismantling of the Benmore School house…" The Tooele County paper does mention a Benmore school census on November 21, 1924. At that time there were 19 students (14 girls and 5 boys). Bennion's journal, however, continues to reference the town, albeit in terms making clear its slow demise, until October 1943 when it ends. At one point, he notes the loss of the Chris Jensen family as a loss of one-third of Benmore's population—two adults and 10 children (IBJ December 3, 1933).

In one of many national programs designed to assist farmers affected by post-War conditions and the Great Depression, the United States government established the Agricultural Resettlement Administration, and the Benmore dry farm area was bought out between 1934 and 1936. Most residents returned to homes nearer Vernon or left the area altogether (several relocated south to Delta where better water supplies allowed irrigation farming). In 1954, the Forest Service began managing most of the area.

3 ARCHAEOLOGICAL INVESTIGATIONS AT BENMORE

In meeting at Benmore I ...said, "You who have come now...must apply yourselves,... must not continue to be a tax on those who have helped you; or, behold we are all ruined together...There will be no place for selfishness, for every selfish thing will perish". [November 26, 1914]

Benmore's formal organization may have lasted only a few short years, but the historical records exhibit so much emotional commitment to the survival of the town, that it is clear these settlers were seeking a permanent home and a future Zion community. Yet after only a few years, nearly all residents had moved on and buildings were dismantled. Archaeological investigations at Benmore have been conducted for more than ten years. In recent years the Benmore townsite has been identified as a potential National Register District. Documentation is complete for all of the known sites in the area along the main street through town. In this chapter, I present the methods used to collect the archaeological data from Benmore and discuss factors affecting this data. I describe the site types found within the Benmore community and consider the basic community, socioeconomic, and householding data at Benmore. In Chapter 5, I conduct an in-depth analysis relating to householding at Benmore and the socioeconomic level of the residents, as indicated by both the archaeological data and various historical records.

METHODS

Benmore-associated sites were identified in several ways. Locals or Forest Service employees pointed some out, while many were identified during the nine Passport

in Time (PIT) volunteer projects held annually since 1999. Additionally, sites were identified during Section 106 compliance projects related to federal undertakings.

An Intermountain Antiquities Computer System (IMACS) form exists for each site. On most sites, crews marked the location of every artifact and feature on each site with a pin flag. Artifacts were then counted and recorded by type and description. On some of the largest sites, quantities of unidentifiable metal bits and ubiquitous artifacts like barrel straps and glass fragments were more roughly estimated. Crews also mapped every feature, and made sketches. Site maps were either hand-drawn using compass and tape, or mapped using a Trimble GeoExplorer 3 and completed in ArcMap.

Recording homesteads can be overwhelming—particularly large sites with thousands of artifacts. Tallying every artifact down to broken window glass and tin can lids can be tedious; however the data used herein are the direct result of this detailed effort. Many volunteers, in addition to the small heritage staff at the Forest Service, have participated in PIT projects and other events focused on documenting Benmore. Although an attempt was made to gather data on every feature and within every artifact class, there are several factors which affect the reliability and utility of surface data on archaeological sites.

Preservation

This thesis relies on surface data from Benmore, and is therefore limited by preservation factors including vandalism (discussed below) and the survival of artifacts and features. Abandoned wood buildings are often dismantled, moved, or removed for firewood. The only standing structures recorded so far at Benmore are the Skidmore/ Jorgensen house and the Oborn Homestead barn, both near the center of town. One other structure, the Aage Larsen home, remains on private property several miles east of

Benmore's center and has not yet been documented. These sites remain because owners did not remove them in historic times and they are now protected by current owners or managers. As a result of the natural deterioration and removal or destruction of many structures at Benmore, information may often be incomplete or non-existent. In some cases, the archaeologist's best attempt at identifying a feature may be incorrect.

Limited preservation, however, is less of an obstacle when historic and oral data are added to that of the archaeological record. And such artifacts as metal, glass, ceramic and other common materials used in domestic and farm settings are much more likely to survive compared to easily rotted or removed wood. Glass may change color, metal may bend and ceramics may break or discolor, but they can nonetheless survive on the surface for many years. Most of the sites at Benmore postdate 1900, so most materials have not had time to decompose to any great extent. Vandalism is the main threat to preservation of Benmore's surface data.

Vandalism

Vandalism is a significant issue on the Vernon Unit, as in other areas of the Uinta National Forest. It is rare to find a posted sign without bullet holes. Such destruction of federal property extends to archaeological sites as well. The popularity of bottle collecting has made its mark at Benmore. Pot holes are frequently found in the area around what is believed to be the kitchen of the Skidmore/Jorgensen homestead. The house (Figure 5) was sold to Justin Skidmore in 1910. Now only the four walls of the main room remain and there is little evidence at all for the second floor of the structure (Figure 6).

Other Benmore sites are similarly impacted. On several occasions, PIT volunteers

Figure 5. Photograph of the Skidmore/Jorgensen Homestead main house.

have encountered bottle-hunters and others in the act of combing a site's surface. The detailed artifact tallies from these sites are assuredly incomplete representations of the full assemblage that must have once existed. The bias is probably against whole glass bottles (and other glass items) and recognizable household objects such as toys, kitchen utensils, and farm implements, which are rare to begin with since most such items are generally taken with residents when they leave. Unfortunately these are often the artifacts that are most useful in determining the age of a site and provide the best evidence for economic behavior in the individual sites and the community.

Although the extent to which looting has occurred at each site is impossible to determine, the fact that the sites are well known to locals and generally clustered together and along major roads on the Vernon Unit suggests that most sites have probably experienced fairly equal visitation. Since the bias produced by vandalism seems

Figure 6. Modern condition of the Skidmore/Jorgensen Homestead main house.

proportionate across sites, using proportions of artifact types within the assemblages is useful if we recognize the loss of familiar or whole artifact types. Finding few complete bottles or ceramics may not be so much an indication that the residents did not discard such items as it is that those items are universally interesting or valuable to site visitors.

SITE TYPES AND ARTIFACTS

Twenty sites have been identified and recorded within the Benmore community as defined using GLO homestead claims, land records and ward records. Several other sites are known but have not yet been fully documented. More sites likely exist although the community center has been thoroughly investigated. The center of the community lies

near and around the location of the Benmore schoolhouse, near the intersection of Forest Roads 090 and 005. Most sites are associated with a single family and consist of a few features. There are 15 sites that may be best characterized as homesteads, and most of these can be specifically associated with an individual or family through property records and oral history data. Additional site types include artifact scatters not associated with any feature or known individual, and a charcoal platform that may have been used by members of the community. Table 2 lists each site by type and state number as well as the common property name (e.g. the Jorgensen/Skidmore Homestead or the Benmore Schoolhouse). A brief discussion of typical features and artifacts follows. Full site descriptions can be found in Appendix 1 and a more complete presentation of the data from Benmore is located in Appendix 2..

Features

A site sketch of the Jorgensen/Skidmore Homestead (Figure 7) provides an example of the typical layout and types of features characteristic of Benmore. The overall site boundary of the homestead is determined by identifying the extent of the features and artifact scatter. Artifacts are typically concentrated near features. The typical Benmore homestead site has a stone or concrete foundation of the size (20 feet by 18 feet on average), shape, and location to suggest it was the main residence. In addition to the house foundation, most Benmore homesteads have associated dugouts, cisterns, and outbuildings associated with farming-related or other activities. Landscape features such as earthen dams and rock piles associated with field clearing are also common.

A dugout was usually the first structure built after a homesteader staked a claim. These subterranean shelters acted as residences until a main house could be constructed.

Table 2. Benmore Site Names and Types.

Site No.	Site Name	Site Type
42TO538	Charles Skidmore Homestead	Trash Scatter
42TO836	Ben Lomond Extension	Trash Scatter
42TO843	Ben Lomond I and II	Homestead
42TO893	Charles Anderson Homestead	Homestead
42TO1501	Skidmore/Jorgensen Homestead	Homestead
42TO1510	Vernon Creek Trash I	Trash Scatter
42TO2125	Vernon Creek Trash II	Trash Scatter
42TO2270	Moses Green Homestead	Homestead
42TO2373	Charcoal Preparation Site	Charcoal Preparation
42TO2376	Dog Hollow Cabin	Cabin
42TO2707	Benmore Schoolhouse	Schoolhouse/Homestead
42TO2886	Sharp/Hite Homestead	Homestead
42TO2887	Van Otten Homestead	Homestead
42TO2889	Downtown Homestead	Homestead
42TO2956	Chris Jensen Place	Homestead
42TO3197	Sherman Cadwell Homestead	Homestead
42TO3214	The Dry Farm Co-op	Dry Farm/Homestead
42TO3311	Irvin Hillman Homestead	Homestead
42TO3313	Hyrum Yates Homestead	Homestead
UN-285	Oborn Homestead/Benmore Work Station	Homestead

Following the family's move to the house, dugouts became storage facilities for food and other domestic items. The typical dugout at Benmore was constructed by laying a large central beam lengthwise across a hole that was dug out to fit the size of the family. Sticks and other roofing material were then rested across the crossbeam and the sides of the pit. A door frame was built at one end to provide access with a ramp or other access from ground surface. Similar dugouts are visible at sites throughout the West.

Benmore cisterns are typically concrete-lined and are most often round. Size varies from 5 to 11 feet in diameter. Cisterns served as water storage and were typically covered with a wood door to protect the water from animals and pollutants. Cisterns generally lie

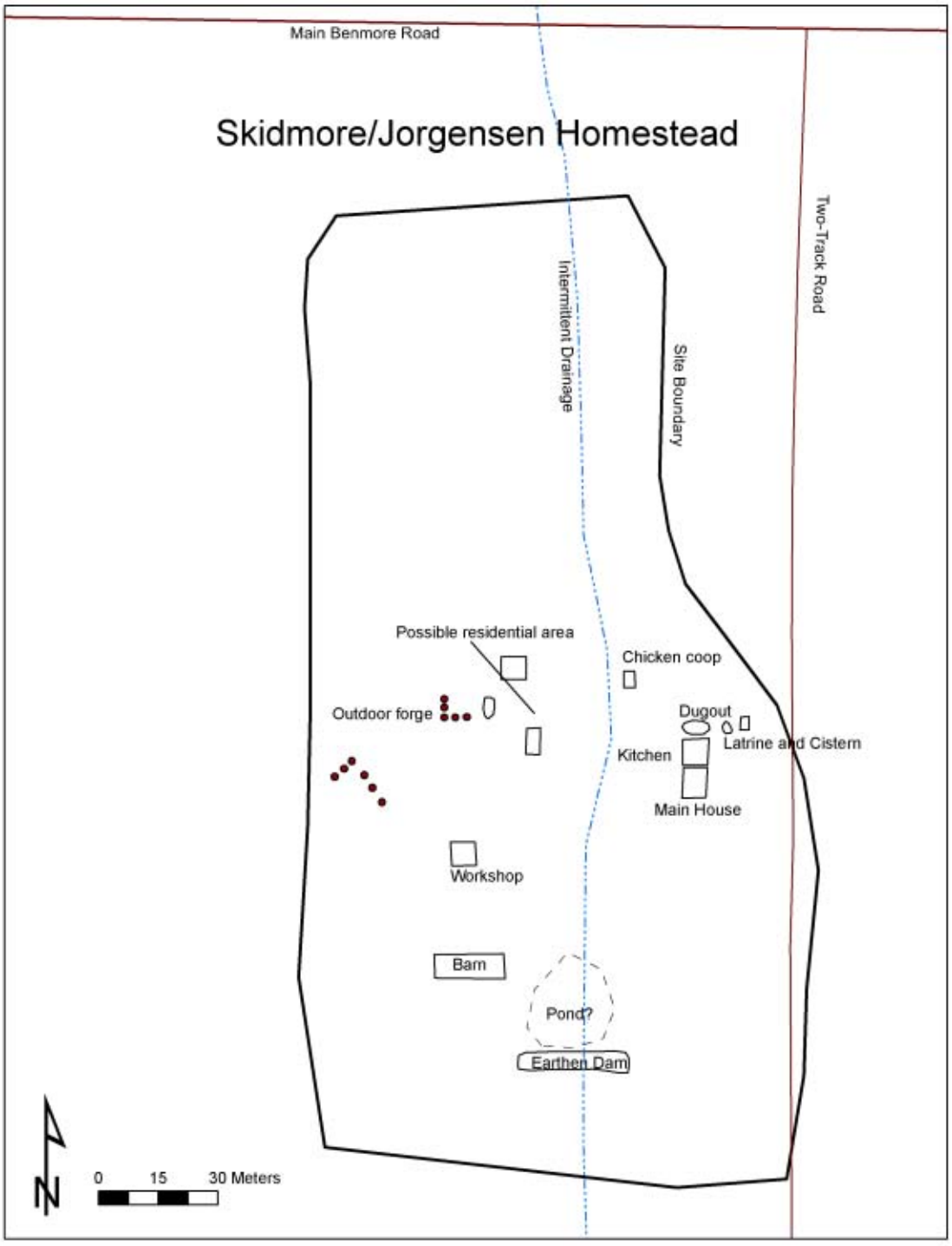


Figure 7. Skidmore/Jorgensen Homestead site map.

near the main house and, as a result, serve as a useful clue in identifying the main house among other stone or concrete foundations. Water would have been transported to the cisterns from nearby earthen dams and streams.

Additional outbuildings vary widely at Benmore. Figure 7 indicates many features in addition to the main house, cistern, and dugout at the Jorgensen/Skidmore Homestead. These features are typical of those found throughout Benmore and include latrine holes, chicken coops, and barns. Landscape features such as earthen dams, orchard remnants, and rock piles associated with field clearing are generally at the periphery of each site. These features play important roles in identifying each homestead's extent and utilized space within the community. Fences, mostly made with barbed wire, and the occasional rock wall were used to indicate boundaries between purposes and ownership. In many cases, boundaries that were once probably very clear are no longer identifiable.

Artifacts

Artifacts used in this thesis are limited to those which have survived on the surface and are, as discussed above, affected to varying degrees by weathering and vandalism. Artifacts are divided into four main categories: glass, ceramics, tin cans, and miscellaneous. Within these categories, artifacts discussed in this section include those which are especially useful in identifying age, socioeconomic level or site use.

Glass

Most of the glass at Benmore homesteads is in tiny, unidentifiable fragments. Larger fragments and the occasional whole bottle or jar assist in identifying characteristic glass functions at Benmore. These functions are primarily domestic and include window glass, tableware and decorative pieces, and food/subsistence items such as condiment jars and

wine bottles. Functions are most useful for determining feature function. For example, a depression surrounded by large amounts of window glass may suggest that there was a structure of some sort that has now been removed or otherwise obliterated. The color of glass is useful for determining site occupation ranges. Aqua-colored glass dates between approximately 1880 and 1920, and amethyst-colored glass dates between approximately 1880 and 1915. Clear-colored glass dates from 1930 to the present. Most sites at Benmore have all three of these color types present, suggesting that the sites date both before 1915 and after 1930, right during the main occupation time at Benmore. Color can also help demonstrate artifact function. For example, brown bottle glass is most often associated with beer or chemicals.

Ceramics

Ceramics are most useful when the fragments are large enough to identify the pattern, maker, and vessel type. Since this is not often the case at Benmore, ceramic paste is of particular interest, as described in the socioeconomic data section below. In addition, basic decoration types can contribute to identifying site occupation dates. For example, Flow Blue, a technique generally used on porcelain, was particularly popular from about 1825 to 1862 (IMACS 1990). Transfer prints were developed in the mid-eighteenth century and continued through the twentieth century, but were replaced in popularity by Decalware, invented around 1860 and still prevalent today (IMACS 1990; Simmons 2008). There are very few identifiable maker's marks on Benmore sites, but when found, these marks are very useful in identifying the date of occupation.

One of the most visible ceramic trends at Benmore is the popularity of blue-on-white ceramics, including mostly transfer print and flow blue designs. The two most popular patterns include the iconographic Blue Willow and the lesser known Ho-o Bird

(Phoenix). Blue-on-white ceramics are present on nearly every Benmore site though there is very little variety of patterns throughout the town. This contrasts sharply to the widespread variety in Decalware designs found throughout Benmore.

Tin Cans

Tin cans are most useful in terms of identifying feature function and food/subsistence variety among sites. The standard sizes of cans still used today, such as the easily recognizable short, wide tuna can and the church key punched, 3-ringed juice can, were manufactured similarly during the occupation of Benmore. Some cans, like milk cans, were far more common then but continued until the 1980s or later. As a result, it is often far easier to identify the contents of a can than it is to determine the manufacture date. The exceptions are hole-in-top cans of specific measurements or with specific markings (i.e. "Punch Here" cans) that can be dated to a specific date range.

Miscellaneous Artifacts

The miscellaneous artifacts category includes common items like barbed wire, stove parts, or shoe soles. These artifacts are often easily identified by general artifact function, which is useful in determining site functions. For example, large numbers of heavy duty cast iron fragments, used for various industrial purposes, assist in separating work and farm areas from domestic areas.

COMMUNITY DATA

The archaeological data gathered from the twenty sites included in this research tell much of the story of community life at Benmore, including differences and similarities of socioeconomic level and householding practices in the community. While these data

can be combined with and supported by historical records, the archaeological data are extremely useful on their own—particularly because they lack the bias of oral history. There are two specific questions which help frame the community data at Benmore. First, what community data have been collected from the Benmore sites? Second, what does this information tell us about Benmore?

What community data have been collected from the Benmore sites?

As discussed above, the Benmore data come entirely from surface observations. This includes, however, data similarly collected for each site. The sites can, therefore, be easily compared and contrasted, and they can be combined into an overall look at Benmore as a community which can be compared to Tintic Junction in Chapter 5. In describing the archaeology of Benmore, I first summarize the nature of features and artifacts on the sites. I then discuss the data gathered at the Benmore Schoolhouse (42To2707), which is the only community site identified at Benmore.

Table 3 summarizes the features identified within sites at Benmore. Features are identified as residences, storage-related, cisterns, farming-related, landscape (such as ditches and dams) and other features. Unidentified features are also tallied. Table 3 illustrates that out of 99 features recorded at sites associated with Benmore, 17 are residential and 14 are farming-related. This supports the supposition that Benmore was primarily a farming town. There are nine storage-related features, mostly dugouts. All of these features occur in close proximity to a residential structure and artifacts around these features are typically consistent with domestic and subsistence-related functions. The six cisterns identified on Benmore sites are also consistently associated with residential features. Other features include possible latrine pits, stone-lined flower beds, and other

Table 3. Benmore features by type.

Site No.	Site Name	Residential	Storage	Cistern	Farming-related	Landscape	Other	Indeterminate	Total Features per Site
42TO538	Charles Skidmore Homestead	1	0	0	0	0	0	0	1
42TO836	Ben Lomond Extension	0	0	0	0	0	0	0	0
42TO843	Ben Lomond I and II	2	2	2	6	2	0	1	15
42TO893	Charles Anderson Homestead	0	0	0	0	2	0	4	6
42TO1501	Jorgensen/Skidmore Homestead	2	2	1	4	1	1	1	12
42TO1510	Vernon Creek Trash I	0	0	0	0	0	0	1	1
42TO2125	Vernon Creek Trash II	0	0	0	0	0	0	0	0
42TO2270	Moses Green Homestead	1	1	0	0	0	0	1	3
42TO2373	Charcoal Preparation Site	0	0	0	0	0	7	0	7
42TO2376	Dog Hollow Cabin	1	0	0	0	0	0	0	1
42TO2707	Benmore Schoolhouse	1	0	0	0	0	1	1	3
42TO2886	Sharp/Hite Homestead	1	1	0	1	1	3	6	13
42TO2887	Van Otten Homestead	2	1	0	0	0	0	2	5
42TO2889	Downtown Homestead	1	0	0	0	0	0	3	4
42To2956	Chris Jensen Place	1	0	1	0	1	0	3	6
42TO3197	Sherman Cadwell Homestead	0	1	0	0	0	1	2	4
42TO3214	The Dry Farm Co-op	1	0	0	2	0	0	4	7
42TO3311	Irvin Hillman Homestead	1	0	0	0	0	0	1	2
42TO313	Hyrum Yates Homestead	1	1	1	0	0	0	2	5
UN-285	Oborn Homestead/Benmore Work Station	1	0	1	1	0	1	0	4
	Total:	17	9	6	14	7	14	32	99

domestic features.

Each artifact at Benmore was classified into one of five general function categories, including domestic, food/subsistence, personal, structural/industrial and indeterminate (Table 4). Thirty-five percent of artifacts at Benmore could not be identified to a specific general function. These generally include common materials in fragments or conditions

Table 4. Benmore general function ratios.

Site No.	Site Name	Domestic	Food	Personal	Structural	Indeterminate	Total
42TO538	Charles Skidmore Homestead	.69	.25	.00	.00	.06	672
42TO836	Ben Lomond Extension	.27	.12	.05	.22	.34	41
42TO843	Ben Lomond I and II	.26	.05	.01	.31	.37	2616
42TO893	Charles Anderson Homestead	.11	.19	.04	.30	.35	378
42TO1501	Jorgensen/Skidmore Place	.21	.05	.01	.36	.37	1130
42TO1510	Vernon Creek Trash I	.89	.00	.01	.09	.02	358
42TO2125	Vernon Creek Trash II	.18	.59	.17	.06	.01	108
42TO2270	Moses Green Homestead	.14	.08	.02	.01	.75	974
42TO2373	Charcoal Preparation Site	.32	.35	.00	.06	.26	65
42TO2376	Dog Hollow Cabin	.26	.19	.00	.30	.24	208
42TO2707	Benmore Schoolhouse	.14	.05	.01	.59	.21	1682
42TO2886	Sharp/Hite Homestead	.15	.16	.04	.27	.38	1611
42TO2887	Van Otten Homestead	.33	.05	.01	.21	.39	541
42TO2889	Downtown Homestead	.27	.04	.01	.13	.56	3358
42TO2956	Chris Jensen Place	.24	.07	.02	.58	.10	3033
42TO3197	Sherman Cadwell Homestead	.21	.09	.00	.03	.67	203
42TO3214	The Dry Farm Co-op	.28	.04	.02	.28	.38	5108
42TO3311	Irvin Hillman Homestead	.18	.14	.01	.60	.07	177
42TO3313	Hyrum Yates Homestead	.14	.14	.01	.39	.31	1188
UN-285	Oborn Homestead/Benmore Work Station	.00	.00	.00	.00	.00	0
	Total:	.25	.07	.02	.31	.35	23451

too mangled to identify. If we exclude these indeterminate artifacts, the percentages of artifacts in each of the other four categories changes slightly from that reported in Table 4. Forty-seven percent of artifacts at Benmore are structural/industrial in nature. This includes such things as wood and brick fragments from various structures, sheet metal fragments, and farm machine parts. Most non-can metal is structural/industrial. The other 53 percent of Benmore artifacts are associated with domestic, food, or personal

functions and are consistent with items used by family households of the time.

The Benmore Schoolhouse (Figure 8) was built in the center of town on a 3.12 acre lot intended for both the school and a church, which was never built. Based on artifact general function ratios for each feature (Table 5) and the nature of the features themselves, only Feature 1 is associated with the school. The remaining features appear to be domestic in nature and are associated with an additional homestead closely neighboring school property, of which no land claim or other record has been identified. The school-associated feature dates to the 1910s or 1920s; there are higher than average counts of window glass and structural/industrial artifacts, as well as pieces of desks. Domestic artifacts at the school include only a few fragments of glass and ceramics, some stove and bucket parts and more than 50 fragments of coal. This low domestic artifact count supports the identification of this feature as a public structure.

Bennion planted trees to beautify the school grounds in 1915. On June 30, 1921, Bennion (IBJ) taught Lagrand Larsen, one of the local children, "how to water the public lawn and trees". There are no references to any other public area at Benmore and since the church was never built, the school grounds were apparently the only public property in the community.

What does this information tell us about Benmore?

The features, artifact functions, and public school grounds at Benmore are consistent with a 1910s to 1920s farming community. The community as a whole is not necessarily homogenous, as I will discuss below, but the homesteads at least superficially resemble one another and the non-residential sites are consistent with other activities that occur in homestead communities.

Now that the community data at Benmore are summarized, there are two more

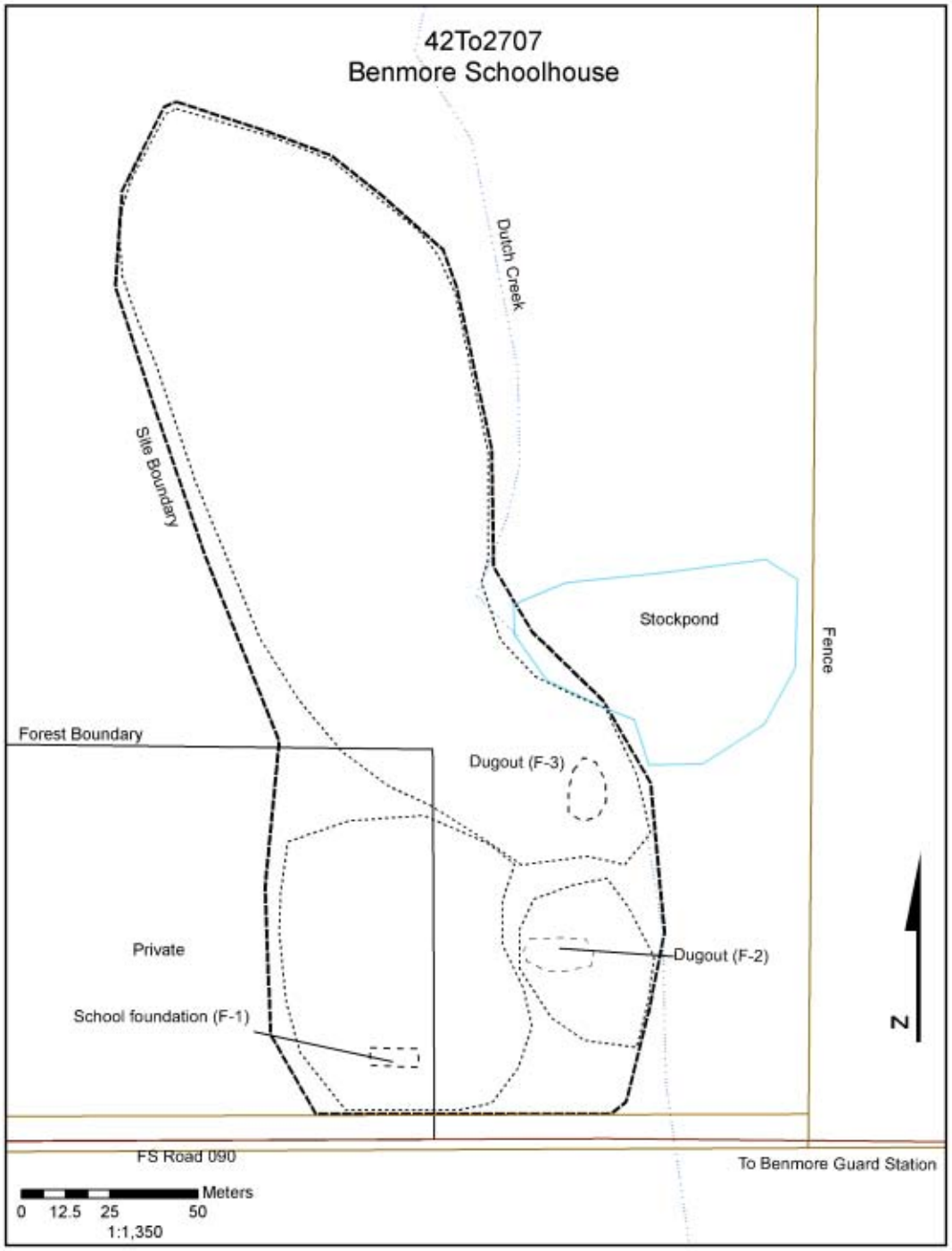


Figure 8. Benmore Schoolhouse site map.

Table 5. Benmore Schoolhouse general artifact functions by feature.

Feature No.	Feature Type	Domestic	Food/ Subsistence	Personal	Industrial/ Structural	Indeterminate	Total Count
1	School Foundation	16%	9%	3%	69%	3%	493
2	Dugout	9%	4%	0%	48%	39%	502
3	Dugout	15%	4%	0%	60%	21%	687
	Total:	25%	5%	1%	51%	19%	1682

specific areas of interest which can be addressed by the archaeological data. First is the question of what economic differences are evident within the community. For this we turn to socioeconomic data.

SOCIOECONOMIC DATA

A brief historical overview of life at Benmore was given in Chapter 2. To summarize, the historical record suggests that Benmore was established largely because of the influence of Israel Bennion. It was a farming community, had a high enough population to support its own school, and consisted primarily of members of the LDS Church. The historical data suggest that Bennion was a prominent figure, the bishop of the local congregation, but in his journal, Bennion frequently refers to his economic hardships. He suggests that all families are on a level playing field, excepting those whose members are unwilling to work. In an effort to clarify varying socioeconomic information, I look for indications of patterned differences in ceramic paste ratios, artifact functions, homestead size and total artifacts, and features at sites.

Ceramic Paste Ratios

Ceramic paste ratios at historic sites are commonly used to examine socioeconomic differences (Spencer-Wood 1987; Henry 1987). Historically, porcelain ceramics were generally display items while white earthenware ceramics were more often used for utilitarian purposes, although Henry (1987) notes that Sears and Montgomery Ward catalogs indicate that German porcelains were less expensive than decal-decorated English semi-porcelains and other whitewares in the 1920s. Since Benmore was occupied both before and after this shift in price index for porcelain, ratios of porcelain to whiteware at Benmore may be somewhat less reliable than ratios at sites occupied entirely before this shift, however the ratio should indicate socioeconomic differences since porcelain and whiteware prices were always different from one another. According to historic records, Benmore's residents are ethnically similar (Americans of European descent) and probably had equal access to goods (though not necessarily equal access to cash). Comparing ratios will indicate whether or not Benmore really was so homogeneous.

In order to compare porcelain rations, I first use correspondence analysis (CA), which Stephen Shennan (1997) describes briefly as analogous to principal components analysis for categorical data. The method utilizes chi-square distances to illustrate the inertia, or weight, with which specific variables affect the way data interact. CA graphs are useful when data demonstrate high chi-square values, indicating that differences in the data are large enough to suggest that discrepancies are not a matter of chance. The chi-square statistic is never reliable when the expected frequency value is below one. Some expected values below five (a traditional cut-off point), but above one are included here,

however in order to keep as many of the smaller sites as possible.

For the Benmore sites shown in Table 6, only twelve of the sites have enough data to be used in the CA. The sites whose expected frequency values are too low are typically the smaller homesteads and other non-residential sites, although Vernon Creek Trash I does have enough ceramic data to be used. At the Charles Skidmore Homestead, a large number of what are probably yellowed whiteware fragments were recorded as yellowware, which skews the percentage of other paste ceramics. This misidentification was corrected, though with the possibly erroneous assumption that all of the yellowware fragments, rare at Benmore, are actually whiteware. The data from this particular site

Table 6. Ceramic pastes ratios at Benmore.

Site Number	Site Name	Porcelain	Whiteware	Other Paste	Total Ceramics per site
42TO538	Charles Skidmore Homestead	.00	.54	.46	260
42TO843	Ben Lomond I and II	.16	.74	.10	481
42TO893	Charles Anderson Homestead	.03	.77	.19	31
42TO1501	Jorgensen/Skidmore Homestead	.06	.89	.05	123
42TO1510	Vernon Creek Trash I	.62	.38	.00	130
42TO2125	Vernon Creek Trash II	.00	1.00	.00	8
42TO2270	Green Family Homestead	.35	.65	.00	98
42TO2373	Charcoal Preparation Site	.00	1.00	.00	5
42TO2376	Dog Hollow Cabin	.04	.89	.07	28
42TO2707	Benmore Schoolhouse	.34	.66	.00	98
42TO2886	Sharp/Hite Homestead	.53	.44	.02	171
42TO2887	Van Otten Homestead	.25	.69	.06	133
42TO2889	Downtown Homestead	.17	.80	.03	852
42TO2956	Chris Jensen Homestead	.35	.63	.01	401
42TO3197	Sherman Cadwell Homestead	.14	.86	.00	22
42TO3214	The Dry Farm Co-op	.26	.70	.04	956
42TO3311	Irvin Hillman Homestead	.29	.71	.00	7
42TO3313	Hyrum Yates Homestead	.40	.59	.01	75
	Total:	.24	.69	.07	3879

should, therefore, be treated with some hesitation. Figure 9, the CA using the twelve sites, illustrates an interesting dichotomy among Benmore residents. The twelve sites are split evenly between those whose inertia pull most toward porcelain and those that pull most toward the whiteware and other paste categories. While the two clusters are not split very far apart, they are still distinctly divided.

This pattern is also visible in Figure 10, a dotplot of the percentage of porcelain at each site that permits the comparison of all Benmore sites with ceramics. Figure 10 is color-coded to separate the clusters indicated in the CA. The dotplot illustrates that the porcelain cluster in Figure 9 includes sites with more than approximately 30 percent of the ceramics having porcelain paste. Of the sites whose assemblages were too small to be in the CA, only one, the Irvin Hillman Homestead, may have enough porcelain to fit that cluster with 29 percent. The rest fit better in the whiteware cluster, though these fits are tentative due to sample size.

The CA and dotplot both indicate that there is a difference among the homesteaders. The occupants of the Sharp/Hite, Moses Green, Chris Jensen, anwd Hyrum Yates homesteads, as well as the unknown individuals associated with Vernon Creek Trash Scatter I and the Benmore Schoolhouse, with its two domestic zones, seem to have greater access to or preference for porcelain than the rest of the community. This suggests that those sites may have had more cash than other residents. Since Benmore was a small farming community isolated from populated areas, where socioeconomic class might be more of a factor, access to cash is the more likely alternative.

Artifact General Functions

The second socioeconomic indicator I use is the ratio of artifact general function and

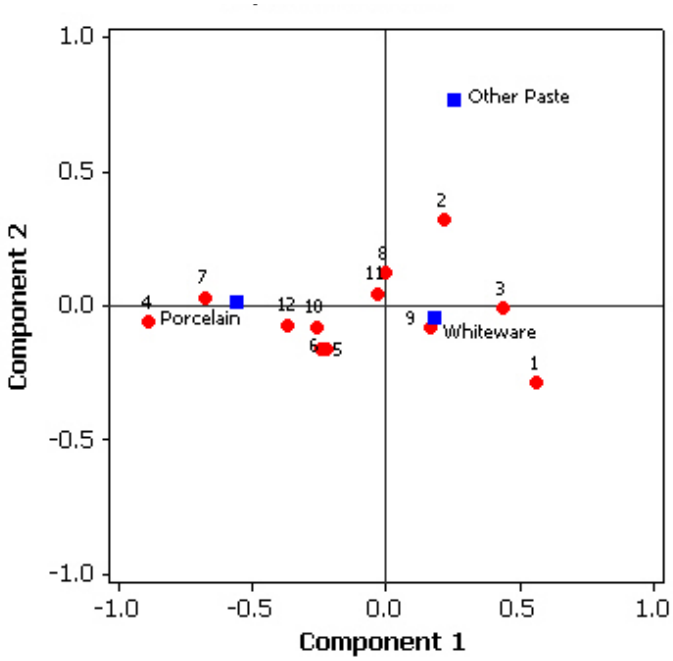


Figure 9. Correspondence analysis plot of Benmore ceramic paste ratios.

Key—1: Charles Skidmore Homestead; 2: Ben Lomond I and II; 3: Jorgensen/Skidmore Homestead; 4: Vernon Creek Trash I; 5: Moses Green Homestead; 6: Benmore Schoolhouse; 7: Sharp/Hite Homestead; 8: Van Otten Homestead; 9: Downtown Homestead; 10: Chris Jensen Homestead; 11: The Dry Farm Co-op; 12: Marvin Yates Homestead.

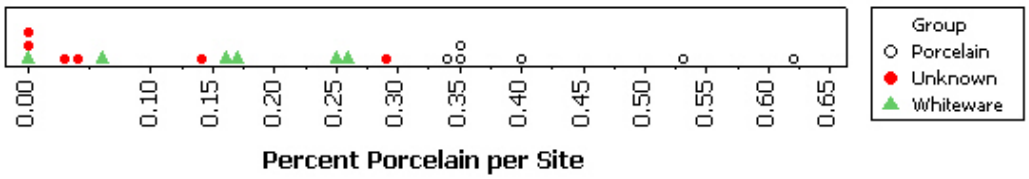


Figure 10. Dotplot of Benmore ceramic paste ratios.

total artifacts. Table 7 is an abbreviated version of Table 4 showing only Benmore sites with residential features. This limiting serves to focus the discussion of socioeconomic status at Benmore to sites that share function and thereby better control for functional variations that could interfere with comparison. It also eliminates the very small sites which would be excluded from the CA conducted below. There are thirteen homestead

Table 7. Benmore general artifact function ratios.

Site No.	Site Name	Domestic	Food	Personal	Structural	Indeterminate	Total
42TO538	Charles Skidmore Homestead	.69	.25	.00	.00	.06	672
42TO843	Ben Lomond I and II	.26	.05	.01	.31	.37	2616
42TO1501	Jorgensen/Skidmore Place	.21	.05	.01	.36	.37	1130
42TO2270	Moses Green Homestead	.14	.08	.02	.01	.75	974
42TO2376	Dog Hollow Cabin	.26	.19	.00	.30	.24	208
42TO2707	Benmore Schoolhouse	.14	.05	.01	.59	.21	1682
42TO2886	Sharp/Hite Homestead	.15	.16	.04	.27	.38	1611
42TO2887	Van Otten Homestead	.33	.05	.01	.21	.39	541
42TO2889	Downtown Homestead	.27	.04	.01	.13	.56	3358
42TO2956	Chris Jensen Place	.24	.07	.02	.58	.10	3033
42TO3214	The Dry Farm Co-op	.28	.04	.02	.28	.38	5108
42TO3311	Irvin Hillman Homestead	.18	.14	.01	.60	.07	177
42TO3313	Marvin Yates Homestead	.14	.14	.01	.39	.31	1188

sites with residential features.

Using correspondence analysis illustrates the variation visible among the sites listed in Table 7. Figure 11 is a CA of the artifacts at each site divided into the four general function categories, excluding indeterminate. It illustrates that domestic and structural functions are opposed (on either end of the x-axis) thereby representing a principal component. The second component opposes food-associated artifacts to the other categories. Figure 11 illustrates how much variety there is among artifact function ratios at the sites. It also demonstrates a continuing separation between the ceramic paste clusters identified above, although here the unknown sites are more similar to the porcelain cluster than the whiteware cluster. Corresponding scatterplots suggest that sites with a higher porcelain percentage also have a stronger correlation to structural/industrial artifacts than to domestic artifacts.

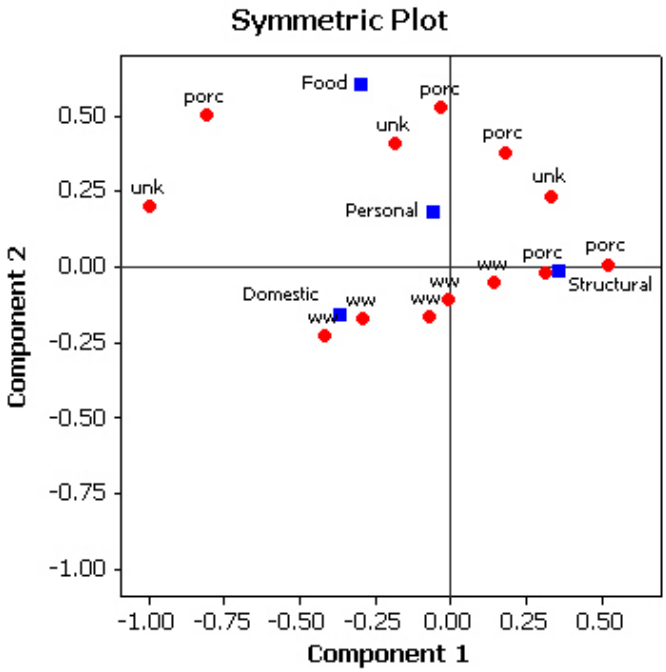


Figure 11. Correspondence analysis plot of Benmore general function artifacts labelled by the porcelain, whiteware, and unknown ceramic paste clusters identified in Figure 9.

Key—1: Charles Skidmore Homestead; 2: Ben Lomond I and II; 3: Jorgensen/ Skidmore Homestead; 4: Moses Green Homestead; 5: Dog Hollow Cabin; 6: Benmore Schoolhouse; 7: Sharp/Hite Homestead; 8: Van Otten Homestead; 9: Downtown Homestead; 10: Chris Jensen Homestead; 11: The Dry Farm Co-op; 12: Irvin Hillman Homestead; 13: Marvin Yates Homestead.

Homestead Size and Total Counts of Artifacts per Site

At Benmore, the size of sites is determined by the extent of the associated artifact scatter. This size, in contrast to the set parcel sizes made under homestead laws, permits comparison of land use without accounting for fields and grazing land. It is presumed that more buildings and land used translates to a larger operation, which may be due to family size or higher socioeconomic level.

Figure 12 is a scatterplot of the total number of artifacts per site versus the size of the site in square feet. The figure is color-coded by the ceramic paste clusters with fit

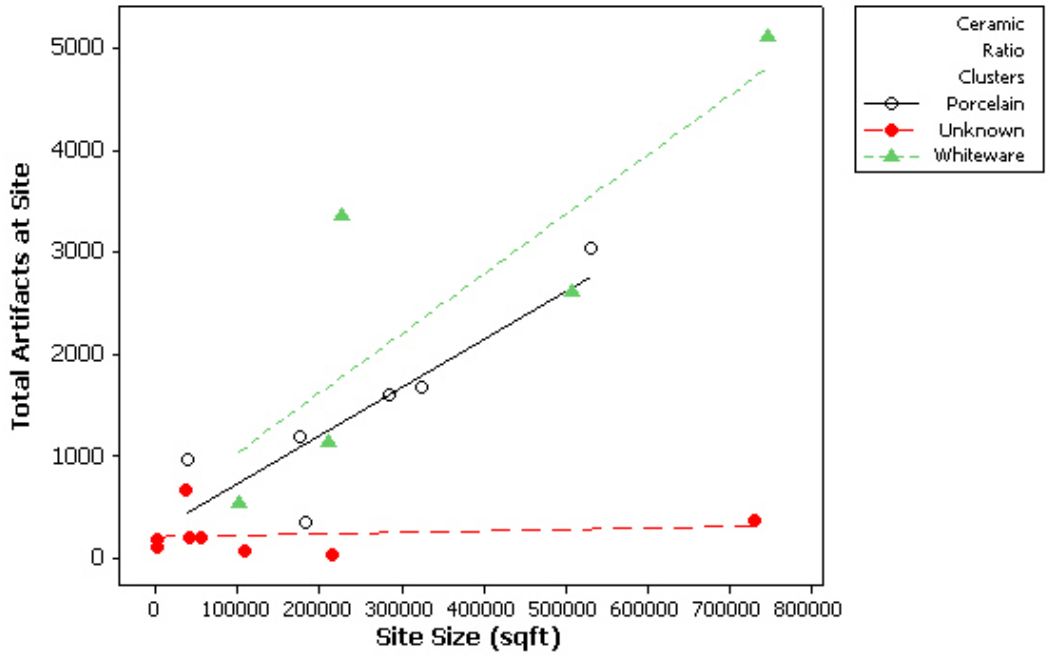


Figure 12. Scatterplot of total artifacts per site vs. site size labelled by the porcelain, whiteware, and unknown ceramic paste clusters identified in Figure 9.

regression lines. As expected, the sites which were too small to fit to a ceramic paste cluster are typically the sites smallest in area. The one significant outlier in this Unknown category is the Charles Anderson Homestead on the far right of the graph whose site size is skewed by the distant separation between features associated with the homestead rather than by number of artifacts and features. The regression lines fit to the porcelain and whiteware categories are at a fairly similar slope, demonstrating that ceramic paste does not affect the ratio of artifacts to site size. It is not surprising that there does appear to be a moderate positive correlation between total number of artifacts and site size (R^2 = .445; total artifacts at site = 294 + .00396 site size [sq ft]; p = .002) although size does not always reflect density of artifacts.

Features by Site

Similar to site size, the number of features in a site can also indicate differences

within a community. It seems logical that larger sites will have more features and that families who could build and support such large sites had more workers, whether in the family or hired hands. The implication is that larger sites reflect a higher socioeconomic level since these homesteads supported more people and presumably produced more income for the family. In order to build more facilities and take on more land, a family would need to be capable of providing the necessary workers and capital.

Figure 13 is a scatterplot of the number of features at each Benmore site versus the total size of each site in square feet. A regression analysis of these data support only a very moderate relationship ($R^2 = .226$; total features per site = 2.90 + .000009 site size [sq ft]; $p = .040$) between the variables. There are three sites with significantly higher feature counts—the Jorgensen/Skidmore Homestead, the Sharp/Hite Homestead, and the Ben Lomond I and II Homestead—and these three sites are all associated with multiple occupations by different families over time. Thus, it appears that the primary

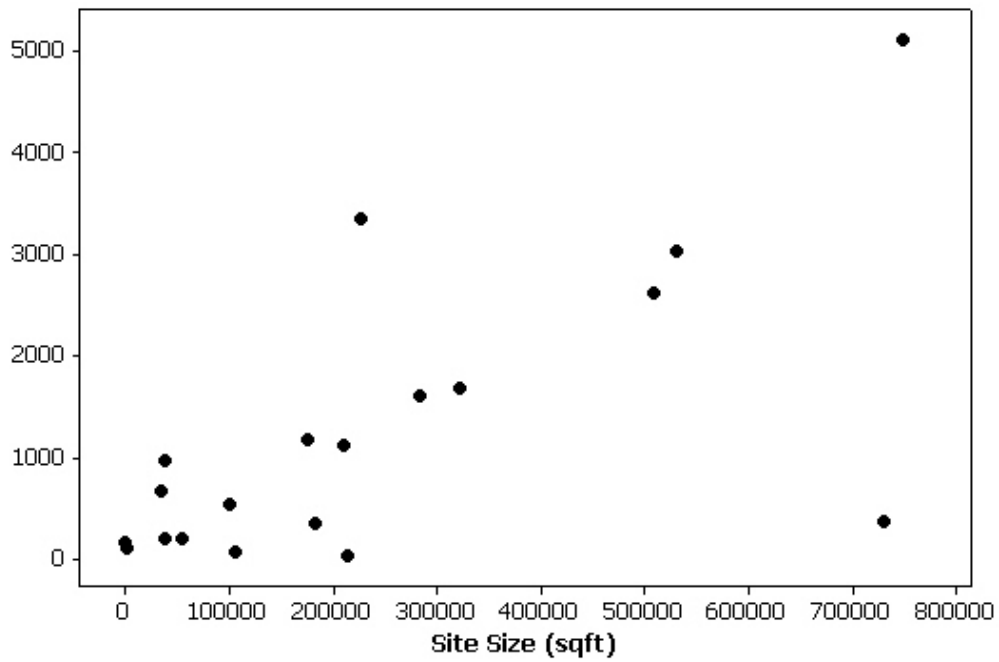


Figure 13. Scatterplot of the total number of features per site vs. site size in square feet.

correlation of number of features at Benmore is to the occurrence of multiple occupations by different families. Since each family would have had individual preferences and may have utilized the homestead land differently, it makes sense that this is a major influence. When Figure 13 is coded for ceramic paste clusters, no patterns are evident. Therefore feature count does not contribute to an understanding of that trend. Rather, it suggests a degree of homogeneity among homesteaders.

The basic socioeconomic data considered here demonstrate the Benmore community's heterogeneity. The ceramic paste data are particularly indicative of a possible difference within the community. The two clusters appear to split the community's large homesteads approximately in half—those with greater porcelain concentrations and those without. This suggests that some individuals in Benmore had more access to cash to acquire fancier goods. These individuals may have been in different businesses or were otherwise more involved in the capitalist economy which would have supplied such products. Bennion gives no allusion to such a difference, but other records provide limited support for the idea. For example, as noted in Appendix 1, the Moses Green family was involved in mineral prospecting in addition to raising cattle and conducting other agriculture-based activities. Other socioeconomic tests support this difference, although the number of features per site is more homogeneous.

HOUSEHOLDING DATA

In addition to socioeconomic data, my second specific consideration of archaeological data at Benmore addresses the question of householding. Given the above discussions of the general history of Benmore, community life, and socioeconomic differences, what evidence is there that Benmore fits the characteristics of a rural householding community per Halperin's discussion of Polanyi's economic strategy? As outlined in Chapter 1, there

are several ways in which artifacts and other surface data can be utilized with regards to householding. To review, these areas are dietary variety reflected in variety of foodstuff containers, greater reliance on storage and use of home/local resources reflected in the ratio of canning jars to store-bought cans and goods, lag or absence of popular styles demonstrated by less variety in goods prone to frequent change, and frequent instances of repair and reuse of items. In addition, social unity among community household members should be visible in a similarity of architecture, common subsistence practices, and similar religious and political beliefs.

In this section, I consider the evidence of householding within Benmore; however, since householding is best identified by comparison to the mainstream economy, most of the discussion of householding at Benmore is reserved for Chapter 5 in which the data presented here are compared with those of Tintic Junction, presented in Chapter 4.

Dietary Variety

Benmore data related to dietary variety of store-bought goods are somewhat limited by difficulty in identifying the specific type of food being stored in cans and jars unless those containers are of a specifically recognizable size or shape. This is sometimes due to the condition of cans found on site surfaces, but is also heavily affected by the fact that many foods, particularly fruits and vegetables, were packaged in identical cans such that the former contents are not recognizable without a label. Table 8 lists the cans and other food-associated, apparently store-bought artifacts by site and function at Benmore. Most function determinations were based on size, though some have identifiable maker marks. Canned goods are always assumed to be store-bought. Glass and miscellaneous food containers are more difficult. All, including canning jars—which may have been

Table 8. Benmore food function artifacts by category.

Site No.	Site Name	Glass						
		Canning	Beverage	Milk	Condiment	Jelly	Other	Total Glass
42To538	Charles Skidmore Homestead	40	130	0	0	0	0	170
42To836	Ben Lomond Extension	1	0	0	0	0	0	1
42To843	Ben Lomond I and II	47	1	0	0	0	0	48
42To893	Charles Anderson Homestead	0	6	0	0	0	0	6
42To1501	Jorgensen/Skidmore Homestead	33	2	0	0	0	0	35
42To2125	Vernon Creek Trash II	10	40	0	0	0	0	50
42To2270	Moses Green Homestead	20	0	0	0	0	0	20
42To2373	Charcoal Preparation Site	8	2	0	0	0	0	10
42To2376	Dog Hollow Cabin	8	1	0	0	0	9	18
42To2707	Benmore Schoolhouse	51	22	0	0	0	0	73
42To2886	Sharp/Hite Homestead	19	22	0	0	1	1	43
42To2887	Van Otten Homestead	7	0	0	1	0	0	8
42To2889	Downtown Homestead	72	8	0	1	2	0	83
42To2956	Chris Jensen Place	125	18	0	1	0	0	144
42To3197	Sherman Cadwell Homestead	0	7	0	1	1	0	9
42To3214	The Dry Farm Co-op	91	24	1	6	1	4	127
42To3311	Irvin Hillman Homestead	5	18	0	0	0	0	23
42To3313	Hyrum Yates Homestead	38	7	1	0	0	0	46

used for any number of foods—are given, but only those identified as being potentially store-bought are used to determine the variety of store-bought goods visible in the archaeological record of Benmore.

As is typical, variety of food containers appears linked to total number of artifacts. The number of categories of food function artifacts increases with sample size. Keith Kintigh (1984; 1989) proposed resampling methods by which sample size is controlled to allow more useful investigation of diversity. At Benmore, greater diversity would support the argument that the community was tied into the mainstream economy because it would demonstrate more purchased foods than would be expected of a householding

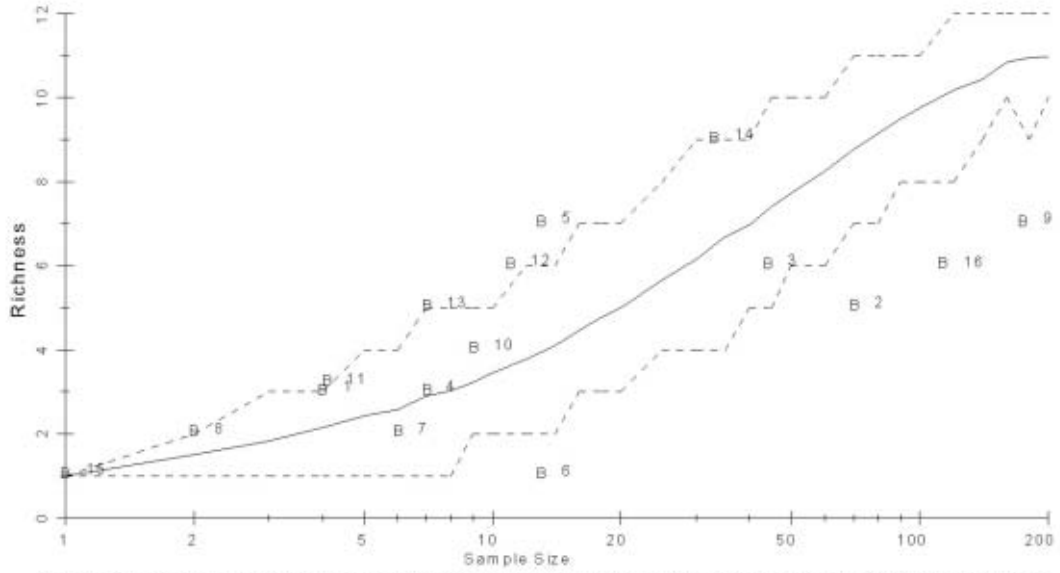
Table 8 (continued). Benmore food function artifacts by category.

Site No.	Site Name	Can															Miscellaneous			
		Milk	Syrup	Bak Powd	Coffee	Spice	Meat	Fruit/Veg	Sardine	Tuna	Juice	Lard	Beverage	Food	Other	Total Can	Beverage	Canning	Other	Total Misc.
42To538	Charles Skidmore Homestead	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42To836	Ben Lomond Extension	1	2	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
42To843	Ben Lomond I and II	58	0	8	1	1	2	0	0	0	0	0	0	7	1	78	2	2	0	4
42To893	Charles Anderson Homestead	32	1	0	0	1	2	18	7	0	1	0	0	0	0	62	5	0	0	5
42To1501	Jorgensen/Skidmore Homestead	5	0	0	0	1	0	0	1	0	0	4	0	8	0	19	1	1	1	3
42To2125	Vernon Creek Trash II	0	0	0	0	0	0	0	0	0	0	0	0	14	0	14	0	0	0	0
42To2270	Moses Green Homestead	5	1	0	1	1	3	4	0	1	1	0	12	0	2	31	0	2	0	2
42To2373	Charcoal Preparation Site	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0
42To2376	Dog Hollow Cabin	0	4	0	0	0	2	0	0	0	0	1	0	14	0	21	0	0	0	0
42To2707	Benmore Schoolhouse	0	1	0	0	0	1	1	0	0	0	2	1	0	0	6	1	7	0	8
42To2886	Sharp/Hite Homestead	140	1	0	12	1	16	0	0	3	0	7	0	14	0	194	1	0	0	1
42To2887	Van Otten Homestead	0	1	0	5	2	0	0	0	0	0	7	0	1	2	18	0	0	0	0
42To2889	Downtown Homestead	0	0	0	0	1	0	0	0	0	0	11	0	0	0	12	1	24	0	25
42To2956	Chris Jensen Place	5	0	0	1	1	2	0	1	0	0	0	0	1	0	11	0	43	5	48
42To3197	Sherman Cadwell Homestead	3	0	1	0	0	0	1	0	0	1	1	0	2	0	9	0	0	0	0
42To3214	The Dry Farm Co-op	6	0	3	7	2	3	0	0	0	4	9	0	7	1	42	6	9	1	16
42To3311	Irvin Hillman Homestead	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0
42To3313	Hyrum Yates Homestead	81	0	0	3	1	20	3	0	0	1	1	0	1	0	111	0	10	1	11

community seeking to survive through alternative non-capitalist means. Kintigh's (1984; 1989) computer programs written for his resampling methods utilize the composition of the sample population to generate a number of random samples based on the frequency distribution of the provided data, which indicate the richness of the data. A confidence interval is plotted around the mean of the richness and evenness values.

The data for Figure 14 were produced using Kintigh's (1984; 1989) computer programs. Each site/context is represented by a data point, with sample size along the X-axis and number of categories along the Y-axis. The graph also includes the mean and a 90 percent confidence interval. Items which are only identified to the general food level (for example canning jars which held any number of foods or cans identified as holding an unknown type of fruit or vegetable) are excluded.

Figure 14 demonstrates that dietary variety at many Benmore homesteads is more diverse than expected given the sampled population. This suggests that some of the Benmore homesteads have more dietary variety than expected, given the makeup of the



B 1: Ben Lomond Extension; B 2: Ben Lomond I and II; B 3: Charles Anderson Homestead; B 4: Jorgensen/Skidmore Homestead; B 5: Moses Green Homestead; B 6: Charcoal Preparation Site; B 7: Dog Hollow Cabin; B 8:Benmore Schoolhouse; B 9: Sharp/Hite Homestead; B 10:Van Otten Homestead; B 11:Downtown Homestead; B 12: Chris Jensen Homestead; B 13: Sherman Cadwell Homestead; B 14: The Dry Farm Co-op; B 15: Irvin Hillman Homestead; B 16: Marvin Yates Homestead.

Figure 14. Benmore dietary variety.

assemblage from the community as a whole. Comparing Benmore to Tintic Junction in Chapter 5 will contribute to determining the extent of this involvement in capitalism.

Reliance on Storage and Home/Local Resources

Benmore residents presumably produced food crops during the growing season which were intended to last through the balance of the year. Storage buildings and home packaging items like canning jars should, therefore, be visible throughout the community. Table 3 already illustrated the types of features that exist at Benmore. Table 9 shows the ratios of both home packaging and store bought food-associated artifacts by site. The data show no obvious patterns on their own but will be considered further in Chapter 5 where Benmore will be compared to Tintic.

Lag of Popular Styles

Styles data for the 1900s to 1920s are difficult to find and nearly impossible to identify with such a small assemblage as that at Benmore. The most common artifact type indicative of popular culture and economy styles in the early twentieth century United States is domestic ceramics. Unfortunately, during such a short occupation, it is likely that if Benmore residents did acquire pieces, or even full sets, of trendy ceramics, they were not owned long enough to be broken before the residents moved away from the town. As a result, there are very little, if any, useful data to either confirm or deny a lag of popular styles that would be necessary to argue such a lag as indicative of householding at Benmore.

Table 9. Benmore canning jars and food cans.

Site No.	Site Name	Canning Glass	Canning Misc	Canning Can	Canning Total	Beverage Cans	Food Cans	Cans Total
42To538	Charles Skidmore Homestead	40	0	0	40	0	0	0
42To843	Ben Lomond I and II	47	2	0	49	59	19	78
42To893	Charles Anderson Homestead	0	0	0	0	33	29	62
42To1501	Jorgensen/Skidmore Homestead	33	1	0	34	5	14	19
42To2125	Vernon Creek Trash II	10	0	0	10	0	14	14
42To2270	Moses Green Homestead	20	2	0	22	19	14	33
42To2373	Charcoal Preparation Site	8	0	0	8	13	0	13
42To2376	Dog Hollow Cabin	8	0	0	8	4	17	21
42To2707	Benmore Schoolhouse	51	7	0	58	1	5	6
42To2886	Sharp/Hite Homestead	19	7	0	20	152	42	194
42To2887	Van Otten Homestead	7	0	0	7	7	13	20
42To2889	Downtown Homestead	72	24	0	96	0	12	12
42To2956	Chris Jensen Place	125	43	0	168	6	5	11
42To3214	The Dry Farm Co-op	91	9	1	101	17	24	41
42To3313	Hyrum Yates Homestead	38	10	0	48	85	26	111

Reuse and Repair

Table 10 illustrates the instances of reuse, repair, and other artifact manipulation by site. There are no visible patterns in the data, although with a few exceptions (such as the Chris Jensen Homestead), instances of reuse appear to moderately correlate with total number of artifacts (R = .445; total number of reused artifacts = 5.7 + .0213 total number of artifacts by site; p = .002), as shown in Figure 15. It is important to remember here that some sites were recorded before reuse was identified as an important variable and several of the sites indicating no reuse may actually be instances of no data.

Table 10. Benmore evidence of reuse and repair.

Site No.	Site Name	Holes Punched or Cut	Edges Rolled	Structural Use	Ends Cut Off	Flattened	Other	Holes Punched or Cut	Edges Rolled	Remade as something else	Flattened	Otherwise Modified	Total Re-Used Artifacts	Total Artifacts	% Reused
42To538	Charles Skidmore Homestead	0	0	0	0	0	0	0	0	0	0	0	0	672	0.00%
42To836	Ben Lomond Extension	0	0	0	0	0	0	0	0	0	0	0	0	41	0.00%
42To843	Ben Lomond I and II	15	0	0	4	2	2	0	0	0	0	0	23	2616	0.88%
42To893	Charles Anderson Homestead	2	0	1	0	0	0	0	0	0	0	0	3	378	0.79%
42To1501	Jorgensen/Skidmore Homestead	4	0	0	1	28	0	5	0	22	0	1	61	1130	5.40%
42To2125	Vernon Creek Trash II	0	0	0	0	0	0	0	0	0	0	0	0	108	0.00%
42To2270	Moses Green Homestead	0	0	0	0	1	0	0	0	0	0	0	1	974	0.10%
42To2373	Charcoal Preparation Site	0	0	0	0	0	0	0	0	0	0	0	0	65	0.00%
42To2376	Dog Hollow Cabin	0	0	3	0	0	0	0	0	0	0	0	3	208	1.44%
42To2707	Benmore Schoolhouse	0	0	0	0	0	0	87	0	1	0	0	88	1682	5.23%
42To2886	Sharp/Hite Homestead	8	0	0	2	7	4	4	0	7	0	7	39	1611	2.42%
42To2887	Van Otten Homestead	0	0	0	0	0	0	0	0	0	0	0	0	541	0.00%
42To2889	Downtown Homestead	0	0	0	0	2	0	0	0	35	1	0	38	3358	1.13%
42To2956	Chris Jensen Place	0	0	0	1	113	0	46	0	3	1	1	165	3033	5.44%
42To3197	Sherman Cadwell Homestead	0	0	0	0	51	0	0	0	0	0	0	51	203	25.12%
42To3214	The Dry Farm Co-op	0	0	41	5	15	0	14	0	12	0	4	91	5108	1.78%
42To3311	Irvin Hillman Homestead	0	0	0	0	0	0	0	0	0	0	0	0	177	0.00%
42To3313	Hyrum Yates Homestead	0	0	0	1	0	0	23	0	2	0	5	31	1188	2.61%
	Total:	29	0	45	**14**	**219**	**6**	**179**	**0**	**82**	**2**	**18**	**594**	**23093**	**2.57%**

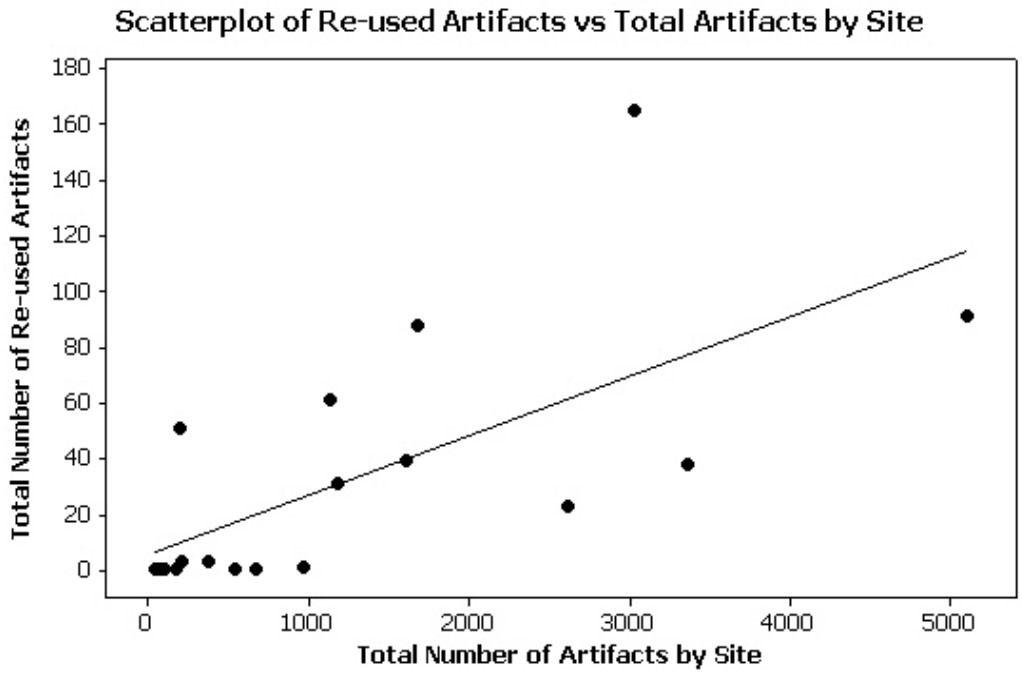


Figure 15. Scatterplot of Benmore reused artifacts vs. total artifacts by size size .

Similarity of Architecture, Subsistence, and Beliefs

Similarity of architecture is limited by the extent of removal at Benmore sites. Table 3 already shows that most residential sites are fairly comparable in the types of feature extant. Number of features typically varies by size of site. It appears that architecture is generally comparable throughout Benmore homesteads. The sites with more features than the norm, such as Ben Lomond, the Sharp/Hite Homestead and the Skidmore/ Jorgensen Homestead all changed hands between several families. It is curious that the Dry Farm, one of the largest sites and one that local tradition maintains was occupied by two families at once, has fewer features than might be expected.

Subsistence practices among Benmore residents appear to be similar. Some variation is visible in diversity of food and home storage use; however, no clear trends are visible. Since most of the town's residents were farmers (see Table 1), this is not surprising.

Belief-systems include both religious and non-religious values. The LDS Church began to encourage its membership to avoid alcohol, tobacco and coffee in 1833 and by 1902, use of these substances was cause for restriction from certain religious activities such as temple worship (Alexander 1981). Bennion notes several meetings in which Benmore residents were strongly encouraged to abstain from such items. Archaeological data, however, do not support any clear separation between residents who were LDS and those who were not. Table 11 shows artifacts associated with alcohol, tobacco and coffee by site, with religious affiliation noted where known. These data should be considered somewhat unreliable, however, since both cans and bottles were frequently reused for different functions. Bottles, in particular, may have been collected, refilled with unidentifiable substances (either alcoholic or not), and then sold again. Those families which are not on the Benmore Ward records may still have been LDS (choosing to attend another congregation for personal reasons) or may have been another religion of many practiced by residents of Tooele County.

Non-religious belief systems, such as self-sufficiency or work-ethic are often over-looked in such a religiously definable community as Benmore, but it is probable that where similarity of religion was absent, other values relating to lifestyle in early settlement areas still united the community. Bennion suggests, however, that perspectives on community development versus personal gain were not held in common. On May 10, 1914, he [IBJ] stated at a Church meeting:

> Water owners have selfishly withheld water from their nabors (sic), yea from their own sons, and now if the water is forced from them, the elements of profit, and pleasure, will be lacking and the cause of Zion will not be advanced as it would otherwise have been.

Bennion, at least, believed there were differing values at work in Benmore.

Table 11. LDS Church discouraged items at Benmore.

Site No.	Site Name (LDS Affiliation)	Alcohol	Tobacco	Coffee	Total Prohibited Artifacts	Total Artifacts	Percent Prohibited
42TO538	Charles Skidmore Homestead	0	0	0	0	672	0%
42TO836	Ben Lomond Extension (LDS)	0	1	0	1	41	2%
42TO843	Ben Lomond I and II (LDS)	2	10	1	13	2616	0%
42TO893	Charles Anderson Homestead	6	8	0	14	378	4%
42TO1501	Jorgensen/Skidmore Place (LDS)	5	5	0	10	1130	1%
42TO1510	Vernon Creek Trash I	2	0	0	2	358	1%
42TO2125	Vernon Creek Trash II	0	0	0	0	108	0%
42TO2270	Moses Green Homestead (LDS)	3	0	1	4	974	0%
42TO2373	Charcoal Preparation Site	1	0	0	1	65	2%
42TO2376	Dog Hollow Cabin	1	1	0	2	208	1%
42TO2707	Benmore Schoolhouse	0	0	0	0	1682	0%
42TO2886	Sharp/Hite Homestead	3	22	11	36	1611	2%
42TO2887	Van Otten Homestead (LDS)	0	0	5	5	541	1%
42TO2889	Downtown Homestead	0	1	0	1	3358	0%
42TO2956	Chris Jensen Place (LDS)	6	2	1	9	3033	0%
42TO3197	Sherman Cadwell Homestead	0	1	1	2	203	1%
42TO3214	The Dry Farm Co-op	48	0	7	55	5108	1%
42TO3311	Irvin Hillman Homestead	0	1	0	1	177	1%
42TO3313	Hyrum Yates Homestead (LDS)	0	0	3	3	1188	0%
	Total:	77	52	30	159	23451	.68%

Unfortunately, the archaeological record does not yet readily contribute to our understanding of belief systems at Benmore.

Similarity of Socioeconomic Level

Evidence of differences in socioeconomic level is presented above. It is clear that variation did exist among Benmore residents. Since a similar socioeconomic level among

most residents contributes to contentment among residents and, in a householding society, reflects the interrelationship of all those within the householding group, it is apparent from the data presented in this chapter that if householding occurred, either only some of the residents of Benmore practiced it, or they practiced householding to different degrees within the community. It is only through comparison with a community that was much more involved in the mainstream economy that such a conclusion can be substantiated, however. Therefore, Chapter 4 presents data at Tintic Junction which are as equivalent as possible to those presented here for Benmore. Chapter 5 will then compare the two data sets.

SUMMARY

Archaeological investigations at Benmore, Utah were conducted over several years. The data presented here come from the surfaces of a total of twenty sites. Sites associated with Benmore vary from a number of single-family homestead operations, to one large cooperative farm, one series of charcoal platforms, and a few other sites. The data from these sites, when organized by general artifact function, are useful in defining similarities and differences among the community and its socioeconomic level. Basic householding data are identifiable, as well, although these data are more useful when compared to data from a community actively participating in the mainstream economy. Chapter 4 will present Tintic Junction data similar to that presented here for Benmore. Chapter 5 will compare these data sets to each other and draw conclusions relating to householding within the Benmore community.

4 ARCHAEOLOGICAL INVESTIGATIONS AT TINTIC JUNCTION

The new R. R. has crossed the wagon road just over the Goshen Pass. Siding for Vernon is right by the "Old Road" running down from the Barrow Pass. Mine was the first wagon to cross the rails, and just after I was over, the construction train came along. I swung my hat, they whistled, my horses plunged, got "straddle" of the tongue; did more kicking and bucking, and got right again. This will bring us to about 8 ½ miles from R. R. station instead of 17 miles. [IBJ May 8, 1904]

In 2000-2001, the Level III Communications Fiber Optic Project resulted in archaeological compliance work at Tintic Junction, Utah. Work was conducted by SWCA Environmental Consultants, Inc. (SWCA), under the direction of Dr Matt Seddon. The project followed the Union Pacific Railroad Right-of-Way, and several railroad-associated historic sites in and around Rush Valley were included in the project work. These include railroad section stations at Faust, Dunbar, Lofgreen and Tintic Junction. For the purposes of this thesis, Tintic Junction is used as a contrast to Benmore because the city was only 20 miles away, but significantly differs socioeconomically from Benmore. This chapter provides a brief historical summary of Tintic Junction, as well as an overview of the archaeological methods and research design used by SWCA in their investigations. The bulk of the chapter is devoted to an analysis of community, socioeconomic and householding data at Tintic Junction identical to those applied to Benmore in Chapter 3. Chapter 5 will then compare the findings at the two sites.

A BRIEF HISTORICAL NARRATIVE OF TINTIC JUNCTION

The history of Tintic Junction is tied to that of the San Pedro, Salt Lake and Los

Angeles Railroad (SP, SL, & LA) line. The town was never incorporated into more than a railroad operation for that line. The line's specific location, running just west of Eureka, was chosen for the purpose of more easily accessing the rich mineral wealth of the Tintic Mining District. After several years of competition among various companies and their subsidiaries, the SP, SL, & LA was constructed using a standard gauge rail line that stretched the long distance from Salt Lake City to Los Angeles. Regular service began May 1, 1905 and by 1909 two trains a day ran from Salt Lake to Tintic Junction (though these continued to follow the original Salt Lake and Western/Oregon Short Line Railway). The SP, SL, & LA was used heavily for hauling ore from the Tintic Mining District. In 1918, the old rail line was removed and only the SP, SL, & LA operated.

Tintic Junction was established in 1903 as a work encampment associated with the construction of the Leamington Cutoff of the SP, SL, & LA railroad. There were more than 30 buildings and structures associated with the Tintic Junction section station, not including section foremen houses and some other residences, making it one of the larger section stations along the rail line. Tintic Junction even had its own school from 1910 to 1913 (Hutmacher and Lawrence 2001). The population of the community is difficult to ascertain since it was included with the Eureka precinct, and it is possible that census takers failed to record the community until 1930 when it is noted separately (population: 67). With Eureka, a booming mining town, only three miles away, Tintic Junction never developed its own stores or other services and after 1913, children attended the Eureka schools. Nevertheless, Tintic Junction was "undoubtedly a busy stop with every train traveling between Los Angeles and Salt Lake City along the Leamington Cutoff having to stop at Tintic Junction to take on coal and water in preparation for the long grade to the "summit" at Boulter" (Hutmacher and Lawrence 2001:46).

All of the residences appear to be associated with the railroad, although little is

known about the residents. Residences were either bunkhouses used as temporary stays for work crews or single-family dwellings for the families of section foremen. Residents of Tintic Junction purchased their food and other items at Eureka or ordered them through railroad commissaries at reduced employee shipping costs. Mrs. Matsumiya, the wife of Jinzaburo Matsumiya, a Japanese immigrant section foreman, ran what may have been one of the only side-businesses to the railroad at Tintic Junction. She prepared lunches for Japanese bachelors working at the section, charging 20 dollars per month for the service, and also did laundry for the men. Such activities served to supplement her family's income. The Matsumiyas arrived at Tintic Junction around 1923 and worked there until 1942, during World War II, when the family was forced off railroad property like many other Japanese employees.

Other changes occurred during the 1940s which resulted in Tintic Junction's ultimate demise. A centralized traffic control system and route changes affected the importance of the section station. Two work crews were housed, instead of one, for some time and many rail services were shifted to Tintic Junction, but by 1948, the Tintic Junction roundhouse was dismantled and employees were transferred elsewhere (Hutmacher and Lawrence 2001). The town was left to the few transient residents who would pass in and out of the area through the 1960s. Features from the heyday of Tintic Junction are still visible on the landscape, but a rare reference (Falling Rain Genomics 2008) to the location as more than a highway crossroads suggests a present-day population of 54 people within a 7 kilometer radius (including part of Eureka).

PROJECT RESEARCH DESIGN

Archaeological investigations at Tintic Junction were conducted in advance of

a trench that was dug through the town for fiber optic lines. Work included surface collections and recording, excavations, and site monitoring. The 64-acre community was recognized as an excellent potential contributor to railroad history in Utah and was therefore made a key focus of the overall project.

The overarching research design for all historical sites investigated as part of the project focused on large-scale historical events and local situations. Research recognized the contribution of ranching and farming, mining, settlement studies, and consumerism/ subsistence in addition to railroading as themes affecting individual sites. At Tintic Junction, mining and railroading are most applicable, but the subsistence of railroading was also analyzed.

Archaeological remains at Tintic Junction include many different structures and artifact concentrations. Table 12 lists all structures present at Tintic Junction in June 1914 and is taken from Hutmacher and Lawrence (2001). Artifacts on site include glass, tin cans, ceramics and miscellaneous domestic, railroad and other items. Three areas, not including the entire site, were identified as representative of the several activities that occurred at Tintic Junction (Figure 16). These areas are sub-divided into 22 contexts which each represent a specific purpose or function. Table 13 provides a brief description and estimated date for each.

In addition to these areas, several areas associated with railroad maintenance were investigated. Excavations were conducted within each of the formally defined areas and at multiple section houses, depressions and other locations and other areas of interest. Investigations concluded that Tintic Junction's population during its time as a railroad section station was both diverse and active. Two time periods are represented at the site: 1905 and from approximately 1920 to 1960. A portion of Area A includes the early period construction encampment and lacks domestic artifacts and structures.

Table 12. Structures Present at Tintic Junction, June 1914.
Reproduced from Table 4.2 (Hutmacher and Lawrence 2001).

Building/Structure Type	Qty	Dimensions	Description/Comment
Depot	1	26 x 80 ft	Frame building; passenger and freight
Coal shed and Out-house	1	8 x 16 ft	Frame building
Track scales	1	100 ton capacity	Fairbanks concrete foundations
Section house	4	24 x 32 ft	1 1/2 stories; frame; root cellar; walks
Bunk house	1	16 x 34 ft	Frame building
Section tool house	2	10 x 14 ft	Frame building
Outhouses	6	4 x 5 ft	Frame building
Sheds	5	various	Frame buildings
Water tank	1	24 ft dia x 16 ft tall	Wood tub; concrete footings
Pump house	1	16 x 16 ft	Frame; coal shed addition, well, and wood derrick
Pumper's house	1	8 x 26 ft	Rail car body lean-to
Coaling station	1	unknown	12 pocket patent coal chute on concrete foundation
Engine house	1	unknown	3 stalls; brick walls; concrete foundation
Platform	2	9 x 16 ft; 272 sq ft	One covered; one material platform
Oil cellar	1	10 x 13 ft	Concrete structure
Cinder pit	1	3 x 24 x 3 ft	n/a
Sand house	1	13 x 19 ft	Sand bin associated (12 x 23 ft)

The remainder of Area A, along with Areas B and C, represent the primary period of occupation at Tintic Junction when the site operated as a railroad section station.

Once Tintic Junction was decommissioned in 1948, homes were sold, the engine roundhouse was dismantled, and many of the materials from these features were re-used to construct other features found on the site. A fire occurred among Area C's residences at some point and the resulting bull-dozing of the area seriously fragmented many artifacts and collapsed some structures. The area progressively declined until Tintic

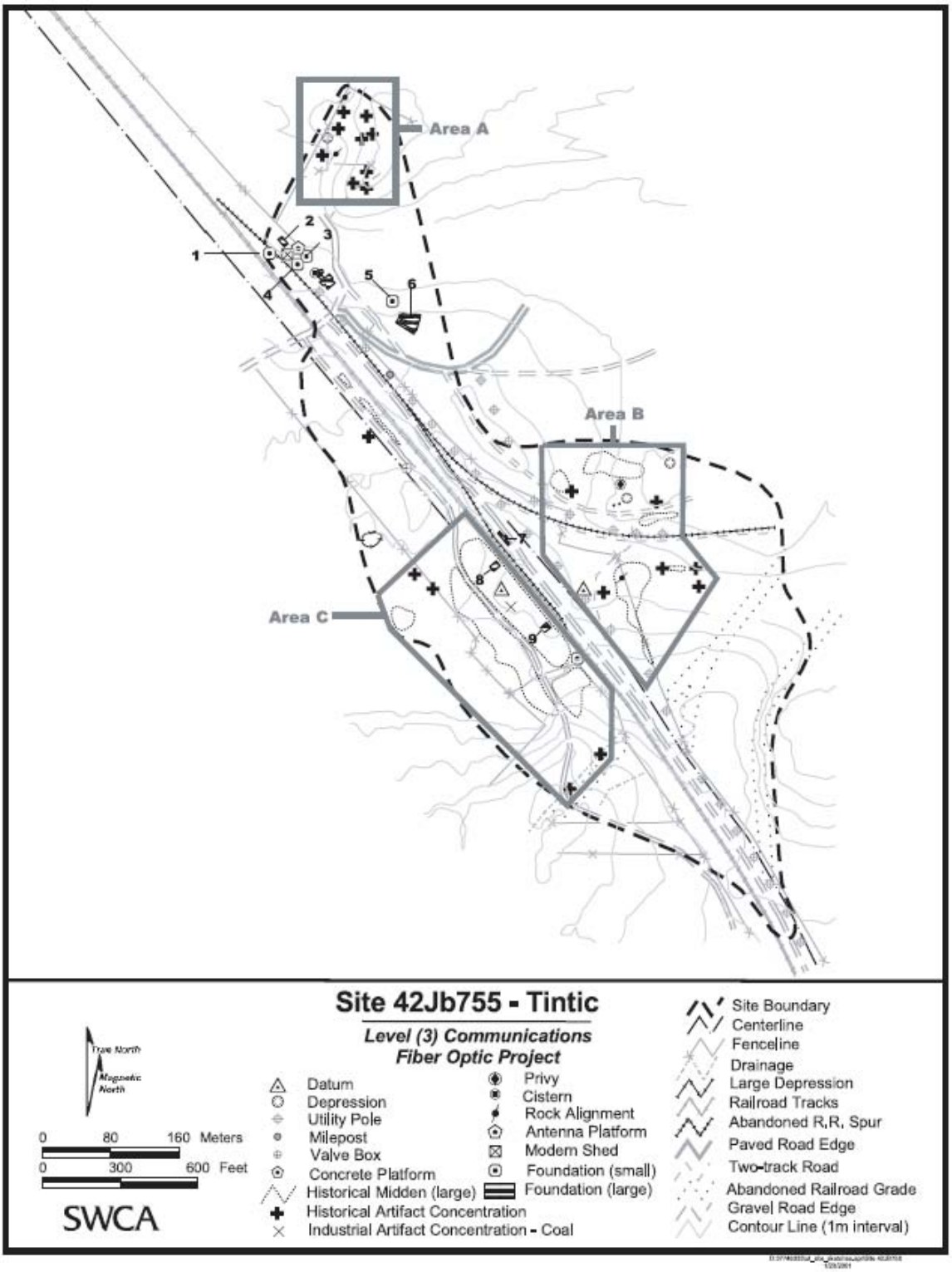


Figure 16. Map of Tintic Junction with Areas. Reprinted with permission from SWCA, Inc.

Table 13. Tintic Junction context area summaries.

Area	Context	Approximate Date	Description
A	Depression 1 and HM 1	1935 to 1945	Depression and historical midden.
A	Possible Auto Dump	Late 1950s and on	1940s and 1950s cars and car parts.
A	Possible Encampment	1908 to 1960	4 artifact concentrations and a rock alignment.
A	Rock Exposure 1	----------	Natural rock cluster.
B	Depression 3 and Structure 1	1905-1975	Gandydancer shack and depression.
B	Depression 4	1905-1975	Cistern.
B	Depression 5	1929-1964	Root cellar.
B	Depression 6	1929-1964	Decorative pond.
B	Historical Privy 1	1905-1960s	Privy.
B	Platform 1	1923-1942	Residential platform
B	Railroad Disposal Area	1917-1975	2 middens.
B	Refuse Disposal Areas	1925-1960	Artifact concentration and midden.
C	Foundation 8	1905-1975	Section house, industrial artifact conc., rock alignment, wooden posts.
C	Foundation 9	1905-1975	Section house, dugout, wooden posts, artifact concentration.
C	Foundation 10	1905-1975	Section house, artifact concentrations.
C	IAC-Building Material	1905-1975	Industrial artifact concentration.
C	Refuse Disposal Area	1905-1975	Artifact concentrations, 3 middens.

Junction ceased operating as a stop along the SP, LA, and SL Railroad. Some residences remained occupied into the 1960s, but Tintic Junction was no longer a separately identifiable community.

METHODS

Although investigations at Tintic Junction were conducted primarily through

excavation, the data collected through analysis of artifacts should be generally comparable to that collected from surface artifacts at Benmore. This is in part due to the extremely meticulous recording methods at Benmore, but also to the well-defined analysis methods used by SWCA at Tintic Junction. SWCA analysts (2001:42) report that "historical artifacts were collected and identified, and the analyses of the artifacts were used to address first-order research questions such as site stratigraphy, cultural activities that have contributed to the site formation, the age of sites, and food resources used." This section briefly summarizes the methods used by analyzers to identify and categorize historical artifacts collected from Tintic Junction.

SWCA analysts divided artifacts into four general artifact categories: domestic, food/subsistence, personal, and structural/industrial. For the purpose of brevity, the analysis methods used by SWCA are summarized for each material type (glass, historical ceramics, ammunition cartridges, tin cans, and miscellaneous artifacts) in Table 14.

The only additional note regarding artifact analysis relates to ammunition cartridges, which play little part in this thesis since ensuring true association of cartridges found on the surface is sometimes impossible. They are not abundant at either Benmore or Tintic Junction and since cartridges are all but ignored at Benmore, for my purposes, they are likewise discounted at Tintic Junction.

COMMUNITY DATA

Investigations at Tintic Junction resulted in the identification of several use areas, as defined above. The several functions of the town are visible within these areas as clusters of similar features. For example, Area C has a cluster of residential features including foundations, depressions, and others. The types of features identified at Tintic Junction

Table 14. Artifact types and functions identified by SWCA at Tintic Junction.

Artifact Type	Elements or Details Analyzed	Functions Identified	
Glass			
	Part	Whiskey/Liquor	Ale bottle
	Color	Champagne	Figural
	Diagnostic base marks	Beer	Cosmetic
	Neck finish	Ale/Stout	Patent Medicine
	Method of manufacture	Wine	Pharmeceutical Store
	Function	Other Alcoholic	Poison
	Decoration	Other Non-alcoholic	Chemical
		Soda/Mineral Water	Insulator
		Catsup	Lamp Chimney
		Condiment	Tableware
		Canning Jar	Window
		Milk Bottle	Indeterminate
		Mustard	Bitters
		Other Kitchen	Baby feeding
		Preserves/Pickles	Soda pop
		Sauce, club	Demijohn
		Ashtray	Perfume
		Goblet	Aftershave
		Ink	Shelf
		Other Domestic	Vial/Test tube
		Tooth Powder	Worked Glass
		Shoe Polish	Other
		Wine Glass	General Bottle
Historic Ceramics			
(Analysis follows the guidelines in IMACS 1990)	Paste	Bowl	Shouldered jar
	Glaze	Coffe cup/mug	Soy sauce
	Decoration	Chamber pot	Spoon
	Pattern	Crockery	Tea pot
	Vessel part	Mixing bowl	Wine cup
	Vessel form	Pitcher	Whiskey bottle
		Plate	Electrical Porcelain
		Platter	Mortar

Table 14 (continued). Artifact types and functions identified by SWCA at Tintic Junction.

Historic Ceramics (continued)			
		Saucer	Ginger Mortar
		Tea cup	Ale jug
		Ginger jar	Indeterminate
		Globular jar	Other
		Opium pipe	Vase
		Pan	Indeterminate
		Rice bowl	
Ammunition Cartridges			
	Cate type		
	Case material		
	Primer type		
	Manufacturer of cartridge		
Tin Cans			
	Type	Other	Non-food
	Opening	Food	Baking Powder
	Seam type	Coffee	Kerosene
	Function	Fruit	Motor Oil
	Part of the can	Juice	Paint
		Tobacco	Milk
		Tea	Beer
		Syrup	Indeterminate
		Vegetable	Button
Miscellaneous Artifacts			
	Specific to the item, by category or function	Coin	Pipe/Smoking
		Shoe	Shaving/Grooming
		License Plate	Horseshoe/Muleshoe
		Cloth	Railroad Spike
		Brick	Key
		Plastic	Lighting/Electrical
		Toy	Cosmetic
		Jewelry	Tool
		Newspaper/Paper	Household Maint.
		Plaster/Stucco	Lock
		Metal Cap/Lid	Sewing

Table 14 (continued). Artifact types and functions identified by SWCA at Tintic Junction.

Miscellaneous Artifacts (continued)		
	Metal Can	Cooking
	Battery	Writing/Ink
	Leather	Roofing Material
	Nail	Stove parts
	Wood	Clothing clasp/pin
	Rubber	Household/Architecture
	Metal	Other
	Bead	Other
	Car Part	Other
	Dice/Gaming pieces	Other
	Tableware/Utensil	Assaying crucible
	Barbed Wire	

(Table 15) support that this was a town focused on railroading. Artifacts identified within the features support the assumption that town residents were all associated with the operation of the railroad in some way. As Seddon (2001:551) puts it, "Although these stations were an artificial imposition on a previously barren landscape, and were completely dependent on and linked to the fortunes of a single component of a single industry, they quickly became communities." Table 15 shows features identified as residences, storage-related features, cisterns, railroad-related features, landscape features (such as ditches and dams) and other features (including a water tower, mechanical features, a privy and two patios connected to residences). Unidentified features are also tallied. These areas of Tintic Junction are relatively close together within the town boundary. Five residential features were identified at Tintic Junction, including one probable gandydancer (railroad worker) shack and four section-foremen's houses. Additionally, the features of Area A that are associated with the construction of the

Table 15. Feature types at Tintic Junction.

Area	Context	Residential	Storage	Cistern	Railroad-Related	Landscape	Other	Indeterminate	Total Features per Site
A	Depression 1 and HM 1	0	0	0	0	1	0	0	1
A	Possible Auto Dump	0	0	0	0	0	0	0	0
A	Possible Encampment	1	0	0	1	0	0	0	2
A	Rock Exposure 1	0	0	0	0	1	0	0	1
B	Depression 3 and Structure 1	1	0	0	0	0	0	0	1
B	Depression 4	0	0	1	0	0	0	0	1
B	Depression 5	0	1	0	0	0	0	0	1
B	Depression 6	0	0	0	0	0	1	0	1
B	Historical Privy 1	0	0	0	0	0	1	0	1
B	Platform 1	1	0	0	0	0	0	0	1
B	Railroad Disposal Area	0	0	0	0	0	0	0	0
B	Refuse Disposal Areas	0	0	0	0	0	0	0	0
C	Foundation 8	1	0	0	0	2	0	0	3
C	Foundation 9	1	1	0	0	0	1	0	3
C	Foundation 10	1	0	0	0	0	1	0	2
C	IAC-Building Material	0	0	0	0	0	0	0	0
C	Refuse Disposal Area	0	0	0	0	0	0	0	0
--	Railroad Maintenance Foundations	0	0	1	2	0	3	4	10
	Total:	6	2	2	3	4	7	4	28

railroad, though only artifact scatters and not, therefore, included in Table 15, can be considered residential in nature. These areas will be examined in more detail in the socioeconomic data section below.

Table 16 illustrates the relative percentages of the general functional types between the various contexts in the three areas. Interestingly, a CA of the data, after removing contexts where expected frequency cell values are too low, does not suggest that

residential areas have more domestic artifacts than railroad or other contexts. The Areas B and C Refuse Disposal Areas are heavily related to Domestic and Personal items, and are most different from all other contexts.

No community structures were located at Tintic Junction, however the community was probably held together by the cooperative efforts to operate the section station. Therefore, any community events were most likely held on SP, SL & LA Railroad property. Larger civic and social organizations were held in the much larger town of Eureka. Seddon (2001:554) notes that, "Moves and reassignments were…common, so that while a section station community might remain relatively stable in size, the actual composition of its members could change on a yearly, monthly, or even weekly, scale.

Based on this community data, Tintic Junction appears very homogenous in general purpose, though it is clear from the history of the station as well as the presence of several different types of residential features that the individual workers and families were widely varied in socioeconomic status, ethnicity, and background. The socioeconomic data discussed below best address the differences among the residents, though they are covered only briefly as a summary of the SWCA's findings.

SOCIOECONOMIC DATA

The residential features at Tintic Junction consist of four section foremen houses and one gandydancer shack. Seddon (2001) suggests that Area B is associated with gandydancers while Area C is associated with section foremen. The exception lies in the residence of Jinzaburo Matsumiya in Area B. The debris from the two areas can therefore be utilized in comparing the two groups. Seddon (2001) utilized consumer choice methods and direct comparison of goods in the two areas to consider the socioeconomic

Table 16. Tintic Junction general function ratios.

Area	Context	Domestic	Food	Personal	Structural	Indeterminate	Total
A	Depression 1 and HM 1	.50	.00	.00	.00	.50	2
A	Possible Auto Dump	.00	.00	.00	.00	.00	0
A	Possible Encampment	.06	.00	.04	.80	.09	2721
A	Rock Exposure 1	.00	.00	.00	.00	1.00	5
B	Depression 3 and Structure 1	.00	.00	.00	.96	.04	284
B	Depression 4	.02	.00	.19	.75	.04	208
B	Depression 5	.08	.01	.15	.70	.05	14469
B	Depression 6	.06	.01	.11	.78	.05	4082
B	Historical Privy 1	.17	.02	.11	.66	.05	3340
B	Platform 1	.00	.00	.11	.78	.11	706
B	Railroad Disposal Area	.90	.00	.10	.00	.00	10
B	Refuse Disposal Areas	.64	.00	.31	.00	.04	746
C	Foundation 8	.02	.00	.07	.87	.04	11929
C	Foundation 9	.17	.01	.06	.72	.04	119296
C	Foundation 10	.05	.00	.06	.86	.02	110191
C	IAC-Building Material	.00	.00	.00	1.00	.00	1331
C	Refuse Disposal Area	.15	.00	.48	.17	.19	1128
	Total:	.11	.00	.07	.79	.03	270448

differences of the community. He concludes that there are visible differences among households—"Section foremen lived in better houses, ate better meat on a periodic basis, drank better liquor, and appear to have had status display items such as entire tea sets in greater proportions than their workers across the tracks" (Seddon 2001:571). No additional study was made of socioeconomic indicators at Tintic Junction since Seddon's (2001) conclusions are sufficient to establish that variation exists between the workers and the section foremen. In comparing Tintic Junction to Benmore in Chapter 5, I will keep the two areas separate in order to facilitate the comparison of both workers and foremen to the residents of Benmore.

HOUSEHOLDING DATA

The purpose of evaluating Tintic Junction in such a similar way to Benmore is to provide a comparison regarding the extent to which householding occurred at Benmore. The community and socioeconomic data discussed above assist in building a picture of the community as either within or apart from the mainstream economy. This section of Chapter 4, therefore, presents the comparative data from Tintic Junction that will be used in Chapter 5 to discuss householding at Benmore.

Dietary Variety

Food-associated artifacts serve to illustrate dietary variety among the households. Tables 17 through 19 illustrate the wide variety of glass, can, and miscellaneous artifact functions represented in the Tintic Junction assemblage. Given that the data come primarily from excavation contexts, it is not surprising that more specific categories of items could be identified than at Benmore where artifacts were documented only on the surface and were consequently more broken and subject to more vandalism and decay, although the number of categories specifically associated with store-bought foods is essentially equal to the number of categories identified at Benmore. These data will be compared to Benmore in Chapter 5.

Reliance on Storage and Home/Local Resources

Table 20 shows canning-related and food can items which are useful in determining the extent to which home storage was used to preserve family or local food resources.

Table 17. Tintic Junction food functions--glass.

Area	Context	Tableware	Wine Glass	Ale/Stout	Beer	Canning Jar	Condiment	Milk Bottle	Other Alcoholic	Other Non-alcoholic	Preserves/ Pickles	Sauce, club	Soda pop	Soda/ Mineral Water	Whiskey/ Liquor	Wine	Catsup	Total
A	Depression 1 and HM 1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	5
A	Possible Auto Dump	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
A	Possible Encampment	5	0	0	1	5	0	0	5	0	0	0	0	0	2	0	0	18
A	Rock Exposure 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	Depression 3 and Structure 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	Depression 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	Depression 5	1	0	0	33	19	18	0	2	0	3	0	2	0	2	0	0	80
B	Depression 6	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27
B	Historical Privy 1	0	0	0	36	5	1	0	0	0	0	0	1	10	1	0	1	55
B	Platform 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	Railroad Disposal Area	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	Refuse Disposal Areas	105	6	0	8	74	0	0	3	0	5	0	2	0	0	0	0	203
C	Foundation 8	0	0	0	0	0	0	0	0	0	0	0	1	0	0	59	0	60
C	Foundation 9	3	0	1	15	12	0	2	0	6	8	0	42	0	3	1640	0	1732
C	Foundation 10	10	0	1	92	3	0	0	0	1	48	0	11	1	4	1961	0	2132
C	IAC-Building Material	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
C	Refuse Disposal Area	166	4	1	72	150	12	4	5	0	6	1	69	26	20	313	0	849
	Total:	292	10	3	285	270	31	6	15	7	70	1	128	37	32	3975	1	5163

Table 18. Tintic Junction food functions--tin cans.

Area	Context	Food	Fruit	Juice	Baking Powder	Coffee	Total Cans
A	Depression 1 and HM 1	28	5	4	0	0	37
A	Possible Auto Dump	0	0	0	0	0	0
A	Possible Encampment	5	0	0	0	0	5
A	Rock Exposure 1	0	0	0	0	0	0
B	Depression 3 and Structure 1	0	1	0	0	0	1
B	Depression 4	0	0	0	0	0	0
B	Depression 5	1	0	0	0	0	1
B	Depression 6	1	0	0	0	0	1
B	Historical Privy 1	0	0	0	0	0	0
B	Platform 1	0	0	0	0	0	0
B	Railroad Disposal Area	0	0	0	0	0	0
B	Refuse Disposal Areas	1109	14	0	3	49	1175
C	Foundation 8	0	0	0	0	0	0
C	Foundation 9	4	1	0	0	0	5
C	Foundation 10	1	0	0	0	1	2
C	IAC-Building Material	0	0	0	0	0	0
C	Refuse Disposal Area	1234	11	3	3	64	1315
	Total:	2383	32	7	6	114	2542

The miscellaneous canning-related items are all metal lids or caps. Some of these lids are probably not canning-related, but since the comments do not specify canning function, all metal lids were counted as potentially contributing to food storage. There were nearly 3 times as many food-related tin cans, presumably store bought, as there were canning-related items at Tintic Junction. Interestingly, canning-related items are significantly more common ($\chi^2 = 59.215$; df = 2; $p > .001$) in Area C where the section foremen and their families lived than in Area B near the workers. It is possible that this simply indicates the presence of families who are more likely to store food than are individual workers. However, since Seddon (2001) noted that workers did sometimes bring their families as well, it is equally possible that the higher presence of canning-related items

Table 19. Tintic Junction food functions--miscellaneous artifacts.

Area	Context	Metal Can	Metal Cap/Lid	Misc. Total
A	Depression 1 and HM 1	0	1	8
A	Possible Auto Dump	0	0	23
A	Possible Encampment	3	3	104
A	Rock Exposure 1	0	0	0
B	Depression 3 and Structure 1	0	0	7
B	Depression 4	0	0	6
B	Depression 5	4	17	347
B	Depression 6	0	4	99
B	Historical Privy 1	2	9	79
B	Platform 1	0	0	16
B	Railroad Disposal Area	0	0	0
B	Refuse Disposal Areas	6	171	733
C	Foundation 8	0	1	292
C	Foundation 9	394	114	3199
C	Foundation 10	76	30	2693
C	IAC-Building Material	0	0	34
C	Refuse Disposal Area	36	226	1676
	Total:	521	575	9024

in Area C suggests that the families of the section foremen may have been growing side crops that could be stored or were purchasing food in addition to that needed immediately for the purpose of storing some away.

Lag of Popular Styles

Since styles data for the 1900s to 1920s are difficult to find and were essentially impossible to identify at Benmore, styles data at Tintic Junction are not utilized either. It is possible that the somewhat longer occupation of Tintic Junction would make limited data available for considering lags in popular styles, but since ceramic patterns were rarely identified and paste and decoration popularity did not vary enough during the

Table 20. Tintic Junction canning jars and food-associated tin cans.

Area	Context	Canning Related Items			Food Related Tin Cans		
		Glass	Misc.	Canning Total	Beverage	Food	Cans Total
A	Depression 1 and HM 1	2	1	3	4	33	37
A	Possible Auto Dump	0	0	0	0	0	0
A	Possible Encampment	5	3	8	0	5	5
A	Rock Exposure 1	0	0	0	0	0	0
B	Depression 3 and Structure 1	0	0	0	0	0	0
B	Depression 4	0	0	0	0	0	0
B	Depression 5	19	17	36	0	1	1
B	Depression 6	0	4	4	0	1	1
B	Historical Privy 1	5	9	14	0	0	0
B	Platform 1	0	0	0	0	0	0
B	Railroad Disposal Area	0	0	0	0	0	0
B	Refuse Disposal Areas	74	171	245	49	1126	1175
C	Foundation 8	0	1	1	0	0	0
C	Foundation 9	12	113	125	0	5	5
C	Foundation 10	3	30	33	1	1	2
C	IAC-Building Material	0	0	0	0	0	0
C	Refuse Disposal Area	150	226	376	65	1048	1113
	Total:			845			2339

occupation, any visible trends would be weak at best.

Reuse and Repair

Reuse and repair, commonly referred to as recycling in the literature, is a fairly recent question in historic archaeology. As a result, the research design at Tintic Junction did not include questions relating to reuse, but it was noted in the comments for miscellaneous artifacts (Table 21). No cans appear to have been reused. It is possible that these data are incomplete, but the comments should have included descriptions of

Table 21. Reused items at Tintic Junction.

Area	Context	Holes Punched or Cut	Edges Rolled	Remade as something else	Flattened	Otherwise Modified	Total Reused Artifacts	Total Artifacts	% Reused
A	Depression 1 and HM 1	0	0	0	0	0	0	177	.00%
A	Possible Auto Dump	0	0	0	0	0	0	52	.00%
A	Possible Encampment	1	0	0	0	1	2	1087	.18%
A	Rock Exposure 1	0	0	0	0	0	0	5	.00%
B	Depression 3 and Structure 1	0	0	0	0	0	0	18	.00%
B	Depression 4	0	0	0	0	0	0	16	.00%
B	Depression 5	0	3	0	0	0	3	1218	.25%
B	Depression 6	2	0	0	0	0	2	224	.89%
B	Historical Privy 1	0	0	0	0	1	1	263	.38%
B	Platform 1	0	0	0	0	0	0	43	.00%
B	Railroad Disposal Area	0	0	0	0	0	0	10	.00%
B	Refuse Disposal Areas	0	0	0	0	0	0	4789	.00%
C	Foundation 8	0	0	1	0	0	1	844	.12%
C	Foundation 9	0	0	2	0	0	2	9139	.02%
C	Foundation 10	0	0	0	0	1	1	6734	.01%
C	IAC Building Material	0	0	0	0	0	0	39	.00%
C	Refuse Disposal Area	0	0	0	0	0	0	16329	.00%
	Total:						12	40987	.03%

most modifications and the data are, therefore, considered reliable enough to make a comparison to Benmore in Chapter 5.

Similarity of Architecture, Subsistence and Beliefs

There are three residential architecture types at Tintic Junction: section foremen houses, boxcar houses, and gandydancer tie shacks. Other architecture types include railroad-related buildings such as the roundhouse and are generally standardized

throughout the SP, SL & LA lines. Residential architecture at Tintic Junction is not well documented, but historical records and interviews with those who lived and worked at section stations suggest that foremen's houses were probably quite similar in layout with kitchen and bathroom at the back (Hutmacher and Lawrence 2001).

Boxcar houses were generally more characteristic of gandydancer residences according to Seddon (2001), but the double boxcar at Tintic Junction was used by Jinzaburo Matsumiya, the Japanese section foreman, and is the only boxcar residence identified during investigations of the community. This seems to be in keeping with an apparent social or economic difference between Matsumiya and the other section foremen as evidenced not only by the different house type, but by the fact that Matsumiya's house was located on the opposite side of the tracks from other foremen. One gandydancer shack identified (tentatively) at Tintic Junction was made out of railroad ties and represents a far more temporary and makeshift form of housing. Architecture at Tintic Junction is, then, very homogenous.

Subsistence differences are somewhat less obvious, but were considered by Seddon (2001) in his comparison of gandydancers and section foremen. He found that access to a range of goods was less at Tintic Junction than in Salt Lake City because most residents were purchasing through mail order and this method most likely limited choice compared to Salt Lake City residents who could go to different stores in addition to making independent mail orders (Seddon 2001). Interviews with former residents of Tintic Junction, which were conducted by SWCA as part of their research for the Level III Communications Fiber Optic Project, suggested that a system was in place in which workers could order from a railroad commissary through the section foremen (Seddon 2001). This would have naturally homogenized the community's subsistence options. Archaeological and historical evidence indicates that there were Japanese workers living

in Area B, and that these individuals likely followed Matsumiya who ordered Japanese foods and supplies from Japanese store owners (Seddon 2001:554). Given the diversity of the population, there is certainly some variety among subsistence practices at Tintic Junction, but the availability of a commissary and the fact that workers largely lived together in bunkhouses probably made subsistence practices more homogenous than not. An exact determination of the extent to which the community shared similar subsistence practices is difficult to identify, but the variety of food types found at Tintic Junction will be compared to that at Benmore in Chapter 5.

Beliefs are much more difficult to pin down than company and location-constrained practices like architecture styles and subsistence. Little is said about the beliefs of the residents of Tintic Junction and the ever-changing workforce means that a high number of people are probably represented in the archaeological record. Utah communities associated with mining and railroading were consistently inhabited by non-Mormons, compared to most Utah farming communities that were largely settled by Latter-day Saints. Thus, in terms of religious beliefs, at least, Tintic Junction should be different from, and more diverse than, the Latter-day Saint communities nearby.

Since Latter-day Saints during this time were being strongly advised to adhere to the dietary guidelines prohibiting alcohol, tobacco and coffee, one way to test the assumption that Tintic Junction was primarily a non-Mormon town, and therefore less homogenous in terms of beliefs, is to consider these Latter-day Saint discouraged items. Table 22 illustrates the presence of items related to alcohol, tobacco and coffee. The percentage of Latter-day Saint prohibited artifacts in each context and at Tintic Junction as a whole will be compared to that at the primarily Latter-day Saint Benmore in Chapter 5.

Variation within the community may include the presence of Japanese workers who were predominately Buddhist, but also Shinto and Christians of various non-Mormon

Table 22. LDS Church discouraged items at Tintic Junction.

Area	Context	Alcohol	Tobacco	Coffee	Total Prohibited Artifacts	Total Artifacts	Percent Prohibited
A	Depression 1 and HM 1	1	2	0	3	177	2%
A	Possible Auto Dump	1	0	0	1	52	2%
A	Possible Encampment	8	0	0	8	1087	1%
A	Rock Exposure 1	0	0	0	0	5	0%
B	Depression 3 and Structure 1	0	0	0	0	18	0%
B	Depression 4	0	0	0	0	16	0%
B	Depression 5	37	0	0	37	1218	3%
B	Depression 6	27	0	0	27	224	12%
B	Historical Privy 1	37	1	0	38	263	14%
B	Platform 1	0	0	0	0	43	0%
B	Railroad Disposal Area	0	0	0	0	10	0%
B	Refuse Disposal Areas	17	77	49	143	4789	3%
C	Foundation 8	59	0	0	59	844	7%
C	Foundation 9	1600	0	0	1600	9139	83%
C	Foundation 10	2058	0	1	2059	6734	31%
C	IAC-Building Material	1	0	0	1	39	3%
C	Refuse Disposal Area	415	60	64	539	16329	3%
	Total:	4261	140	114	4515	40987	11.02%

denominations. Other railroad employees probably professed many different religious beliefs, but the data are not available to document these differences or how they affect the archaeological record. The 1900-1930 censuses for Eureka, note several different denominations including Catholic, Baptist, Latter-day Saint, and Presbyterian. Non-religious beliefs such as self-sufficiency and work ethic are also difficult to identify. We know that this was a working town and most residents were actively employed in some way, demonstrating a shared belief in working for a living.

Similarity of Socioeconomic Level

As previously discussed, there are visible differences within the community of Tintic Junction. Seddon noted that there were differences between the section foremen and workers, as well as between Japanese and non-Japanese town residents, that are present despite the limited consumer choice available (2001). Given that paychecks were different from job to job and that they also probably varied by ethnicity, it is not surprising that Tinitc Junction appears as diverse as it was cohesive.

SUMMARY

Tintic Junction is an excellent example of a railroad community along the SP, SL & LA rail line. The community is characterized by two main residential areas—one for section foremen and one for workers and a Japanese section foreman. The differences between the two areas are most visible in type of architecture and in socioeconomic indicators as discussed by Seddon (2001). The data provided in this chapter serve to briefly summarize the characteristics of the community in terms of community, socioeconomic, and householding data types, with particular emphasis given to those data sets that are useful for inter-community comparison. Chapter 5 will compare the Benmore data given in Chapter 3 to those summarized here and conclusions will be drawn regarding the extent of householding at each community and the degree to which each community operated within the mainstream capitalist economy of Utah in the first half of the twentieth century.

5 DISCUSSION AND CONCLUSIONS

Bro Wrathall spoke in prophetic strain of the future growth of Benmore, and its division into 3 or more wards. It is remarkable how the spirit of prophecy comes upon the Stake Presidency and High Council when they come here. [September 24, 1916]

The goal of this thesis was to look at the economic and organizational information that exists for Benmore and Tintic Junction in order to determine to what extent householding, as defined by Rhoda Halperin (1994), occurred in the two towns. The information available to do so is now gathered and presented in Chapters 1-4. The primary purpose of this chapter, then, is to discuss the data and draw conclusions about the extent of householding in Benmore and Tintic Junction. To summarize, householding is the practice of relying on informal economic activities in order to survive on the margin of, or resist incorporation into the formal capitalist economy. At Benmore, I expected the isolated location and focus on farming and ranching to lead to greater reliance on informal economic activities in order to allow the town's residents to survive in a desert climate with limited resources. At Tintic Junction, however, I expected to find that the town's less isolated location and greater access to wage earnings led to a greater emphasis on the mainstream economy.

The study of householding occurs primarily in capitalist societies, and both householding and capitalism have gained popularity in historical archaeology in recent years. Householding is one of the alternative economic approaches available to individuals seeking to avoid participating in, or to survive, capitalism. Since these individuals are, by their nature as householders, less visible in the capitalist community,

the study of householding is an important way to identify and study these more independent people. As a result, considering the extent to which a group participated in householding is potentially indicative of those peoples' view or acceptance of capitalism.

The specific locations, Benmore and Tintic Junction, used in this thesis were chosen, and are particularly useful, because they appear to provide a contrast between two attitudes or approaches to capitalism. At Tintic Junction, the residents actively participated in capitalism because they were paid in cash and worked in labor or management positions for an employer. At Benmore, however, the residents were primarily farmers and ranchers and appear to have had a much smaller cash flow, primarily caught up in the exchange of lands and crops rather than labor. Comparing the extent of householding evidenced at these towns should either support or confirm my proposal that Benmore residents sought alternative means of survival outside of the mainstream capitalist economy.

In this chapter I combine the data gathered for Benmore and Tintic Junction to discuss the differences between the two communities and consider the extent to which householding appears to have occurred at each town. First I compare the two communities and look at socioeconomic differences between them. Following that discussion, I look at the specific householding data and then draw my final conclusions about Benmore's involvement in the mainstream economy. I conclude with a call to broaden our understanding of the settlement of the American West using Polanyi's concept of householding.

COMMUNITY DATA

Although the towns of Benmore and Tintic Junction were only approximately 20

miles apart, the communities were quite different in their organization and philosophy. While Tintic Junction's residents were fairly transient and all worked for the same employer, Benmore's residents generally owned their own farms and at least intended, it seems, to remain in one place for a time. In addition, there is a division of function visible in the layout of Tintic Junction—railroad-associated features are grouped together separate from residential features—that does not exist at Benmore since each farmer needed his own storage and farm-related facilities.

Despite the shared profession at Tintic Junction, no community buildings exist and children attended school in nearby Eureka, except for the three years (1910-1913) when it appears there was a local school (which may have met in a residence rather than a dedicated schoolhouse). At Benmore, the schoolhouse was utilized as school, community meeting place, and sometimes church though it was only about one mile farther to Vernon than Tintic Junction is to Eureka. Both communities, however, do share similar artifact types and functions, aside from the obvious difference of farming or railroading-related objects.

Both Tintic Junction and Benmore show evidence of distinct variation among residents. Tintic Junction's residents varied widely—from single Japanese gandydancer to European-American section foreman with family in tote—but they were all employed by the same company and most, it seems, utilized the same railroad commissary to order food and supplies. Despite this, socioeconomic level varies widely. Benmore's residents operated different sized farms and grew different crops to support many different sized families, but they were all living essentially similar farming lifestyles, yet there is a distinct division of ceramic wares that divides the community in half. In comparing the two communities in this chapter, I seek to acknowledge both their homogeneity compared to other towns and the sharp variation within each community by maintaining the spatial

divisions (separate sites at Benmore, separate contexts at Tintic Junction) I used in Chapters 2 and 3 to identify intra-community characteristics. By doing so, the potential to identify areas of each community that may be more similar to the norm in the other community is left open.

SOCIOECONOMIC DATA

The socioeconomic differences between Benmore and Tintic Junction can best be summarized as the difference between a community with high cash flow and one with very little. The workers at Tintic Junction were paid in cash and their primary asset was that cash. At Benmore, however, cash was more limited and a good deal of business was conducted without its use. Benmore residents had land and water rights as their primary assets—and these exchanged hands fairly frequently. In this section, I look at some of the key socioeconomic differences between Benmore and Tintic Junction. I utilize ceramic paste ratios to compare the two communities in general and consider the differences in artifact general ratios. Site size and feature counts, used to explore differences within Benmore, are not useful to compare the two towns since Tintic Junction's residences are not clearly separable and many of the features were maintained by the railroad for multiple workers or their families.

Ceramic Paste Ratios

At Benmore, a difference was observed between six homesteads whose ratio of porcelain ceramics to other ceramics was above 30 percent and six homesteads which had more whiteware and lower porcelain ratios. At Tintic Junction, where SWCA analysts estimated socioeconomic status using both paste ratios and pattern identification, Areas

A and B were found to be lower to middle class with Area C having a slightly higher presence of full tea sets and porcelain suggesting middle to upper class. The findings were tentative, however, due to sample size and other limiting factors.

Figure 17 is a CA of the combined Benmore and Tintic Junction data, permitting comparison. The numbered points are Benmore sites, while the three points labeled Areas A-C indicate the Tintic Junction areas. The total counts of porcelain, whiteware, and combined other pastes are plotted against these locations. A number of inferences can be made from this figure. First, the Benmore porcelain and whiteware clusters are still visible as the clusters of dots on the left side of the figure. Tintic Junction's Area A is comparable in components to the Benmore sites, but does not fit either of the Benmore paste clusters.

Second, the first component in Figure 17 opposes the Other Pastes category (including a combined count of earthenware, redware, yellowware, and other rare pastes) to the Porcelain and Whiteware categories. In this case, Benmore clearly varies from Areas B and C, which have a much higher count of other pastes ceramics. Since paste identification appears comparable between the Benmore and Tintic Junction data sets, this difference suggests that Tintic Junction had better access to a variety of goods. Given that Benmore's sites frequently have the same patterns repeated over and over, it is possible that Benmore residents were ordering their ceramic together to save freight costs or that they were buying from the same small store. This would limit their access to ceramic types with less common pastes than whiteware or porcelain. If Tintic Junction's residents had more stores or catalogs to choose from, the higher presence of non-whiteware or porcelain pastes makes sense.

Next, the second component of Figure 17 opposes the Porcelain and Whiteware categories. This is surely in part due to the Benmore clusters, described more fully in

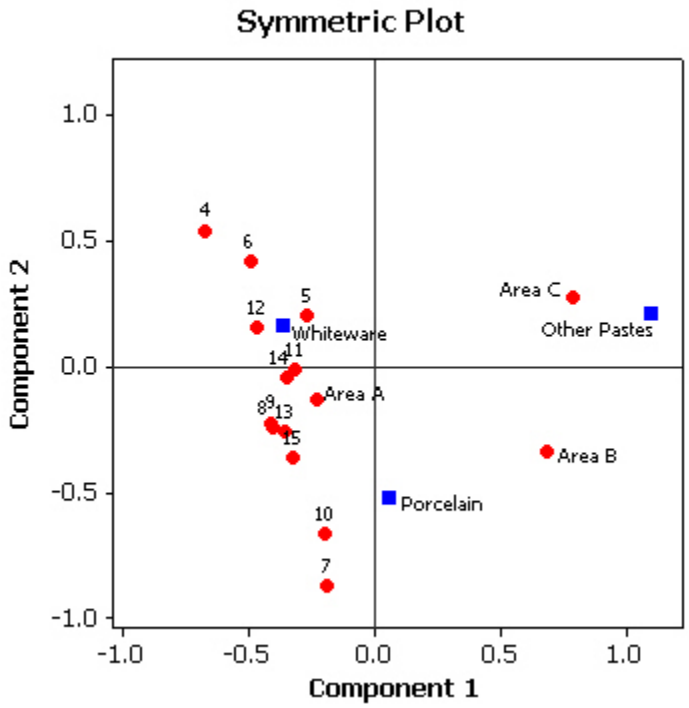


Figure 17. Correspondence analysis plot of ceramic paste ratios at Benmore and Tintic Junction.

Key—1: Charles Skidmore Homestead; 2: Ben Lomond I and II; 3: Jorgensen/Skidmore Homestead; 4: Vernon Creek Trash I; 5: Moses Green Homestead; 6: Benmore Schoolhouse; 7: Sharp/Hite Homestead; 8: Van Otten Homestead; 9: Downtown Homestead; 10: Chris Jensen Homestead; 11: The Dry Farm Co-op; 12: Marvin Yates Homestead.

Chapter 3, which oppose sites with more than 30 percent porcelain to sites with less than 30 percent porcelain. Area A ceramics are 29 percent porcelain, right on the edge between the two Benmore clusters.

Finally, given that SWCA's analysis of the areas concluded that Area C was of middle to upper class while Area B was of low to middle class, comparing the components of Areas B and C in Figure 17 is surprising. The ratio of porcelain at Area B is 42 percent while the ratio of porcelain at Area C is only 15 percent. Seddon's research on additional socioeconomic factors explains this seeming contradiction. Area B was home to many Japanese workers and their section foreman Jinzaburo Matsumiya and there is

a strong ethnic preference for porcelain pastes among the Japanese population at Tintic Junction and throughout the American West (Hutmacher and Lawrence 2001). At Area C, however, full tea sets, a status symbol, are more prevalent despite the lower ratio of porcelain to other ceramic pastes. Seddon (2001) concluded that although the residents of Area B had more porcelain, the fact that it did not include full tea sets is indication that the high ratio is due to the preference for imported porcelain bowls and cups purchased from Japanese stores rather than a higher socioeconomic level in Area B. Area C's residents purchased full tea sets, unlike other residents of Tintic Junction, as status markers and because they had enough money to do so. Unfortunately, the surface data collected at Benmore do not provide enough information on specific ceramic forms to permit a comparison to this Tintic Junction data.

Figure 18 is a dotplot of the same data. If we utilize the approximately 30 percent porcelain ratio from Benmore as a cut-off, it appears that Area B falls easily into the cluster of Benmore sites with more than 30 percent porcelain, Area A (interestingly since it is primarily associated with the possible initial encampment) also fits the Benmore porcelain cluster, and Area C is most like the Benmore whiteware sites. Although the explanation relating to ethnicity and full tea sets provided above does explain the high porcelain percentage at Area B as well as the reason Area C was identified by SWCA as being middle to upper class, the low porcelain percentage at Area C when compared to Benmore's sites is more difficult to explain. This could indicate that all of Benmore's residents were at least middle to upper class, since they have comparable or higher porcelain levels than Area C, and certainly supports the assumption that at least the Benmore residents with more than 30 percent porcelain had significant access to cash used to buy porcelain goods.

This ceramic paste ratios data illustrate some of the clearest variations within and

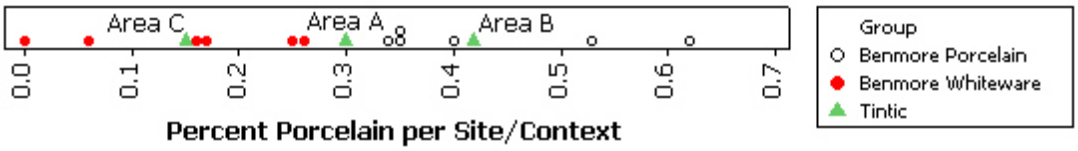


Figure 18. Dotplot of porcelain paste ratios at Benmore and Tintic Junction.

between Benmore and Tintic Junction. Such socioeconomic differences, particularly where they suggest greater access to cash among one population versus another, serve to define the community above and beyond the existing historical records. By identifying the socioeconomic similarities and differences between Benmore and Tintic Junction, the householding data discussed below are placed in a better understood context. Benmore, for example, was expected to be fairly homogeneous if the entire community was householding, but the socioeconomic data supplement that presented below in illustrating that there is far more variation within the community than was originally expected.

Artifact General Ratios

A series of boxplots (Figure 19) of the percentage of artifacts in each of the four artifact general function categories for Benmore and Tintic Junction illustrates the distinct differences between the townsites. A two-sample test of proportion shows that raw counts of domestic and food artifacts are significantly higher at Benmore ($Z = 52$ and 25, respectively; $p < .001$ for both) while personal and structural artifacts are significantly higher at Tintic Junction ($Z = -18$ and -173, respectively; $p < .001$ for both). The differences are interesting. Tintic Junction's heavy structural count may reflect the railroading occupation of all of the town's residents while the greater presence of

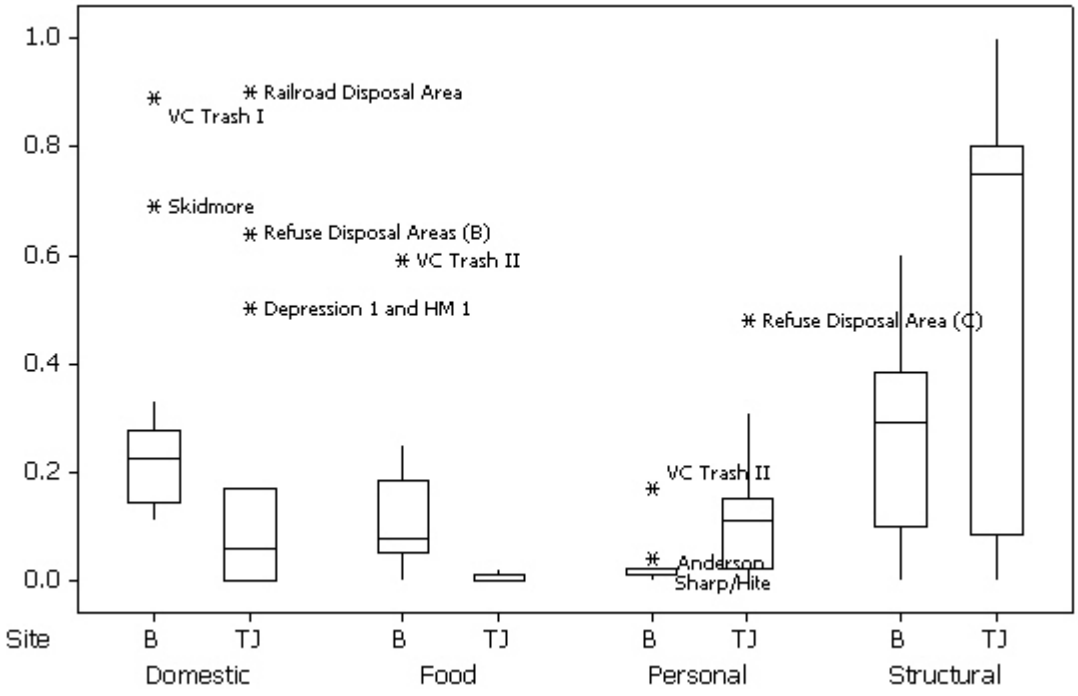


Figure 19. Boxplot of artifact general function ratios at Benmore and Tintic Junction.

personal items supports the argument that Tintic Junction's residents had greater access to cash and were probably wealthier, in general, than Benmore's residents who did not purchase such items as frequently. The much greater presence of domestic and food artifacts at Benmore supports the residents' primary occupation of farming. All of these conclusions, however, are naturally limited by the amount of breakage present at both sites. Benmore's surface was heavily impacted by vegetation treatments while Tintic Junction's excavations were conducted in collapsed structures and parts of Tintic Junction were burned and bull-dozed.

In summary, the socioeconomic indicators used to define Benmore and Tintic Junction suggest that each community was heterogeneous, but also that there are more similarities between the two towns than was expected. Benmore's porcelain ratios were higher than expected when compared to Tintic Junction. At Tintic Junction, Area B's Japanese

population resulted in a much higher porcelain ratio in Area B among the gandydancers than in Area C among the section foremen families. Area C was similar to Benmore's whiteware cluster while Area B was similar to Benmore's porcelain cluster. Area A fell between the two Benmore clusters. The porcelain ratios suggest that some residents of Benmore were purchasing many more porcelain pieces even than the middle to upper class Area C residents. It is not possible to identify whether these were individual pieces or complete tea sets, as at Area C. The much higher occurrence of personal items at Tintic Junction may suggest that the families who lived there had greater access to cash, and were, perhaps, from a higher socioeconomic level than Benmore residents. The personal items found at Tintic Junction support this argument. Contrasting the porcelain ratios to the personal items data results is ambiguous. There are some residents of Benmore who appear to be middle to upper class and have access to cash, but overall, Tintic Junction's residents do seem to have more cash to spend on personal items. The greater presence of domestic and food artifacts at Benmore and structural items at Tintic Junction support the different purposes of the two towns.

HOUSEHOLDING DATA

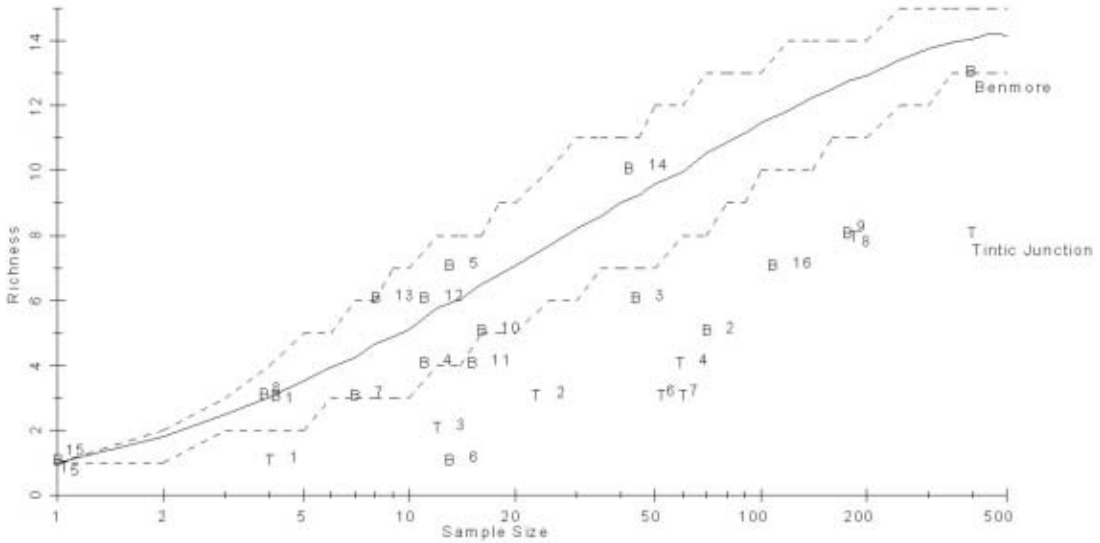
In Chapters 3 and 4 I sought to describe characteristics of householding visible in each community. The data are best understood at the inter-community level rather than intra-community level. This section utilizes the data presented in the previous chapters and conducts the same kinds of tests with a new focus—that of identifying similarities and differences between the two communities rather than within them. The data are left as split out (individual sites at Benmore, separate contexts at Tintic Junction) as possible, although the need for high enough counts to conduct reliable CAs of the data does require

combining sites and contexts at times.

Dietary Variety

A comparison of dietary variety between the two sites uses artifacts associated with diet that are identified to a specific function and appear to be store-bought. It is necessary to use only specific store-bought categories because containers like canning jars may have held many different foods over the course of their use and those foods cannot be specifically identified. Bennion's journal provides a few insights into at least his own family's canning practices, as an example of the different foods canned at Benmore. He notes that the family grew apples, plums, apricots, and pears (IBJ September 5, 1896 and March 18, 1928), and indicates that they grew enough that if they couldn't sell some of it, a surplus was donated to the poor or wasted (IBJ October 1, 1912). In addition to these home grown fruits, Bennion notes that some purchased fruit including peaches was also canned (IBJ September 10, 1936). Canning jars were also used as drinking glasses in the Bennion home (IBJ December 13, 1912). Canning jars were identified by rim style or size and shape of jar base. No complete jars were identified.

In Chapter 3 I introduced the use of Kintigh's (1984, 1989) resampling methods and computer programs to generate graphs which control for sample size while calculating the relative diversity of the data provided. Figure 20 is a graph of the Benmore and Tintic Junction store-bought food item data with both individual sites/contexts and the two communities as a whole. It was plotted over a mean line with a 90 confidence interval. Figure 20 clearly illustrates that Benmore is more diverse in diet than is Tintic Junction, with the combined Benmore data plotting much higher than Tintic Junction. Benmore is on the edge of the lower line of the 90 percent confidence interval. Tintic



B 1: Ben Lomond Extension; B 2: Ben Lomond I and II; B 3: Charles Anderson Homestead; B 4: Jorgensen/Skidmore Homestead; B 5: Moses Green Homestead; B 6: Charcoal Preparation Site; B 7: Dog Hollow Cabin; B 8:Benmore Schoolhouse; B 9: Sharp/Hite Homestead; B 10:Van Otten Homestead; B 11:Downtown Homestead; B 12: Chris Jensen Homestead; B 13: Sherman Cadwell Homestead; B 14: The Dry Farm Co-op; B 15: Irvin Hillman Homestead; B 16: Marvin Yates Homestead.; T 1: Depression 1 and HM 1; T 2: Depression 5; T 3: Historical Privy 1; T 4: Refuse Disposal Areas; T 5: Foundation 8; T 6: Foundation 9; T 7: Foundation 10; T 8: Refuse Disposal Area.

Figure 20. Relative dietary diversity of Tintic Junction and Benmore.

Junction, however, is well below that line. This result directly contradicts the expectation that Benmore, if participating in householding, would have less dietary variety than communities participating in the mainstream economy. The difference between the two communities would be even greater if canning information from the communities could be added. Figure 20 is also interesting because both sites are below the expected diversity. Since the expected richness is based on the data from the sites, the sites most likely plot below the expected diversity because there are categories at one location, but not at the other. In fact, there are seven categories identified at Benmore but not at Tintic Junction (including milk, syrup, spice, meat, sardine, tuna, and lard) and three only found at Tintic Junction (including club sauce, soda/mineral water, and catsup).

There are several possible explanations for this unexpected result. There may be errors related to the limited identification of store-bought goods to specific functions at Benmore and Tintic Junction, or Benmore may have been more tied into the formal

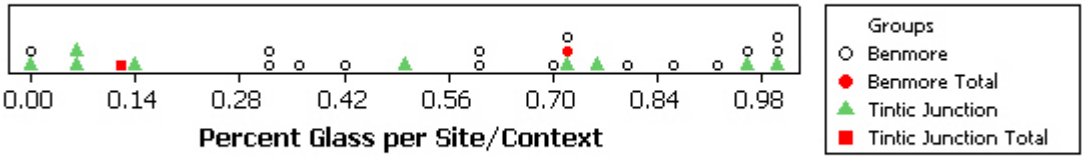


Figure 21. Dotplot of the canning glass ratios of Tintic Junction and Benmore.

economy than was Tintic Junction. Neither of these answers is satisfactory since many categories were identified at each community and several other indicators discussed below indicate that Benmore is less tied to the mainstream economy. It is also possible that Tintic Junctions's residents had a less diverse diet because they were mostly unmarried men ordering from the same railroad commissary. Or that Benmore's families may each have brought to the community very different tastes, thus producing greater variety. Alternatively, this information may be indication that Halperin's (1994) concept of householding does not fully fit the Benmore data.

Reliance on Storage and Home/Local Resources

Since the residents of Tintic Junction were quite transient and did not own their own land, large-scale food production is highly unlikely. This contrast to the very agriculturally based Benmore should be visible in the kinds of food containers found at each location. Storage buildings, likewise, should illustrate the differences between the two communities. Figure 21 illustrates the percentages of canning glass to the total number of food cans and canning glass in the two communities. There is a clear difference between the two communities, here, with Benmore sites exhibiting generally higher canning glass ratios despite consistently small sample sizes ($\chi^2 = 1569$; df = 20; p

Table 23. Storage-related and residential features at Benmore and Tintic Junction.

	Residential	Storage-Related	%
Benmore Features	17	9	.53
Tintic Junction Features	6	2	.33

< 0.001). At Tintic Junction, a few contexts do have quite high canning glass ratios, such as Depression 5 and Historical Privy 1, but there are also two sites with very low canning glass ratios despite very high sample sizes. Although preservation of cans and the difficulty inherent in identifying small glass fragments to the specific canning function do make the data somewhat tenuous, these ratios are telling. The residents of Benmore were clearly using more home-canning items and purchasing fewer canned foods than were their railroading neighbors down the road.

The nine storage features at Benmore include dugouts and a few frame structures, while at Tintic Junction only two storage buildings, a tentatively identified underground storage room (Depression 5) and a dugout root cellar or ice house (within the Foundation 9 context), were identified. The ratio of these storage features to residential features in the two towns (Table 23) provides a standardized consideration of the degree to which storage features were used. When adjusted for sample size, the difference in number of storage features is not significantly different between the two sites (χ^2 = .258; df = 1; p = .611). Like dietary variety, the similarity of storage features to residences at the two sites is unexpected. Hutmacher and Lawrence (2001) however, suggest that a root cellar or other storage structure was a common component of the standard section foreman house constructed by the railroad and this may be the best possible explanation for the two towns' comparable storage facilities.

Lag of Popular Styles

The narrow period of time during which Benmore, in particular, was occupied and the limited ceramic pattern data available in both communities made determining the extent to which popular styles were either delayed or not present at Benmore and Tintic Junction essentially impossible. As a result, though a lag of popular style is a strong contributor to the overall identification of householding communities, it cannot be utilized in this thesis. In the future, more extensive excavation and research about the two communities may supply sufficient data to consider this question.

Reuse and Repair

Since reuse and repair, or recycling, is a relatively new area of study in historic archaeology, the data presented herein may be incomplete. It is important to recognize that these data may be less reliable than most of the Benmore and Tintic Junction data sets. Still, the data that are available are telling. The ratio of reused artifacts to the total assemblage is 2.57 percent at Benmore and .03 percent at Tintic Junction. When compared, in a two-way table of reused and not reused artifacts, there is a significantly higher presence of recycled artifacts at Benmore than there is at Tintic Junction ($\chi^2 = 994$; $df = 1$; $p < .001$). Added to other results, this statistic can be utilized to draw conclusions about the residents of Benmore and Tintic Junction.

Similarity of Architecture, Subsistence, and Beliefs

There are three different kinds of residences at Tintic Junction and only one at Benmore. At Tintic Junction, residential architecture is homogenized by the common purpose (working for the railroad, typically as either a foreman or worker) and, in the case of the section foremen houses, by the shared constructor—the railroad company. At Benmore, residential architecture is similar because of the available resources and similarity of circumstance—original residents all arrive, whether rich or poor, to an undeveloped land claim and must seek immediate shelter followed with the construction of a more permanent residence. At Tintic Junction there is evidence of architectural differentiation by ethnicity, with Matsumiya the Japanese section foreman on the other side of the tracks from the permanent section foreman houses in a double box car. At Benmore, there are no visible trends to indicate differences within the population. Even those families who had more porcelain, possibly indicating a higher socioeconomic level, have comparably sized foundations for their houses, though they may have been made of nicer materials which are long since removed.

Subsistence varies, as noted above, between the two communities. At Tintic Junction, workers were paid in cash and did not own land, which is reflected in a higher tin can to canning jar ratio. At Benmore, residents made a living by growing crops and raising livestock, which is similarly reflected in a lower tin can to canning jar ratio compared to Tintic Junction. Dietary variety at both towns is generally less diverse, though Tintic Junction—probably due to limited identification of specific food categories—is less diverse than Benmore. Tintic Junction's subsistence choices among residents naturally varied with the amount of money made, though there is also evidence that ethnicity affected subsistence choices at Tintic Junction. That said, as noted in Chapter 4, there

Table 24. LDS Church discouraged items at Benmore and Tintic Junction.

	Alcohol	Tobacco	Coffee	Total Prohibited Artifacts	Total Artifacts	Percent Prohibited
Benmore Total	77	52	30	159	23451	.68%
Tintic Junction Total	4261	140	114	4515	40987	11.02%

is less variety than might be expected, even at Tintic Junction, because historic records suggest that the railroad may have operated a commissary for its employees.

Similarities or differences in religious beliefs at Benmore and Tintic Junction are difficult to identify due to the paucity of information on religions practiced by Tintic Junction residents. In Chapters 3 and 4 I suggested that the degree to which the LDS Church dietary restriction called the Word of Wisdom was adhered to could be determined by the presence of alcohol, tobacco, or coffee containers. By determining the extent to which Benmore adhered to these dietary standards, compared to Tintic Junction, which had far fewer Latter-day Saints, an argument can be made for the degree to which the religious homogeneity assumed for Benmore is accurate. The measure is far from perfect given that these dietary restrictions only began to be enforced to Latter-day Saints at the beginning of the twentieth century, but is still illustrative and Bennion writes about a number of sermons in the Benmore Ward on the subject. Bennion, in fact, appears to have been a firm supporter of the Word of Wisdom throughout his life and sought to hold Benmore to a higher standard than was common at the time. On November 23, 1913 he (IBJ) writes:

> I stated position of bishopric thus: Any persons suggested for positions or for advancement in the priesthood must be questioned as to observance of the Word of Wisdom, and the result of such questioning must be satisfactory, before their names can be presented to the meeting for acceptance. I was surprised to hear our visiting brethren express a doubt as to whether this rule could be adhered to. For my part, I have no doubt.

Table 24 shows that less than one percent of all artifacts at Benmore are discouraged, while 11 percent of all artifacts at Tintic Junction are discouraged to Latter-day Saints. This evidence suggests that Benmore was as religiously unified as historical data suggest. These data do not indicate either homogeneity or heterogeneity at Tintic Junction since historic data confirm that this town, like most railroading towns in Utah, was not generally associated with high Latter-day Saint populations.

Other belief systems, specifically non-religious ones such as self-sufficiency and work ethic are likely present, to some degree, in both communities, although the transitory nature of the Tintic Junction workers makes these belief systems difficult to identify. The lack of community buildings at Tintic Junction could suggest that there was less community unity, but the residents may have been very much actively engaged in the community organizations at Eureka or Tintic, thereby eliminating the need for more local community structures. At Benmore, the schoolhouse provided a public ground upon which to gather for religious, educational, and community meetings. These uses are gathered from Bennion's journal and other historical accounts since they are essentially impossible to describe beyond the simple identification of the schoolhouse itself based on unique artifact types.

In summary, similarities of architecture, subsistence, and beliefs are all visible at Benmore while only primarily similarities of architecture and subsistence are visible at

Tintic Junction, though the paucity of evidence of religious practices at Tintic Junction may be due to a lack of historical records rather than a real absence.

Similarity of Socioeconomic Level

As discussed previously, socioeconomic level does vary both within and between Benmore and Tintic Junction. To summarize, Tintic Junction's socioeconomic dynamics were, like so much else, tied up in the railroad. The position of section foreman could come and go, and with it the better housing and pay. At Tintic Junction, there is the further influence of ethnicity, particularly evident in the different living arrangements provided for Jinzaburo Matsumiya on the other side of the tracks from his fellow section foremen. Tintic Junction's economy was decidedly mainstream—workers were paid in cash, bought their food and supplies, and did not own land of their own in the community. While in some sense the residents shared such things in common, clear distinctions of socioeconomic level are still preserved in the archaeological record.

At Benmore socioeconomic level may not have been quite as equal as Bennion's journal entries would suggest, but the differences are less visible than at Tintic Junction. Of the twelve Benmore sites with enough ceramic paste data to use in the CA, six have a clearly higher ratio of porcelain. General artifact functions are quite similar throughout the community, however, and there are no major differences of house size or numbers of out-buildings. Variation, therefore, existed among the families, but there are few archaeological indications of these differences besides the change in ceramic paste. Nevertheless, in combination with stronger indicators, discussed below, the relative similarity of at least part of the community is sufficient to identify the extent to which householding probably occurred at Benmore and how that affected the survival of the

community.

DISCUSSION OF RESULTS

The primary object of this thesis is to identify the extent to which Benmore was utilizing householding in order to operate outside of the mainstream capitalist economy in early twentieth century Utah. To this end, I begin this results discussion by summarizing the evidence for householding at Benmore. I consider the community, socioeconomic and householding data presented previously. First, the data gathered suggest that the community of Benmore was relatively united. The Benmore Schoolhouse served as a school, church, and community meetinghouse. Although Vernon is only five miles north, and many of Benmore's residents had family there, Benmore maintained its own congregation and school—a mark of community autonomy.

Second, socioeconomic data indicate that Benmore was homogeneous compared to Tintic Junction, but certainly not fully homogeneous. The ceramic paste ratios, in particular, indicate a dichotomy among residents—with some families probably having greater access to cash and more interest in prestigious objects like fine porcelains. Dietary variety, used here primarily as an indication of householding, also suggests that some families may have had more cash to purchase canned foods and other non-local items, but Benmore as a whole is generally less diverse than expected given the sampled population. The extent to which families, like the Green family, sought additional sources of income beyond their farms may hint at which families might have been more tied to the mainstream economy since they would have been more likely to have access to cash than those who strictly kept their small farms.

Finally, the four specific indications of householding at Benmore which I identified

in Chapter 1 provide the most conclusive evidence of the extent to which householding occurred in the community. The first is the expectation that Benmore would have less dietary variety than Tintic Junction because of the limited use of store-bought goods. Benmore's sites are, on the whole, much more diverse than are Tintic Junction's contexts. I suspect, however, that this is due in large part to limited identification made on a can-by-can basis at Tintic Junction, and therefore argue that the fact that more than half of Benmore's sites less diverse than the estimated mean does suggest householding may have been occurring. Second, I expected that if Benmore was householding, there would be evidence of a greater reliance on home storage and utilization of home and local grown crops and other resources. Here again, Benmore does have significantly more canning items than Tintic Junction, although there are comparable numbers of storage structures. The number of commercially canned food items is far less at Benmore. Next, I expected that Benmore would show evidence of a lag in popular or "trendy" styles, if the community was householding, since the families would have less cash available to them compared to the wage-paid residents of Tintic Junction. The data here, unfortunately, are limited by the small assemblages in both locations and the very limited success in identifying with any regularity specific patterns that were known to be especially popular right during the Benmore and Tintic Junction heydays. No conclusions, therefore, can be drawn relating to this indicator of householding.

Fourth and finally, I expected to see frequent instances of reuse and repair at Benmore when compared to Tintic Junction, if Benmore was practicing householding. Although the data are limited by the fact that some Benmore sites were recorded before recycling was recognized, there are still enough data to demonstrate that the Benmore community shows significantly more recycling than does Tintic Junction.

In addition to these four primary indicators of householding, I suggested that

similarity of architecture, subsistence, beliefs, and socioeconomic level are probably indicative of householding but can also be present as a result of other factors. For example, I used the Latter-day Saints' Word of Wisdom discouraged items including alcohol, tobacco, and coffee to compare the presence of Latter-day Saints in the communities. The data suggest that Benmore is mostly LDS, while Tintic Junction is not. Combining this with historical records indicating the possibility of several different religions at Tintic Junction (notably Buddhist or Shinto among the Japanese workers and most likely Christian among the European-American workers), supports the argument that Benmore residents shared common religious beliefs while Tintic Junction residents were not so united. Benmore's religious unity could have contributed to the residents' decision to work together to survive, but that certainly does not mean that Tintic Junction's residents did not work together.

CONCLUSION

The primary purpose of this thesis is to determine whether the concept of householding was a useful means of studying Benmore and whether or not the concept should be applied to other homesteading settlements in the American West. Halperin tested the concept by observing a Kentucky family that spreads its members between contexts she refers to as Deep Rural, Shallow Rural, and the City. The three generations of family members all work together as a householding network, but they are spread out geographically. There, householding works because the kin network involved is able to tap into many different means of production in order to continue to operate outside of the mainstream economy. Halperin (1994:164) admits that "cash must be generated…for purchasing those necessities that people cannot produce or obtain in any other way,"

and, in truth, her model Kentuckian householders actually have multiple individuals working wage jobs well away from Deep Rural crops. The need for cash, even very little, necessitates some involvement in the mainstream economy. Thus, the concept of householding is not a complete separation of a group from capitalism, but rather a more limited involvement therein when compared to the norm. Based on the Kentucky example, it may also be necessary to be spread out geographically in order to survive by taking advantage of multiple cash and non-cash means of production.

In order to consider the concept of householding at Benmore, I developed a number of expectations if the town was working together to survive outside of the mainstream economy. Given the above discussion of these expectations, I argue that Benmore, though not nearly as united as was expected, does show evidence of an emphasis on self-sufficiency and some householding. This is particularly evident in the number of home canning items at Benmore when compared to Tintic Junction and the fact that Benmore residents recycled far more than their Tintic Junction neighbors. These particular comparisons may not have been made had I not been specifically looking at householding, so the concept has certainly proven useful in directing the research to some questions which might not have been addressed given a different theoretical approach.

Halperin (1994:164) states, "The kin network becomes an umbrella that protects people from depending upon any single economic sector." At Benmore, a non-kin network was organized in which labor and goods were exchanged, but each family in that network also maintained separate cash sources, land, and other possessions. Particularly in light of the socioeconomic variation visible in the archaeological record, it is clear that although the town's residents were indeed assisting each other in order to make the town survive, this was not a communal group that would either fail or succeed together. Benmore's residents were not so invested in householding that they forgot they were

separate families.

Still, using Halperin's concept of householding at Benmore provides possible explanations for the town's failure. Halperin notes several potential deathblows for householding groups: They must be able to sustain direct access to a means of production whereby they can earn a living, the extended family (the entire group) must remain intact, and some cash must be generated, as stated above. Following World War I, wheat prices plummeted and Benmore's main cash crop no longer provided the cash necessary to maintain the community. As previously noted in Chapter 2, Bennion (IBJ January 1921(1919)) reported that "In the stress of war…the crops were not good…and all the while the easier life…and bigger pay of the city, was an irresistible lure." It seems then, that all of Halperin's indicators of householding failure are clearly evident at Benmore. Their means of production and cash were tied in the same crop which could not provide enough success to keep the younger generation working on the farms.

All of these reasons for Benmore's failure contribute to a picture of the community's inevitable collapse, but I suggest an alternative explanation. Every Benmore family approached their economic survival uniquely, but all primarily followed the well-recognized American West tradition of farming and ranching. Given the marginal dry farming environment in which Benmore lies and the larger historical context in which the settlement occurred, I argue that Benmore did not fail because they were outside of the mainstream economy, rather it was the limitations of marginal dry farming lands, small land parcels, and intermittent water that proved the town's ruin. Had crops been large enough and the environment supportive, the families might have been able to be even less involved in the mainstream economy, thereby avoiding the economic difficulties that arose following the first World War. It is their perseverance and desire to survive that allowed the town to last as long as it did despite these difficulties. Those who survived,

like the Bennions, found means such as wage labor and military service, outside the farm, were their only option. Thus, it was their inability to actually household apart from the mainstream economy that ultimately made it necessary to transition fully into that economy. Unfortunately, householding appears to require a much wider geographic range than is reasonable for Benmore—this is in part due to the need to access natural resources or wage labor opportunities that may not all exist in a single location, but is also an important way of risk buffering (if the Benmore householders had grown crops in multiple environments, the marginal rainfall at Benmore wouldn't have devastated the entire crop). The residents would most likely have had to be kin in order to be committed to such an approach. If they had participated in householding, the town's residents would have had to be far more united. The Green Family, for example might still have done their mine prospecting, but the cash earnings would have gone to support the community rather than just their family. A co-op like the Dry Farm Co-op might have been organized as a means of generating a cash crop in order to allow other homesteaders to devote their land entirely to food crops for the community's needs. Realistically, to truly household, Benmore would have needed to spread itself geographically—the families might have had to make claims in better watered areas or some individuals might have needed wage jobs in the city—in order to maintain the town in such a marginal dry-farming environment as southern Rush Valley. In short, the residents would have had to seek additional ways of maintaining long term access to means of production and given its marginal environment, Benmore would certainly not be the ideal place to attempt such a communal effort.

Halperin's concept of householding did provide a number of expectations that were useful in evaluating the homesteading community of Benmore, but, in the end, it is the historical context and environment in which the townsite existed that

most readily explains its demise. In the historic archaeology of the fairly recent homesteading movement in the American West, such data are readily accessible; therefore application of the concept of householding to such communities may be less useful than in other situations. Nonetheless, considering the differential participation in the mainstream economy of Benmore versus Tintic Junction was certainly useful. Had a different theoretical stance been taken, the marked differences within and between the communities may not have been recognized and Benmore might have continued to be viewed as a largely homogeneous community. I therefore recommend that looking at evidence of householding in homesteading communities and other American West sites is useful in order to gain a clear picture of a community's composition and involvement in the mainstream economy, but argue that such investigation should be made as a part of a larger theoretical approach. By doing so, the concept of householding will provide valuable support to research without limiting the scope of analysis.

The American West, Benmore and Tintic Junction included, is sometimes stereotyped as a very homogenous environment of rustic mining towns, saloons and farm lands, but research is illuminating a more and more complex landscape in which many different belief systems operated on individuals seeking their unique American dreams. At Tintic Junction, the railroad was king and survival meant hard work for minimum wages. At Benmore, the means to survival was, likewise, hard work, but the dream was at least partly one of independence and freedom from the capitalist requirements of wage labor. Fully accessing the archaeological record of the American West requires the application of many different theories and approaches. In this thesis, I have demonstrated the extent to which the concept of householding is useful in identifying one of the many ways in which individuals sought to survive in the pursuit of the American dream.

APPENDIX 1: BENMORE SITE DESCRIPTIONS

42To538 Charles Skidmore Homestead

There are two Skidmore families associated with Benmore. Charles Skidmore was a professor of agriculture at Utah State Agricultural College, superintendent of Granite School District, and a local expert on dry farming. Charles' brother Justin Skidmore also lived in Benmore, with his family, and the two began with a mutual claim which was then split out between them. Records are not completely clear about which of the Skidmores lived on this property the longest, but since it appears that Justin's family bought the Skidmore Homestead (42To1501) in 1910, it may be assumed that Charles' family operated this homestead during the Benmore period. The homestead is located just east of the present-day Benmore Work Station along Bennion Creek and is 262 feet by 131 feet in size. It lies on private land belonging to the Bennion Family Trust and managed by the Mitchell Family. Artifacts on the site include a large quantity of metal, glass and ceramics, but vandalism—particularly shooting—has reduced almost everything to tiny fragments. The one feature on the site is a C-shaped mound of rock with a slight depression inside the mound—it is about 5 feet by 16 feet. Its purpose is not certain, but it is likely the remains of the Skidmore residence. The abundance of purple glass at the site suggests an occupation at the site earlier than 1917. There appears to be a wide variety of ceramic types but flow blue and decal are the most common decorated forms.

42To836 Ben Lomond Extension

The site is associated with the larger Ben Lomond Homestead complex (42To843) down-slope to the north and measures approximately 820 feet by 262 feet. It lies on a wide sagebrush flat near the mouth of Harker Canyon. The site consists of a small historic artifact scatter mostly of various tin cans. There are no especially diagnostic artifacts, however glass on the site is aqua and there is one hinged tobacco can that dates from the 1910-1920's. There are no features on the site. It is included in this research because of its association with Ben Lomond.

42To843 Ben Lomond Homestead

This roughly 885 x 575 foot site is the remains of Ben Lomond, a homestead first established in 1904 by Israel Bennion, at the south end of Rush Valley. The site subsequently exchanged hands between at least two other families, and the wide array of features and artifacts at the site represent at least 30 years of continuous farming operations. The site has two parts, divided by the dirt road that runs east of the northern part of the site and then turns east-west in the southern end of the site. Bennion's original homestead was probably in the northern part of the site, based on the age of the artifacts and types of features, and the southern collection could have been added by later owners of the property. There is a continuous array of artifacts, which makes dividing this site into two discreet units difficult. Both parts of the site are bounded on the west by a ditch that originates at this site (see below), and on the east by a broad ditch dug by Israel Bennion and others that takes water out of Harker Creek to the south. Although the site's main features are all clustered near the center of the site (along the road), there is a broad

scatter of about 2,600 total artifacts at the homestead.

The features on the north side of the site appear to be the earliest and represent a smaller investment in building materials. They include a 12 x 24 foot un-mortared stone foundation (Feature 1) that faces the road that accessed this site. It has an apparent dividing wall that is off-center, creating a hall-parlor house layout typical of small houses during this era. The superstructure was probably frame and moved to another location once the house was no longer needed at this location. About 20 feet to the north is a stone and log dugout (Feature 2) that was probably about 10 x 15 feet in size when in use for storage. This part of the site has a scatter of domestic artifacts close to the features, and more farming-related artifacts as one moves away from the house. Further to the south, and similarly aligned to the road, are at least two areas that were cut back into the broad ditch channel that was just west of the road. These appear to have contained frame outbuildings, since this part of the site contains a higher percentage of big wash tubs, nails, wire, horseshoes, broken machinery parts grease cans, and other artifacts associated with caring for animals and farm equipment. One of these outbuildings (Feature 5) appears to have been roughly 15 x 50 feet in size and was probably an animal shed. The scatter of artifacts in this northern part of the site extends for hundreds of feet north and west of the house and outbuilding locations, suggesting that this was the area of cultivated land.

The features on the south side of the site are considerably more substantial but it is unknown when these features were built. It is possible that at least some of them were built by Israel Bennion. It seems unlikely that many of them were built by the Nels P. Jensen family, who owned the site for a very short time, between 1917 (when it was purchased from Israel Bennion) and 1921, when the site was acquired by the Vorwaller family. Adjacent land to the east had already been homesteaded by the Samuel

Kaiser family in 1919 through 1935, and it is probable that the Kaisers acquired this site some time in the 1920's and may have been responsible for at least some of these improvements as locals commonly refer to this area as "Kaiser's". The Benmore Ward record states that the Kaiser family left in 1918, but Samuel made his land claims near Ben Lomond in 1925 and 1930, after the ward was dissolved. In any case, all of the features here are associated with Benmore community history; the Benmore School was just down the road from this site, about two miles away.

The main domestic feature on the south side of the road is a 30 x 33 foot house foundation (Feature 6) that is partially buried and marked by an exposed layer of common and locally made sand brick. The main floor had 5 rooms and is generally in a central-passage plan (which commonly dated before 1900). One of the rooms has a pipe entering it from the outside, suggesting that the house had water. Just to the west of the house is a 15 x 12 foot cellar (Feature 7) with stairs entering it from the side facing the house. To the southwest of the house is an 11 foot diameter concrete-lined cistern (Feature 8) that is about 5 feet deep and originates at ground level. It is at the northern end of a long berm of dirt (Feature 9) of unknown function that effectively separates a broad, flat area south of the house from a collection of outbuilding foundations to the west. These foundations (Features 11–15) are generally marked by roughly finished concrete slabs that range in size from 3 x 26.5 feet to 13 x 46 feet. Associated artifacts include some domestic artifacts as well as mowing machine blades, axe heads, broken machinery parts and other artifacts associated with the operation of a farm. Local informants say that when the site ceased to function as a farm headquarters, all salvageable building materials were taken and used in buildings in Vernon.

About 300 feet south of the house and outbuildings is an earthen dam (Feature 16) with another concrete cistern built into its banks. This dam was the source of at least one

ditch that watered farmland to the north of the site's structural features. It also appears to have provided water for domestic use by feeding two cisterns. This dam may have allowed farmers to live here longer than other operations associated with Benmore, as access to water was critical to their success.

42To893 Charles Anderson Homestead

This site is a homestead located within Dog Hollow, about 1.5 miles south of Lofgreen on the northeastern flanks of the West Tintic Mountains and is approximately 2,789 feet by 262 feet in size. It is on the very eastern edge of the Charles Anderson homestead, which was patented on May 6, 1930. It is probably the remains of his farm, although some artifacts on the site suggest settlement began here well before 1930 and therefore associate the site with Lofgreen and Benmore. The site is set in a shallow and narrow drainage, and includes two leveled areas cut into hill slopes (presumably for structures), two earthen dams, three round depressions, solitary fence posts, and a scatter of primarily glass, cans, and various metal artifacts. The site does not appear to have been occupied much after the 1930's. The 1920 Census has Charles Anderson, 54, and a nephew, 24, living in a separate household and working as a farmer and laborer. By 1930, there are two heads of household named Charles Anderson. One is the previous resident, now 64, who has a different nephew living with him, aged 42. The other Charles, 62, is father to a family of five children. It isn't clear which Charles Anderson made this homestead claim.

42To1501 Jorgensen/Skidmore Homestead

This is a 350 x 600 foot homestead located at Benmore in the south end of Rush

Valley. It is the largest and most complex single family homestead remaining within the town of Benmore (see Figure 7). It was first developed by the Peter Jorgensen family, who patented this land in 1894 and 1897, and then sold to the Skidmore family in about 1910. Bennion's journal and the minutes of the Benmore Ward (Stemmons 1998) suggest that it was Justin Skidmore's family that actually lived in the house, while Charles' family continued to live at 42To538 to the east. There are many features at this site, and it is unclear which ones were built by the Jorgensens and which were added by the Skidmores. The main site feature (Feature 1) is a partially standing 30 foot long and 18 foot wide log house that has a main parlor with two smaller rooms on the main floor and an unknown number of rooms on the second floor. It has a 20 x 13 foot frame kitchen addition off the back (Feature 2), and the entire structure was covered with shiplap siding (see Figure 5) to create an attractive home. About 16 feet north of the kitchen is a 10 x 12 foot earthen and wood dugout (Feature 3), probably used as a storage cellar. The house also has an associated latrine hole (Feature 4) and a 6 x 8 foot concrete lined cistern (Feature 5). West of the house, within the shallow Dutch Creek drainage, are the remains of a series of other buildings of varying functions. Feature 6 is probably the collapsed remains of a small chicken coop and F7 is a 15 x 8 foot roofed log structure that may have been a bunkhouse. Feature 8 is about 8 x 10 feet in area and was built of logs and stone and placed into the slope of Dutch Creek. It may have served as a storage structure. The faint remains of a frame structure (Feature 12) is just north of F8. There is a mix of both domestic and farming-related artifacts around Feature 7, Feature 8 and Feature 12, suggesting that these features may have been used as housing for Jorgensen or Skidmore children or for hired hands.

Further to the south are clearly agricultural features, including a 16 x 19 foot log structure (Feature 9) that may have been a workshop, a 19 x 43 foot barn foundation

(Feature 10), and an 80 foot long earthen dam. The foundation of Feature 10 is made of very large stones, and the the large logs that remain suggest that this was a substantial log structure. Other features on the site include a possible outdoor forge (Feature 11), a dense artifact scatter just to the west of the Feature 1/Feature 2 house (that has been extensively damaged by bottle hunters), a complex array of barbed wire fences that probably mark garden areas and animal pens, and roughly 200 foot long rows of dead trees that mark the remains of an orchard. The site contains a wide variety of about 1,130 artifacts, most of which are concentrated around the features and within the bottom of the Dutch Creek drainage.

42To1510 Vernon Creek Trash Scatter I

This is a multi-component site on the east bench of Vernon Creek, measuring 610 feet by 300 feet. The historic component of the site consists of a trash scatter and pit/ depression. Historic artifacts found on the site include abundant glass fragments, ceramic fragments, tin cans and miscellaneous metal. Some of the artifacts have maker marks. There is also a concentration of baked clay bricks on the site. The depression measures approximately 15 by 25 feet and three feet deep. It appears somewhat more recent than the artifacts which date generally to 1880-1917.

42To2125 Vernon Creek Trash Scatter II

The site is located immediately on top of the bench above Vernon Creek in the south end of Rush Valley. It consists of a historic trash scatter approximately 49 feet by 23 feet, just east of the road. There are glass fragments of several colors (aqua, green, purple, white, and clear), a few fragments of white vitreous ceramic, barbed wire, sheet metal,

a metal rod, and sanitary cans. There are no features associated with the site. The site artifacts suggest a date range of 1920-1930. The scatter is probably the remains of a temporary camp of some kind used by late Benmore era livestock grazers or post cutters.

42To2270 Moses Green Homestead

The site includes an artifact scatter, the foundation remains of a cellar and a leveled area marked by a rock retaining wall, all cut into the slope of Vernon Creek. It is approximately 230 feet by 164 feet and is located at a developed spring. There is a depression and associated rock strewn area, which does not appear to be structural, east of the piped spring. Porcelain, glass, and tin fragments constitute the majority of the artifacts and are in a concentrated area just north of the spring. There are a large number of leather shoe soles and uppers on the site. Artifacts range widely in age, including early artifacts for the area such as large numbers of purple glass fragments (beginning in the 1880s) and a Knowles, Taylor and Knowles ceramic trademark used no later than 1904. The main occupation of the site probably ranges from 1880 to 1930. This site lies within the Green Family land patent of December 21, 1911. The People of Vernon describes a two room log cabin in this location (Transcript Bulletin Press 1983:222), probably set on the leveled area marked by the retaining wall, with the cellar extending into the hillslope behind the house. It also notes that the Greens raised livestock here and made additional money by prospecting in the area and developing small mines.

42To2373 Charcoal Preparation Site

The site consists of a 541 feet by 197 feet area of scattered historic artifacts, charcoal platforms (Features 1-7), and remnants of a pole and wire fence (Feature 9) located along

the east edge of a low bench overlooking Dog Valley near Lofgreen. There are five 6-15 foot diameter charcoal platforms that are probably not more than 12 inches thick scattered through the middle of the site. Most artifacts are scattered widely across the site, but there is a concentration (Feature 8) at the north end of the site that might represent a camping area.

Artifacts include both round and square hole-in-cap cans, purple and aqua beverage bottles, metal, and whiteware ceramic fragments. The site appears to represent charcoal processing done some time between about 1880 and the early 1900's. The homestead entries in the Dog Hollow area vary from 1878 to 1936 and the entry for the immediate area was made by Charles Anderson in 1930 which post-dates this site. As a result, the site was probably used by earlier settlers in the area, who may have been making extra money by selling charcoal to local miners or to the railroad. Few charcoal processing sites have been identified in this area of Lofgreen, although more probably exist as informants suggest historic charcoal making was a relatively common activity.

42To2376 Dog Hollow Cabin

The site consists of a historic cabin and artifact scatter, which sits on a small prehistoric lithic scatter, on the lower slope of a low ridge on the western side of Dog Hollow near Lofgreen. The site appears to date between 1900 and 1930 and measures approximately 262 feet by 148 feet. Homestead entries in the area range from 1878 to 1936 and this site is probably associated with homesteading and railroading activities in the area, although no homestead entry was found for the site location. The cabin itself is about 14 feet 2 inches x 15 feet in size, based on an intact gable end and intact railroad tie floor footings. The cabin appears to have collapsed rather than being dismantled,

but some lumber from the structure has apparently been salvaged, as there is not enough lumber at the site to constitute a complete cabin. The railroad tie construction of the cabin is unique in the area suggesting that this site may be associated with railroading in the area rather than the typical homesteading, and further research into its use may provide data on the historic use of the area. Artifacts scatter mainly to the north and east of the cabin, and include about 40 sanitary cans, a few hole-in-top cans, glass and ceramic fragments, stove and car parts and other artifacts suggesting domestic use.

42To2707 Benmore Schoolhouse

This site includes the remains of the Benmore schoolhouse (Feature 1) which was built in 1914 to serve the small community of Benmore (see Figure 8). It is on a separate 3.12 acre parcel of land that was set aside for both a school and a church (which was never built). It functioned until atleast 1924; thereafter, bricks and other salvageable materials in the building were removed by local residents. Immediately adjacent to the schoolhouse (and an associated artifact scatter) is a relatively discreet scatter of artifacts and two dugouts (Features 2 and 3). These appear to have been part of a separate farming operation that dates generally to the time in which Benmore (and its school) were in existence. No homesteading records exist for this property but local lore suggests it may have been the original residence for the Peter Jorgensen family, occupied until their more substantial farming operation was established across the road to the south (at 42To1501) in the mid-1890s. However, artifacts at the site generally post-date the turn of the century. The overall site is about 328 feet by 984 feet in area and contains about 1,600 artifacts.

The schoolhouse (Feature 1) is marked by a 36 foot 6 inch by 27 foot 6 inch

concrete foundation with a small extension for an entryway at the southwest corner of the foundation. There is an associated artifact scatter that is dominated by window glass, broken school desk frames, a broken wood stove, and canning jar fragments. To the east of the schoolhouse is the shallow channel of Dutch Creek, and a roughly 30 foot wide by 90 foot long dugout depression (Feature 2) has been cut into the slope of the drainage. It contains fragments of what were probably concrete walls for a structure that was smaller than the depression itself. Its function is unknown but the associated artifact scatter is dominated by window glass and a sparse but wide range of domestic artifacts. Feature 3 is another dugout carved out of the side of Dutch Creek and it depression is about 25 feet wide by 45 feet long. It does not contain concrete and its function is unknown. However, artifacts near this feature are dominated by window and bottle glass, tin can fragments, and a variety of ceramics. This suggests that the feature may be residential. Both the Feature 2 and Feature 3 dugouts are very large compared to the other dugouts documented at other Benmore-era homesteads (42To843, 42To1501, 42To2886, 42To2887, and 42To3197) suggesting that they were either large habitation structures or had a different function such as storage for farming equipment. Extending north of Feature 3 is an extensive but sparse artifact scatter dominated by sheet metal fragments and the remains of a large log with metal reinforcing along its edges that was probably used to level cultivated soil. There is also an earthen dam built across Dutch Creek on the eastern side of the site; its exact age is unknown, but it may have been built by either the residents of this site or by the Oborns, who farmed land immediately to the east (Oborn Homestead UN-285).

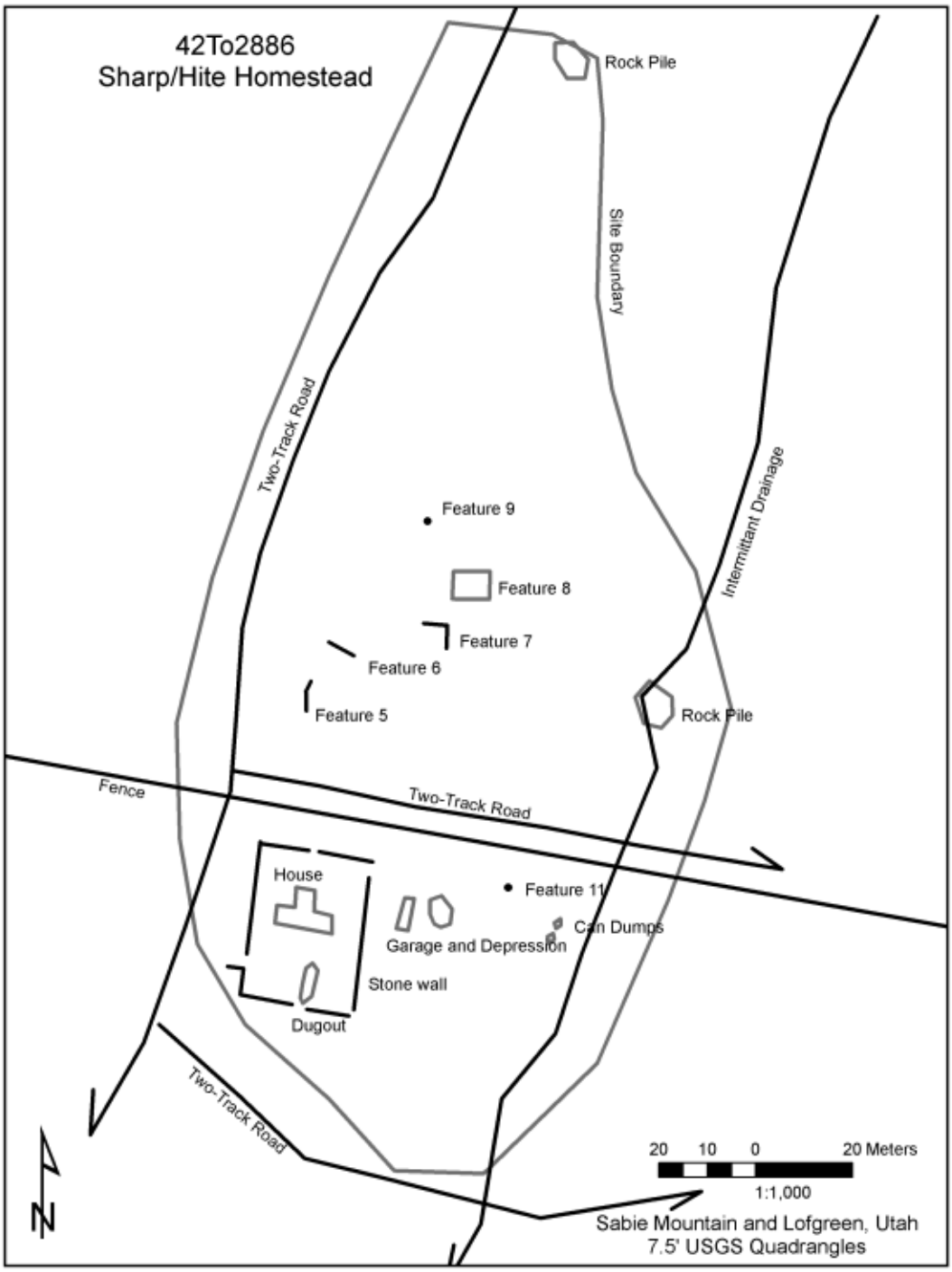


Figure 22. Sharp/Hite Homestead site map.

42To2886 Sharp/Hite Homestead

This site is a 787 feet by 361 feet scatter of artifacts with foundations, dugouts, and other features on the north side of Sharpes Valley (Figure 22). It is labeled as the Sharps homestead on a 1916 General Land Office map which shows a house, stable, and granary (General Land Office 1916). However, a homestead claims record, kept by the General Land Office, indicates that the land in this part of Section 30 was claimed in 1923 by Benjamin Hite. Artifacts on the site suggest it was occupied between the 1890's and 1930's and include ceramics, glass, metal, tin cans, and other domestic trash. Features on the site include a 79 by 105 foot collapsed stone wall that encloses a house foundation and dugout, another dugout and concrete foundation east of the house, one complete 19.6 x 26 foot stone foundation north of the house, four stone alignments of unknown function, three rock piles, and two can dumps in a shallow drainage.

42To2887 Van Otten Homestead

This site consists of a lithic scatter and an early 1900's era homestead on a bench overlooking Vernon Creek at the south end of Rush Valley. Homesteading records do not include this parcel of land; however, farmland in the Vernon Creek bottoms immediately west of this site were patented by Albert Van Otten in 1915. Assuming that the survey was completed properly at the time, it is likely that although this bench was outside his homestead, it provided a better location for his home than the adjacent bottomlands.

The homesteading component is about 430 feet by 236 feet in size and includes the largest group of structures set partially into the ground found on homesteading sites associated with the town of Benmore, including two to three habitation features. Feature

1 is about 7 x 10 feet in size and its roof is level with the ground surface. It is made primarily of juniper logs, and may contain a small window. Its small size and its depth suggest that it was a storage feature. Feature 2 is considerably shallower, with most of its superstructure gone. However, enough remains to suggest that the structure was at least 7 x 11 feet in size and may have served as either a habitation or a storage structure. A more complete picture is available at Feature 3, where the structure is about 8 x 12 feet in size and was lined with wood planks and what appear to be roughly shaped railroad ties. It also contained a window on its south side that was probably originally set at ground level, meaning that its roof would have originated a few feet above the ground. It is probably a habitation structure. Feature 4 has the most elaborate structural members still in place, and is almost certainly a habitation structure. It was constructed of milled wood, rough planks (possibly roughly shaped railroad ties) and juniper logs with some stacked stones lining the interior of the pit. It is at least 20 x 10 feet in size with a window on its south side and a door on its east side. The only other possible structure at the site is marked by an L-shaped alignment of stones that is large enough that it was probably the foundation of a log or frame house or barn. Artifacts scattered across the site are mostly in very small pieces due to cow trampling and the presence of a road through the site. Artifacts include 37 cans, stove and machinery fragments, shoe leather fragments (and a metal shoe last), buckets, multiple colors of glass and several different types of ceramics.

42To2889 Downtown Homestead

This site is the remains of a homestead located near the center of Benmore at the south end of Rush Valley. It is located about eleven hundred feet west of the Benmore Schoolhouse (42To2707) and was the westernmost of at least five farms located near the

school. The site consists of an approximately 312 by 738 foot scatter of artifacts with some features that mark the locations of former structures. Feature 1 is a 30 inch deep dugout that is 16 x 22 feet in size. The function of Feature 3 is more distinct, in that it is a 25 x 21 foot dry-laid stone foundation with a portion of an interior cross-wall located just off center. It is oriented to the nearby road and is almost certainly the foundation for a frame house. There are two shallow but broad depressions behind this foundation that are about 8 feet in diameter and about a foot and a half deep. Their functions are less clear, as they seem large for latrine pits. There are about 3,358 artifacts on the site, with domestic artifacts such as broken bottles and dishes being the most common. The further away from the house structure, the more common such things as sheet metal fragments, barrel strap fragments, and other farming-related artifacts become.

42To2956 Chris Jensen Homestead

This site is a 476 feet by 1,115 feet scatter of artifacts with features that marks the probable location of the Chris Jensen homestead. It is about 800 feet west of the location of the Benmore School. Although there is very little to be seen when scanning the surface of this site, remaining artifacts and features indicate a relatively well-established farming operation. The main site feature is a 15 x 16 foot stone foundation with concrete mortar (Feature 1). It was almost certainly built to accommodate a frame house that may have had a four-square layout, common during this time. There is also a foundation for a three foot wide porch on the north side of the house (facing the road) that runs the full length of the house. There is a 14 foot long by 3 foot wide stone lined gravel pathway that leads to the front of the house from the road. Six feet east of the house is another 12 foot long low stone alignment that may mark the edge of a garden or flowerbed. This

is aligned with another feature that is six feet east of the house, a 3 x 4 foot (interior dimension) concrete lined cistern (Feature 2). This may have been fed by water piped from a small earthen pond (Feature 4) that is about 40 feet east of the cistern (Feature 3) and enclosed by a roughly 90 foot long low berm of dirt. About five feet north of (behind) the house foundation is a 16 x 12 foot wide and roughly 4 foot deep depression (Feature 5) containing a fender and other remains of a 1920's era car or truck. The function of this feature is unknown, but it may have been some kind of cellar feature as it was readily accessible from the back of the house. Radiating about 80 feet northwest of the general house area is a low, single- to double-alignment of stones (F6). It appears in some areas to be a ditch feature; in others, as a low wall or walkway. It has a large number of associated glass artifacts, but this is probably the result of vandals lining up and shooting bottles.

This site is also unique in that it contains more recognizable pieces of a broken surrey, old cars, and farming equipment than other sites at Benmore. Most of these are located in a scatter about 600 feet north of the house. These include the axles, seat, and canopy staves of a surrey, the chassis of a touring car, a wagon tongue, end gate for a wagon, etc. Extending continuously between this part of the site and the house is a scatter of glass, ceramics, can fragments, and other domestic artifacts along with a large number of sheet metal fragments. There are no obvious remains of structures at the north end of the site except a small scatter of milled lumber that may mark the location of a small structure such as a chicken coop. Overall, there are about 3,033 domestic and farming-related artifacts on the site.

Land records for this site are poor, and it is not clear from them who owned and operated this farm. However, local informants believe that this site was established by the Chris Jensen family and was directly related to Benmore community development.

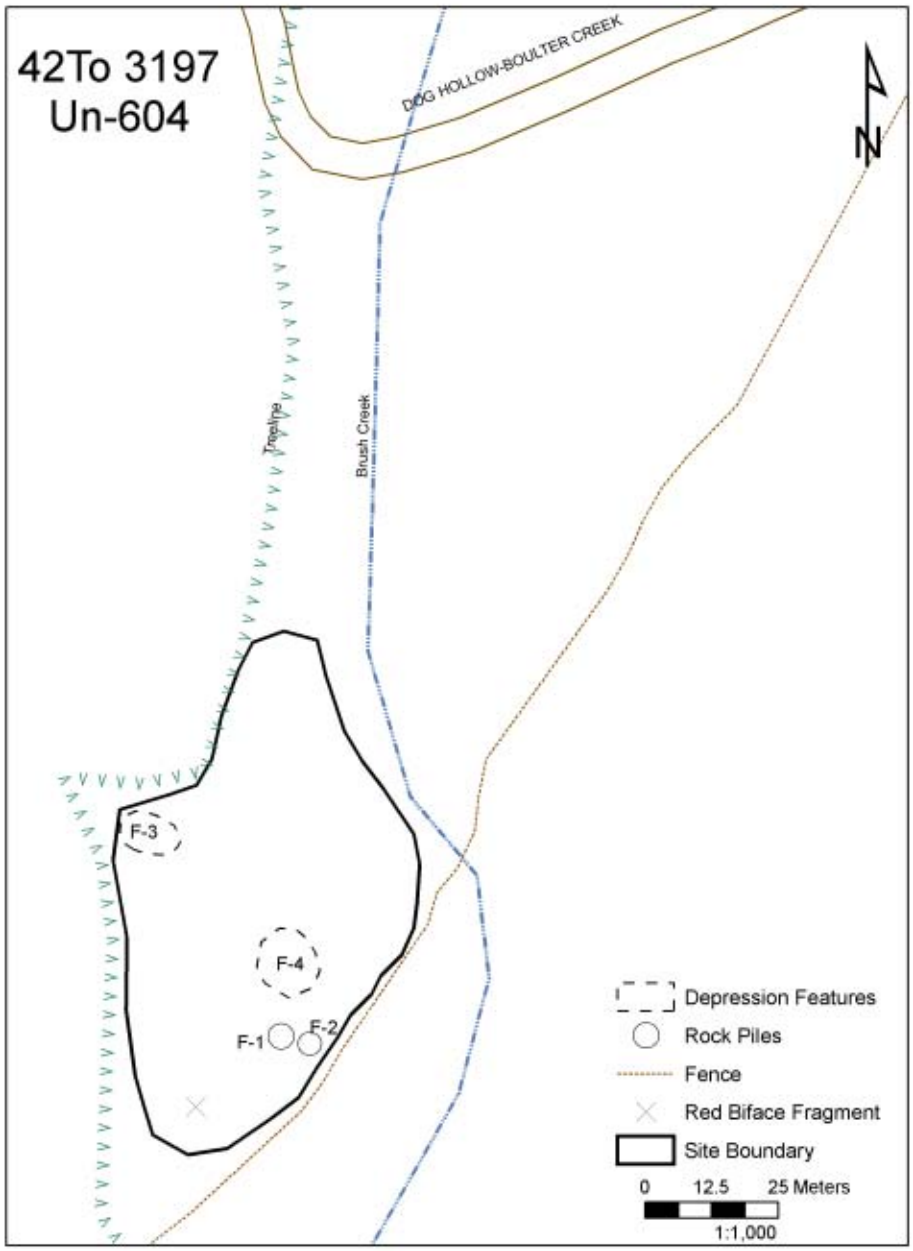


Figure 23. Sherman Cadwell Homestead site map.

42To3197 Sherman Cadwell Homestead

The site consists of a small homestead area with associated features (Figure 23) which lies at the base of a slope along Brush Creek near Lofgreen, just off of the main road from Dog Hollow to Boulter Creek that cuts through the little Brush Creek valley. The site includes two rock piles associated with field-clearing (Features 1 and 2), a dugout/hill-cut similar to many noted on other homesteads in the area (Feature 3), and a large bermed depression in the middle of the site (Feature 4) and measures approximately 302 feet by 180 feet. The artifacts on the site include glass, ceramic, tin cans and various metal artifacts. An enamel-ware plate is stamped with a maker's mark that dates from 1880-1910 but the general type of artifacts and the fact that this property was part of a claim by Sherman W. Cadwell in 1917 suggests that the site most likely dates from 1910 to 1920.

42To3214 The Dry Farm Co-op

This is a 702 feet by 1,115 feet scatter of historic artifacts and features on the western side of the south end of Rush Valley, and is known locally as the Dry Farm (Figure 24). It is the largest of the known farms associated with the historic town of Benmore and is the remains of the headquarters for a large, commerical dry farming operation called The Dry Farm and Stock Company that was started in 1921 by Charles Skidmore and partners. Local informants say that two families, the Youngdells and the Sullivans were employed as overseers and lived at this farm, with large numbers of seasonal farm hands coming and going from this location, particularly during the late summer harvest season.

The most recognizable site feature is a 16 x 8 foot double-width dry laid stone foundation (Feature 6) with a 5 x 6 foot stone foundation addition on the back (west)

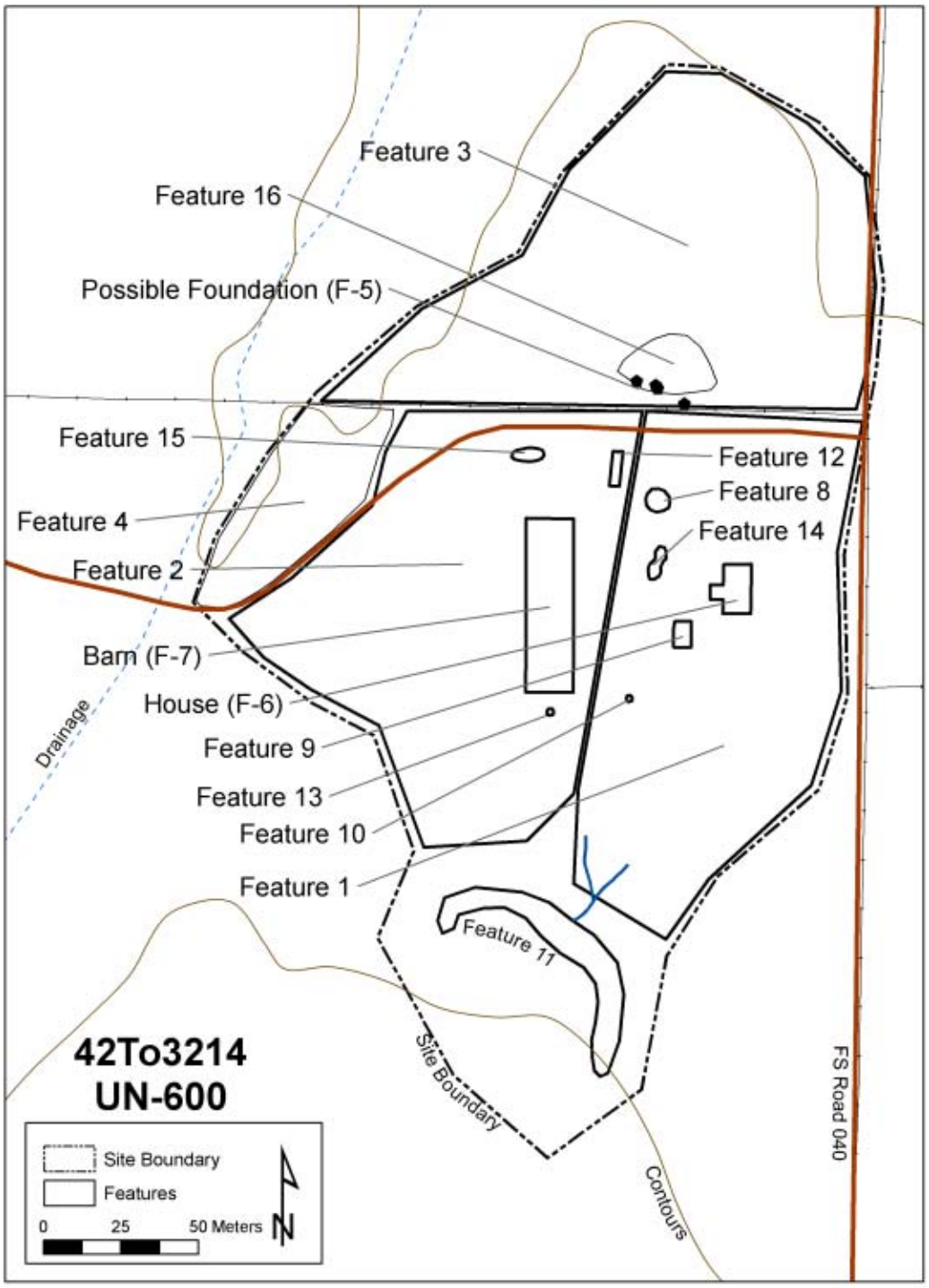


Figure 24. The Dry Farm Co-op site map.

side of the feature. Additional, but much fainter, stone aligments suggest that another room of this size was also added to the back of the house. Although two families were said to have lived here, this is the only clear habitation feature at the site, marked by a relatively high concentration of domestic artifacts. About 10 feet southwest of Feature 6 is a 6.5 x 8 foot rectangular depression with a distinct but low earthen berm around its perimeter (Feature 9). The functon of this feature is unknown, but a scatter of weathered dimensional lumber around it suggests a small frame structure (perhaps a garage?). Northwest of the house, and along the road that runs west through the site, is a series of additional features that were probably outbuildings. One of these is a 4 x 11 foot concrete pad with 5/8" bolts set in rectangular patterns on its floor. It may have been a generator shed. Nearby is a low mound of stones about 15 feet square with upright juniper posts at center; its function is unknown. Further to the west of this feature is a roughly 10 x 20 foot area that is very level and covered with only very low-growing vegetation. This might mark the remains of a small outbuilding, as well. The largest structural feature at the site is a discontinuous alignment of large stones about 160 feet west of the house (about 130 feet south of the other outbuilding remains) that is about 20 x 65 feet in size (Feature 7). This probably supported a barn as it is surrounded by a wide scatter of artifacts like mowing machine blades, badly broken pieces of machinery, large numbers of barrel hoops, wash tubs, and other farming-related artifacts.

A total of about 5,104 artifacts were found on this site, far more than have been documented at other early twentieth century farms in the area. Domestic artifacts are found throughout the site, but are concentrated in three areas. The first is the area around the Feature 6 house foundation, the second is the Feature 3 area north of the east-west trending road that divides the site into two parts, and the third artifact concentration is just west of this road (along the edge of a shallow drainage) on the western edge of the

site (Feature 4). Several large stones in the area of Feature 3 may have been part of a damaged house foundation, but this is only faintly suggested. However, they are located across the road from the rest of the farming operation, in an area where one might expect to find a house. Many of the densely concentrated artifacts in Feature 4 are secondarily deposited. Many are burned and some are clearly deposited in patches, as if a burn barrel had been dumped out on the ground. Many of the artifacts appear to date to the known era of farming operations here and are probably associated with operations of the Dry Farm, but some clearly post-date it. It is possible that some artifacts were brought to this location and dumped after the Dry Farm had ceased to operate.

42To3311 Irvin Hillman Homestead

This small homestead site is located just inside the boundary of the Uinta National Forest along the Benmore Road, about 1.5 miles south of Vernon at the south end of Rush Valley and measures approximately 30 feet by 32 feet. It consists of a 15.5 x 16 foot stone foundation, a shallow depression, and a modest scatter of about 270 glass, metal, and ceramic artifacts (and about half of these are window glass fragments). It appears to be the remains of the Irvin J. Hillman homestead which was patented on June 20, 1918. Compared to other homesteads in the area, this one does not appear to have been used for very long. The actual period of its use is unknown, but U.S. Government purchased the land in 1936.

42To3313 Hyrum Yates Homestead

The Hyrum Yates homestead is located at the T-intersection across the Benmore Road from Benmore Guard Station at the south end of Rush Valley and measures

approximately 378 feet by 463 feet. Its main features are a 30 x 20 foot depression (Feature 2) that is probably the remains of a house cellar and a 7 foot square and roughly 5 foot deep concrete lined cistern (Feature 3) about 20 feet east of the depression. There is also a pair of 36 foot long and 10 to 24 inch wide concrete slabs (Feature 4) that are about 3 feet wide (on center); these may have served as a pathway to a garage for a small vehicle. The site includes a moderate scatter (Feature 1) of broken domestic and farming equipment and a network of barbed wire fences to the east and south of the site that probably represent animal pens and possible garden spaces. There is a relatively dense scatter of tin cans on the eastern side of the site, and a number of those cans have had small circular pieces of flat steel cut out of their sides. These were presumably used as patches, perhaps on wood siding, as some of the little discs were found elsewhere on the site with nail holes in their centers. Several nested sets of cans of diminishing size were also found, and this was also unique to this Benmore era site. Overall, about 1,188 artifacts were found at this site, including glass, ceramic, tin cans, metal, and other miscellaneous objects.

UN-285 Oborn Family Homestead/Benmore Work Station

This site was originally the Henry Oborn Homestead, established in about 1901. The property included a small, gambrel-roofed two-story frame house, an outhouse, a cistern, a shed-roofed barn, and probably other small outbuildings. It was acquired by the Federal Government in 1933 and became part of the Benmore Experimental Range. The house was used as the range headquarters and additional sheds, garages, and other outbuildings were added, including a guard station building that was moved to this location from Little Valley. Other later additions included a windmill, water storage tank

and a grain silo. Activities at the experimental range ended in the early 1980s, and the old homestead house was sold and moved to Vernon for use as a home. During this time the property was drill seeded with crested wheat grass, effectively obscuring all artifacts and most features that may have dated to the Oborn homestead. The only remaining features that can be associated with the Oborn family are a small underground cistern located south of the guard station building and the barn. This 16 x 17 foot roofed, open-ended shed structure is built primarily of salvaged railroad ties. The site is excluded from many of the tables in this and subsequent chapters because there are no artifacts on the site. Where I look at features or other characteristics, it is included.

APPENDIX 2: BENMORE RAW DATA

The supplemental data provided here is not a complete list of all Benmore data collected up to this point, however it does provide all of the raw data utilized to draw the conclusions in this thesis. The full database of Benmore data, as well as IMACS site forms from which the Appendix One summaries were drawn, is available at the Provo office of the Uinta-Wasatch-Cache National Forest.

Table 25. Glass colors at Benmore.

Site No.	Aqua	Brown	Clear	Cobalt	Green	Milk	Olive	Peach	Pink	Purple	Red	Unknown	Window Glass	Yellow	Total
42To538	70	40	101	0	0	60	0	0	0	101	0	0	0	40	412
42To836	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
42To843	133	60	210	1	22	71	2	0	0	373	0	4	0	0	876
42To893	13	31	57	0	3	0	0	0	0	18	0	2	0	0	124
42To1501	134	47	64	3	14	44	0	0	0	97	0	1	0	0	404
42To1510	84	2	32	0	11	12	0	0	0	74	0	0	0	0	215
42To2125	6	0	11	0	0	0	0	0	0	15	0	48	0	0	80
42To2270	320	5	165	98	13	28	0	1	0	139	0	0	0	0	769
42To2373	11	7	2	0	2	0	0	0	0	6	0	12	0	0	40
42To2376	10	1	29	0	38	10	0	0	0	0	0	0	0	0	88
42To2707	11	13	827	1	77	8	3	0	0	54	0	0	0	0	994
42To2886	288	27	145	6	6	36	2	0	0	106	0	0	0	0	616
42To2887	116	9	16	1	25	6	0	0	0	50	0	0	0	0	223
42To2889	452	181	609	40	38	94	0	0	0	428	0	0	141	0	1983
42To2956	129	42	645	12	24	105	0	0	0	74	4	1	0	0	1036
42To3197	9	5	16	16	9	2	0	0	0	0	0	0	0	0	57
42To3214	641	122	943	10	72	86	9	0	6	247	0	0	0	2	2138
42To3311	11	4	104	0	12	0	0	0	0	18	0	0	0	0	149
42To3313	38	35	298	24	23	58	0	0	0	119	0	0	0	0	595
Total	2478	631	4274	212	389	620	16	1	6	1919	4	68	141	42	10801

Table 26. Glass maker's marks at Benmore.

Site No.	Boyds Genuine Porcelain Seal (c. 1869-1950s);	Consolidated Fruit Jar Co.; New York, NY	Coca Cola; The Root Glass Co. (c. 1915-); Terrehaute, IN	Hazel-Atlas (c. 1902-); Wheeling, WV	JH Heinz Co. (1910-); Sharpsburg, PA	Kerr Glass Manufact-uring Co. (1904-1909); Portland, OR	Mason (c. 1858); Crowleytown, NJ	The Mentholatum Co. (c. 1903); Buffalo, NY	Other	Owens Bottle Co. (1911-1929); Toledo, OH	Owens Illinois Glass Co. (1929-1954); Toledo, OH	Owens Illinois Glass Co (post-1954); Toledo, OH	William Franzen and Son (c. 1900-1929); Milwaukee, WI	Total
42To538	0		0	0	0	0	0	0	161	0	0	0	0	161
42To836	0		0	0	0	0	0	0	0	0	0	0	0	0
42To843	7		0	1	0	4	0	0	19	0	0	0	0	31
42To893	0		0	0	0	0	0	0	0	0	0	0	0	0
42To1501	26		1	0	0	0	0	0	19	0	0	0	0	46
42To1510	0		0	0	0	0	0	0	0	0	0	0	0	0
42To2125	0		0	0	0	0	0	0	0	0	0	0	0	0
42To2270	5		0	0	0	0	0	0	5	0	0	0	0	10
42To2373	0		0	0	0	0	0	0	2	0	0	0	0	2
42To2376	0		0	0	0	0	0	0	0	0	0	0	0	0
42To2707	0		0	0	0	0	0	2	1	0	0	0	0	3
42To2886	5		0	10	0	1	0	1	37	0	0	3	0	57
42To2887	1		0	0	0	0	0	0	3	0	0	0	0	4
42To2889	1		0	0	0	1	4	0	21	0	0	0	0	27
42To2956	17		0	0	1	0	0	0	18	0	0	0	1	37
42To3197	0		0	0	0	0	0	0	3	0	0	0	0	3
42To3214	32		0	1	2	3	1	0	67	2	6	0	1	115
42To3311	0		11	0	0	0	0	0	1	0	0	0	0	12
42To3313	24		0	0	0	0	0	0	14	0	2	0	0	40
Total	118		12	12	3	9	5	3	371	2	8	3	2	548

Table 27. Glass functions at Benmore.

Site No.	Alcohol	Beverage	Canning	Chemical	Condiment	Cosmetic	Decorative	Dish	Ink	Medicine	Mentholatum	Other	Poison	Soda	Unknown	Window	Total
42To538	0	40	130	0	0	0	0	0	0	0	0	0	0	0	242	0	412
42To836	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2
42To843	3	0	43	0	0	2	1	36	0	1	0	135	0	1	516	138	876
42To893	6	0	0	0	0	0	0	1	0	0	0	3	0	0	114	0	124
42To1501	5	3	33	0	0	0	16	3	0	1	0	1	0	2	277	63	404
42To1510	2	0	0	0	0	0	0	86	0	0	0	0	0	0	107	20	215
42To2125	0	40	10	0	0	0	0	0	0	18	0	11	0	0	1	0	80
42To2270	2	21	20	0	0	0	2	0	0	2	0	0	0	20	702	0	769
42To2373	1	0	8	0	0	0	0	0	0	0	0	0	4	1	25	1	40
42To2376	1	0	8	0	0	0	0	2	0	0	0	0	0	0	64	13	88
42To2707	0	13	51	3	0	0	0	13	0	1	0	0	0	9	226	678	994
42To2886	2	22	19	1	1	1	0	2	0	13	1	12	0	15	298	229	616
42To2887	0	0	7	0	1	1	0	4	0	1	2	2	0	0	202	3	223
42To2889	0	3	70	0	3	0	1	0	0	4	1	4	0	5	1706	186	1983
42To2956	6	13	125	1	1	2	51	0	0	1	1	13	0	6	367	449	1036
42To3197	0	0	0	0	2	0	0	0	0	0	2	0	0	7	40	6	57
42To3214	46	13	91	3	7	3	6	5	1	9	13	16	0	11	1265	649	2138
42To3311	0	7	5	0	0	0	0	0	0	0	0	0	0	22	14	101	149
42To3313	0	7	39	2	0	1	0	16	20	3	1	10	0	0	308	188	595
Total	74	182	660	10	15	10	77	168	21	54	21	207	4	99	6475	2724	10801

Table 28. Glass decorations at Benmore.

Site No.	Annular/Banded	Carnival Glass	Embossed	Fluted	Incised	Indet.	Molded	None	Other	Painted	Pressed	Total
42To538	0	0	0	0	0	0	0	0	202	0	0	202
42To836	0	0	0	0	0	0	0	2	0	0	0	2
42To843	0	0	0	0	1	0	0	0	21	0	14	36
42To893	0	0	0	0	0	0	0	0	2	0	0	2
42To1501	0	0	0	1	1	1	2	0	12	0	2	19
42To1510	0	0	9	0	0	0	0	0	0	0	0	9
42To2125	0	0	0	0	0	0	11	0	0	0	0	11
42To2270	0	0	3	0	0	0	0	0	1	0	1	5
42To2373	0	0	0	0	0	0	0	40	0	0	0	40
42To2376	0	0	0	0	0	0	0	0	2	0	0	2
42To2707	0	0	0	0	0	0	0	0	13	0	0	13
42To2886	0	0	2	0	1	0	0	4	3	15	0	25
42To2887	6	0	0	0	0	0	0	2	2	0	5	15
42To2889	2	0	0	0	0	0	0	0	3	0	6	11
42To2956	0	0	0	0	0	0	1	0	0	0	51	52
42To3197	0	0	0	0	0	0	0	50	0	7	0	57
42To3214	1	1	2	6	0	0	0	0	5	0	2	17
42To3311	0	0	0	0	0	0	0	0	11	0	0	11
42To3313	0	0	0	0	0	0	0	0	34	0	5	39
Total	9	1	16	7	3	1	14	98	311	22	86	568

Table 29, Ceramic glazes/slips at Benmore.

Site No.	Albany Slip	Clear Crackle Glaze	Clear Glaze	Luster Glaze	None	Other	Salt Glaze	Unknown	Yellow Glaze	Total
42To538	0	0	260	0	0	0	0	0	0	260
42To836	0	0	0	0	0	0	0	0	0	0
42To843	0	12	376	0	8	12	25	10	0	443
42To893	0	0	25	0	0	0	6	0	0	31
42To1501	2	39	77	0	1	2	1	1	0	123
42To1510	0	0	124	0	0	0	0	0	6	130
42To2125	0	8	0	0	0	0	0	0	0	8
42To2270	0	1	87	0	0	4	0	0	6	98
42To2373	0	0	5	0	0	0	0	0	0	5
42To2376	0	0	25	0	0	1	0	2	0	28
42To2707	0	65	33	0	0	0	0	0	0	98
42To2886	4	83	83	0	0	1	0	0	0	171
42To2887	0	75	53	0	4	1	0	0	0	133
42To2889	5	583	237	0	16	8	0	0	2	851
42To2956	2	209	172	5	9	0	0	3	1	401
42To3197	0	18	2	2	0	0	0	0	0	22
42To3214	24	561	327	2	19	10	8	0	2	953
42To3311	0	5	2	0	0	0	0	0	0	7
42To3313	0	44	27	3	0	1	0	0	0	75
Total	37	1703	1915	12	57	40	40	16	17	3837

Table 30. Ceramic decorations at Benmore.

Site No.	Decalware	Gilded	Handpainted	Molded Relief	None	Other	Transfer Print	Unknown	Total
42To538	10	0	0	0	137	0	113	0	260
42To836	0	0	0	0	0	0	0	0	0
42To843	17	3	12	1	222	25	45	156	481
42To893	0	0	0	0	25	0	4	2	31
42To1501	3	1	2	5	106	0	3	3	123
42To1510	7	0	0	14	109	0	0	0	130
42To2125	0	0	0	0	8	0	0	0	8
42To2270	13	0	0	1	81	1	2	0	98
42To2373	0	0	0	0	5	0	0	0	5
42To2376	6	0	0	2	16	0	4	0	28
42To2707	0	0	0	0	64	32	2	0	98
42To2886	22	3	0	1	88	2	47	8	171
42To2887	5	1	0	7	83	3	34	0	133
42To2889	19	421	11	95	119	2	36	1	704
42To2956	37	7	6	17	307	11	16	0	401
42To3197	8	0	0	0	11	2	1	0	22
42To3214	41	63	13	31	563	2	10	232	955
42To3311	0	0	0	0	5	0	2	0	7
42To3313	9	1	2	7	54	0	2	0	75
Total	197	500	46	181	2003	80	321	402	3730

Table 31. Ceramic patterns at Benmore.

Site No.	Annular/Banded	Asian	Blue Willow	Floral	Floral Polychrome	Flow Blue	Ho-o Bird	Indeterminate	None	Other	Unknown	Total
42To538	12	0	0	0	10	101	0	0	137	0	0	260
42To836	0	0	0	0	0	0	0	0	0	0	0	0
42To843	2	3	0	2	17	8	0	0	223	46	155	456
42To893	0	0	0	0	0	0	0	0	25	6	0	31
42To1501	1	2	1	3	1	0	0	0	106	3	6	123
42To1510	14	0	0	0	7	0	0	0	109	0	0	130
42To2125	0	0	0	0	0	0	0	0	8	0	0	8
42To2270	10	0	0	0	0	0	0	7	81	0	0	98
42To2373	0	0	0	0	0	0	0	0	5	0	0	5
42To2376	0	0	0	0	6	0	4	1	17	0	0	28
42To2707	0	0	0	0	0	0	0	0	64	34	0	98
42To2886	2	18	0	1	37	4	0	9	88	12	0	171
42To2887	1	35	0	0	4	0	0	0	90	3	0	133
42To2889	433	14	2	3	3	3	5	1	139	28	221	852
42To2956	29	0	1	7	13	2	0	0	308	41	0	401
42To3197	0	0	0	0	8	0	0	0	11	3	0	22
42To3214	74	0	0	8	38	1	1	0	570	24	240	956
42To3311	0	2	0	0	0	0	0	0	5	0	0	7
42To3313	12	0	0	1	4	0	1	0	54	3	0	75
Total	590	74	4	25	148	119	11	18	2040	203	622	3854

Table 32. Ceramic functions at Benmore.

Site No.	Bowl	Crockery	Cup	Dish	Doll	Figural	Indeterminate	Other	Plate	Sugar Bowl	Teacup	Unknown	Total
42To538	101	6	0	0	0	0	0	0	10	0	0	143	260
42To836	0	0	0	0	0	0	0	0	0	0	0	0	0
42To843	45	9	1	1	3	0	0	3	3	0	0	391	456
42To893	0	6	2	0	0	0	0	0	0	0	0	23	31
42To1501	8	3	2	18	1	0	0	4	48	0	1	38	123
42To1510	0	0	0	0	0	0	0	130	0	0	0	0	130
42To2125	0	0	0	0	0	0	0	0	0	0	0	8	8
42To2270	0	0	0	0	0	0	0	2	2	0	0	94	98
42To2373	0	0	0	0	0	0	0	0	0	0	0	5	5
42To2376	0	0	0	2	0	0	0	0	1	0	0	19	22
42To2707	1	0	0	21	0	0	0	0	0	0	0	76	98
42To2886	2	0	0	13	0	0	1	10	23	0	2	120	171
42To2887	10	1	0	77	0	2	0	0	10	0	0	33	133
42To2889	37	6	0	581	9	2	0	5	6	0	1	205	852
42To2956	4	0	8	12	4	0	0	7	150	7	0	209	401
42To3197	7	0	0	0	0	0	0	0	3	0	1	11	22
42To3214	52	18	2	494	15	0	0	112	65	6	43	149	956
42To3311	0	0	0	0	0	0	0	0	0	0	2	5	7
42To3313	6	0	1	21	2	0	0	2	20	2	6	15	75
Total	273	49	16	1240	34	4	1	275	341	15	56	1544	3848

Table 33. Ceramic maker's marks at Benmore.

Site No.	Carr China Co. (1916-1952); Grafton, WV	CF Splitdorf; New York City, NY	Edwin M. Knowles China Co. (1900-1963); Newell and Chester, WV	Harker Pottery Co. (mark pre-1900); East Liverpool, OH	Homer-Laughlin Co.; East Liverpool, OH	K, T & K China: Knowles, Taylor, Knowles 1872-1904; East Liverpool, OH	None	Other	Taylor, Smith, and Taylor (this mark 1899-1909); Chester, West Virginia	Unknown	Total
42To538	0	0	0	0	0	0	0	0	0	0	0
42To836	0	0	0	0	0	0	0	0	0	0	0
42To843	0	0	0	0	1	0	0	0	0	145	146
42To893	0	0	0	0	0	0	29	0	0	2	31
42To1501	0	0	0	0	1	0	0	0	0	2	3
42To1510	0	0	0	0	2	0	0	0	0	0	2
42To2125	0	0	0	0	0	0	0	0	0	8	8
42To2270	0	0	0	0	0	1	0	0	0	8	9
42To2373	0	0	0	0	0	0	0	0	0	0	0
42To2376	0	0	0	0	0	0	0	0	0	0	0
42To2707	0	0	0	0	0	0	0	0	0	1	1
42To2886	0	1	0	0	1	0	0	0	0	1	3
42To2887	0	0	0	0	0	0	0	0	0	6	6
42To2889	0	0	0	0	1	0	0	0	0	89	90
42To2956	0	0	0	2	50	0	0	0	4	132	188
42To3197	0	0	0	0	0	0	22	0	0	0	22
42To3214	50	0	1	1	1	0	0	1	0	5	59
42To3311	0	0	0	0	0	0	0	0	0	0	0
42To3313	0	0	0	0	0	0	0	0	1	1	2
Total	50	1	1	3	57	1	51	1	5	400	570

Table 34. Tin cans at Benmore.

Site No.	Hole-In-Can	Hole-In-Top	Indeterminate	Sanitary	Soldered	Unknown	Total
42To538	0	0	0	0	0	0	0
42To836	0	1	0	13	0	1	15
42To843	0	130	0	459	0	5	594
42To893	0	32	0	60	0	0	92
42To1501	0	9	0	59	0	115	183
42To1510	0	0	0	0	0	5	5
42To2125	0	0	0	14	0	0	14
42To2270	0	6	0	26	0	42	74
42To2373	0	13	0	2	0	0	15
42To2376	0	4	0	38	0	4	46
42To2707	1	0	0	139	0	1	141
42To2886	11	158	0	373	1	0	543
42To2887	0	2	0	35	0	0	37
42To2889	0	0	0	179	0	32	211
42To2956	0	5	0	244	0	1	250
42To3197	1	3	0	110	0	0	114
42To3214	2	5	1	281	1	325	615
42To3311	0	1	0	13	0	0	14
42To3313	3	81	0	37	0	53	174
Total	18	450	1	2082	2	584	3137

Table 35. Tin can maker's marks at Benmore.

Site No.	1904-1908 Sanitary	American Can Co. (mark 1910s-); Richmond, VA	Canco (1910-1921); Maywood, IL	Hinged (post-1910)	Other	Royal Baking Powder Marks (c. 1873); Fort Wayne, IN	Standard Oil Co. (c. 1889); Indiana	Unknown	Total
42To538	0	0	0	0	0	0	0	0	0
42To836	0	0	0	1	1	0	0	0	2
42To843	0	0	0	0	9	0	1	0	10
42To893	0	0	0	0	0	0	0	0	0
42To1501	0	0	2	5	0	0	0	1	8
42To1510	0	0	0	0	0	0	0	0	0
42To2125	0	0	0	0	0	0	0	0	0
42To2270	0	0	0	0	2	0	0	0	2
42To2373	0	0	0	0	1	0	0	0	1
42To2376	0	0	0	0	4	0	0	0	4
42To2707	0	0	0	0	0	0	0	0	0
42To2886	4	2	0	13	8	0	0	0	27
42To2887	0	0	0	0	4	0	0	0	4
42To2889	0	0	0	0	1	0	0	0	1
42To2956	0	0	0	0	3	0	0	0	3
42To3197	0	0	0	0	1	0	0	0	1
42To3214	0	1	0	0	2	3	4	0	10
42To3311	0	0	0	0	0	0	0	0	0
42To3313	0	0	0	0	102	0	0	0	102
Total	4	3	2	19	138	3	5	1	175

Table 36. Miscellaneous artifacts at Benmore.

Site No.	Barbed Wire	Barrel Strap	Bucket	Button	Car Part	Machine Part	Nail	Other	Shoe	Stove Part	Wire	Total
42To538	0	0	0	0	0	0	0	0	0	0	0	0
42To836	0	7	0	1	0	0	0	16	0	0	0	24
42To843	65	32	9	1	0	13	133	338	2	15	43	651
42To893	0	4	2	1	0	0	20	96	5	1	2	131
42To1501	28	10	6	0	1	4	1	393	0	3	23	469
42To1510	0	0	0	0	0	0	5	3	0	0	0	8
42To2125	2	0	0	0	0	0	0	4	0	0	0	6
42To2270	2	1	0	0	0	1	0	16	13	0	0	33
42To2373	2	0	1	0	0	0	0	3	0	0	0	6
42To2376	7	0	0	0	5	0	7	21	0	3	3	46
42To2707	5	26	9	2	0	10	11	359	0	25	2	449
42To2886	13	42	3	2	0	3	48	138	8	7	11	275
42To2887	14	0	1	1	0	0	23	76	0	21	12	148
42To2889	20	7	0	1	0	1	70	163	1	19	30	312
42To2956	32	24	15	8	107	6	20	1084	1	17	33	1347
42To3197	0	0	1	0	0	0	0	9	0	0	0	10
42To3214	63	101	12	4	5	14	53	1051	15	6	66	1390
42To3311	0	0	0	0	0	0	3	2	1	0	1	7
42To3313	4	6	5	0	0	6	56	229	0	8	5	319
Total	257	260	64	21	118	58	450	4001	46	125	231	5631

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