THE EFFECTS OF CLIMATE CHANGE ON PALEOINDIAN DEMOGRAPHY

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Abstract

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This study examines site frequencies and faunal data from Pleistocene, Younger Dryas, and Early Holocene age sites from New Mexico and Wyoming to investigate the effects of climate change on human demography and subsistence. Paleoclimatic data and ecological models are linked to provide a theoretical framework for understanding the connections between temperature, primary productivity, and ultimately human demographic and subsistence trends. It is shown that the Younger Dryas stadial negatively impacted Paleoindian populations in Wyoming and positively impacted those in New Mexico. The following Early Holocene period had the opposite effects. While the study area limits tests of changes in subsistence, bison are shown to be more common than expected in Younger Dryas faunal assemblages and lagomorphs are more common than expected in Early Holocene faunal assemblages. This indicates decreasing foraging efficiency through time.

Introduction

This study is an effort to understand the nature and causes of demographic trends among Paleoindian foragers in New Mexico and Wyoming from the Pleistocene into the Early Holocene. The basic hypotheses are as follows. During the cooler Younger Dryas, primary productivity, prey species populations, and ultimately forager carrying capacities within a given adaptive strategy were limited by the cold in Wyoming. At the same time, the Younger Dryas of New Mexico was an optimized combination of temperature and precipitation. With rapid warming into the Early Holocene, the temperature restriction on primary productivity in Wyoming was lifted allowing primary productivity, prey populations, and the carrying capacity of forager populations to increase. Early Holocene warming in New Mexico however increased evapo-transpiration which created a precipitation-limited primary productivity regime and reduced available forage and game. Paleoindian populations could most easily have adapted through emigration resulting in the stagnation or even decline of forager populations in New Mexico.

To investigate these hypotheses, I compiled lists of all recorded Paleoindian sites in each state, as well as available faunal data from those sites, and paleoclimatic/paleoenvironmental data at both broad and local scales. With caution (Surovell and Brantingham 2007), the ratio of Younger Dryas to Early Holocene age sites is used here as a proxy for the sizes of the Paleoindian populations in question. Finally, faunal data from sites within the study area are provided to evaluate potential subsistence changes as an adaptation to climatic and environmental change.

Understanding the behavioral adaptations of prehistoric people to climate changes is important to archaeologists in explaining dynamic cultural systems and their ecological context. As Binford (2001) and Kelly (1995) have demonstrated, a variety of cultural variables such as dependence on hunting and mobility patterns are strongly correlated with environmental variables, primarily temperature and precipitation. Therefore, understanding the paleoenvironmental and paleoclimatic conditions that foragers adapted to is essential to understanding why they choose the adaptive strategies that they did. Likewise, patterns observed in one portion of the archaeological record can be used to generate hypotheses pertaining to another part as Gamble et al. (2004) have inspired me to do here.

Additionally, climate change and our options for adapting to it are of increasing importance as we enter a period that is expected to be characterized by rapid global climate change (Alley, et al. 2007). Archaeologists have a unique opportunity to explore the effects of ancient climate changes on human populations. While acknowledging the dramatic differences between modern and ancient North Americans, it is my hope that by understanding more about the consequences of climate changes in the past, we will be better prepared to cope with climate change now. Due to our dramatically different subsistence and technology suite today, the adaptations of Paleoindians and Europeans (Gamble, et al. 2004) to the very rapid warming of the Younger Dryas-Early Holocene transition (Dansgaard, et al. 1989) may be very different from our own expected adaptations to global climate change. However, these adaptations are still relevant information to our understanding of human adaptation to rapid climatic warming. Climate scientists (IPCC 2007), relief organizations (Baird 2007), and the popular media (Vidal 2007) have all become interested in the potential consequences of modern global warming on human migration patterns which could be very dramatic and extend beyond coastal areas into this study area (IPCC 2007).

Following the Last Glacial Maximum approximately 20,000 BP (Ruddiman 2000) the climate of the earth generally warmed with the exception of a few brief stadial periods (Alley 2000; Roberts 1998). The last and most severe of these cold spells was the Younger Dryas, a return to cooler climatic conditions at the end of the Pleistocene, which ended with rapid warming and marked the beginning of the Holocene (Dansgaard, et al. 1989). North America had been colonized prior to the onset of the Younger Dryas so there were people living in the Americas to experience its effects directly (Bever 2006).

Because of the work of Gamble et al. (2004) in Europe, I began to wonder about the demographic consequences of the Younger Dryas in North America. In Europe, Gamble et al. (2004) used numbers of radiocarbon dates as a proxy for population to show that populations in Northern Europe and France diminished dramatically during the Younger Dryas while populations in Iberia increased. This caused me to wonder if the same climatic event had similar consequences in relatively cooler/moister and warmer/dryer parts of North America. In North America, researchers have examined the relative abundance of Paleoindian manifestations and have inferred general trends in Paleoindian population dynamics (Holliday 1997; Jodry 1999; LaBelle 2005), and still others have looked for connections between the climatic changes of the Younger Dryas and cultural changes amongst Paleoindians (Lovvorn, et al. 2001; Newby, et al. 2005).

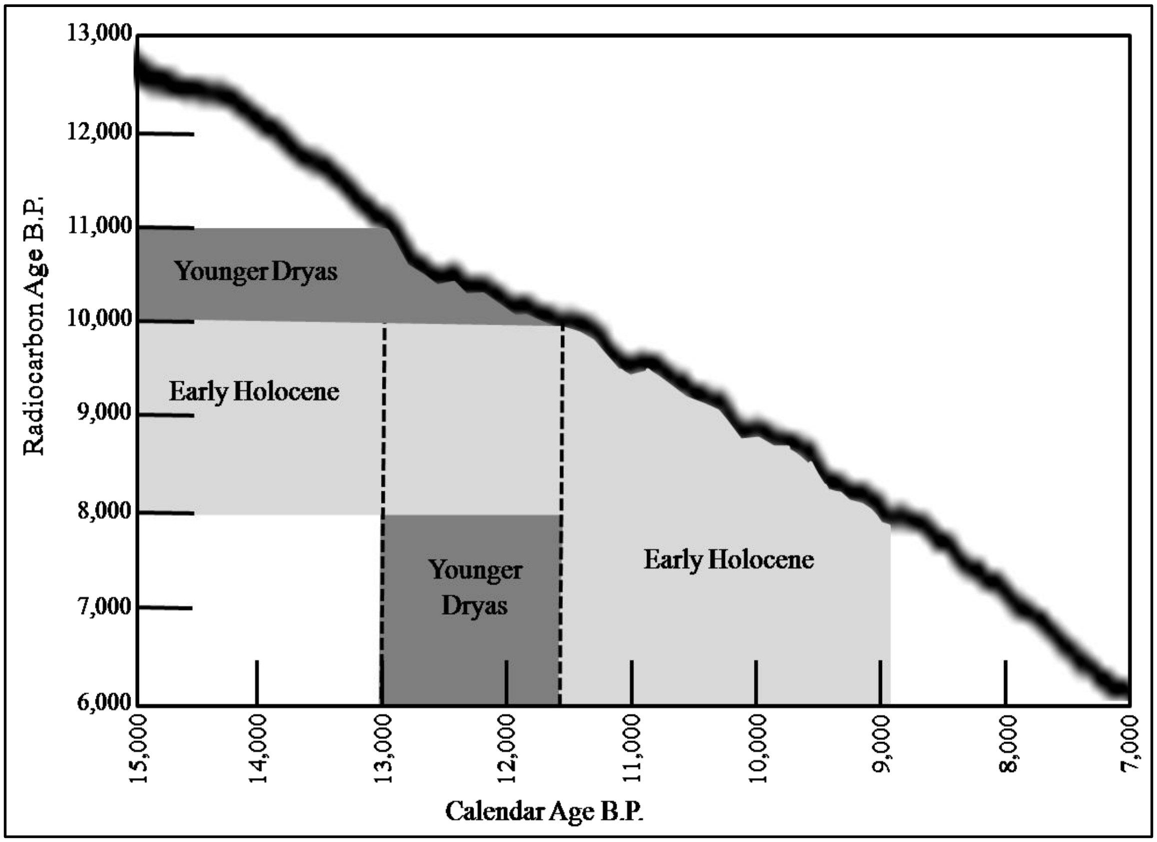

Figure 1. Calibration curve for the Early Holocene and Younger Dryas based on OxCal (Ramsey 2007).

The dates of the Younger Dryas used here are 13,000 to 11,600 Calendar Years B.P. (11,000 to 9,600 Calendar Years B.C.) based on Alley (2000), Bever (2006), and Roberts (1998). This converts to approximately 11,050 to 10,050 Radiocarbon Years B.P. as calibrated by OxCal (Ramsey 2007). The calendar and radiocarbon ages of the Younger Dryas and the Early Holocene as well as the conversion factor are shown in Figure 1.

The Early Holocene is defined here on both a cultural and a climatic basis. For the purposes of this document, the Early Holocene begins immediately following the climatically defined Younger Dryas. However, I end the period an arbitrary 2,000 radiocarbon years later at 8,000 Radiocarbon years B.P. which converts to approximately

8,800 Cal B.P. with Oxcal (Ramsey 2007). This is also shown in Figure 1. The reason for this is that 8,000 RCYBP works well as an approximate end of the Paleoindian Period archaeologically (Figure 6) in this study area. Thus, for the purposes of this study, I define the Early Holocene as extending from the end of the Younger Dryas stadial through the end of the Paleoindian culture-historical period.

Hypotheses

Although it is disputed (Byers and Ugan 2005; Cannon and Meltzer 2004; Hill 2007a, b; Meltzer 1988), I take it as a given that Paleoindians in the study area were mobile foragers with relatively narrow diet breadths and that they were dependent upon large mammals for the bulk of their sustenance (Frison 1982a; Hofman and Todd 2001; Kelly and Todd 1988; Todd 1991; Waguespack and Surovell 2003). As omnivores, hunter gatherers are dependent upon primary producers (plants) and primary consumers (herbivores) for their existence. For an extended explanation of these ecological systems see Smith (1996). As specialized large-game hunters, Paleoindians in particular would have been dependent upon herbivores and ultimately the plants that sustain them for their livelihood. Given that "temperature and precipitation clearly 'control' terrestrial production to a large extent" (Ricklefs 1990:262; Lieth 1973 for original data) changes in climate would have had important effects on primary producers, primary consumers, and ultimately on Paleoindians as well.

We see a positive relationship between temperature, primary productivity, and forager population density in the modern ethnographic record today (Binford 2001; Kelly 1995) such that the warm tropics have high primary productivity and can therefore support more foragers than the cool, minimally productive high latitudes. Primary productivity is a function principally of temperature and precipitation (see below). Increasing primary productivity simply makes more calories available on the landscape. However, not all of those calories are directly available for human consumption. Within the study area, the great plains extend into both states. On the plains, primary production is largely in the form of grasses which are inedible to humans. In order for humans to capitalize on that productivity, it must be transformed into usable calories by animals such as bison. In fact, plains groups are more meat dependent than would be expected given the effective temperatures in their regions (Kelly 1995). Thus plains bison hunters should be particularly susceptible to climate changes which alter the primary productivity of their territories.

Although “temperature and rainfall are, themselves, strongly correlated” (Ricklefs 1990:262) the influences of each can be considered independently. As Ricklefs (1990:262) states:

> “…productivity increases in direct relation to precipitation over the lower part of the range…and then levels off…presumably because some other factor becomes more limiting. When precipitation is factored out statistically, we find that higher temperatures lead to decreased production…confirming the notion that water goes farther in cold climates than in warm climates.”

When prey populations decrease due for instance to environmental change or predation pressure, foraging efficiency (Kcal/hr) of hunter-gatherers should decrease as well. This is due to the fact that prey at reduced population densities require increased search times (Stephens and Krebs 1986). This can occur to the point that foragers are forced to expand diet breadth to include lower-ranked resources that were previously ignored due to their lower net returns (Belovsky 1988; Winterhalder, et al. 1988; Winterhalder and Lu 1997). Otherwise, the resources would not have been low ranked and excluded from the optimal diet in the first place. It is important to note that a decrease in foraging efficiency due to decreased prey densities and expanded diet breadth can still result in growing forager populations, albeit at a lower growth rate (Winterhalder and Goland 1993). For instance, perhaps as an adaption to Younger Dryas cooling Wyoming's foragers expanded their diet breadth to include lower-ranked species. This adaptation may have slowed population growth in Wyoming, but may not have stopped or reverse it altogether.

Ice core data are a deep and detailed record of the earth's climate. Alley (2000), Dansgaard (1989), Fischer (1976), Taylor et al. (1997) and many others have analyzed oxygen isotopes, dust proportions, and atmospheric chemistry from ice cores to examine the record of the climate change including the Younger Dryas and throughout the Holocene and Pleistocene. Extant paleoclimatic evidence (Alley 2000; Armour, et al. 2002; Balakrishnan, et al. 2005; Dansgaard, et al. 1989; Fisher 1976; Roberts 1998; Rossignol-Strick 1995; Ruddiman 2000; Ruddiman and McIntyre 1981; Taylor, et al. 1997; Watts, et al. 1996) indicates that the Younger Dryas was a period of approximately 1,500 years during which the climate of at least the Northern Hemisphere rapidly returned to stadial conditions and then rapidly returned to inter-stadial conditions. The general temperature trend of the Northern Hemisphere for the period in question is shown in Figure 2.

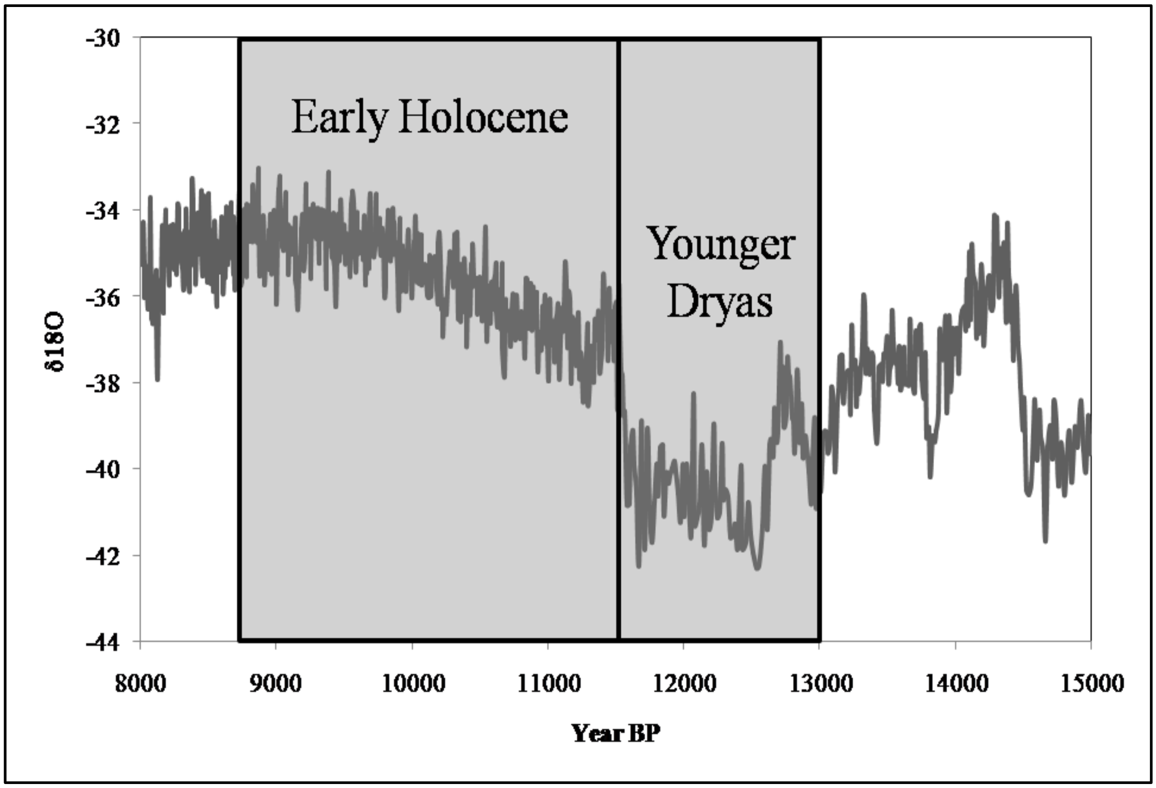

Figure 2. Isotope-based temperature approximation based on Dansgaard et al. (1989) such that more negative values represent a colder climate and less negative values represent a warmer climate. These values are from the GRIP ice core in central Greenland.

However while ice core data such as the record shown in Figure 2 are useful for understanding climatic changes at high latitudes or at hemispheric scales, it is not a substitute for data on climate changes in local research areas. In fact, climatic changes seen at high latitudes tend to occur at a greater scale than the same events at lower latitudes. This can be seen by comparing the magnitude of the differences in oxygen isotope values between the Younger Dryas and Early Holocene shown in Figure 2 and listed in appendix A. In appendix A, the difference between the Younger Dryas and the Early Holocene as measured by the oxygen isotopes of Bison (*Bison antiquus*) tooth enamel from archaeological sites in Middle Park, Colorado is on the order of 2‰ whereas the difference in the ice core is on the order of 6‰.

While the data shown in Figure 2 represent the general hemispheric trend, local paleoclimatic and paleoevironmental information are superior for archaeological interpretation because of their local and temporally appropriate nature. Along those lines, archaeologists have filled volumes with data from sites just in Wyoming and New Mexico examining the nature of the climate and environment at the time that sites were occupied (Balakrishnan, et al. 2005; Brooks 1995; Frison 1974; Frison and Stanford 1982; Frison and Todd 1986; Frison and Todd 1987; Frison and Walker 2007; Haynes 1991, 1995, 1999, 2008; Hill 2001; Hughes 2003; Lovvorn, et al. 2001; Mullen 2007; Widga 2006).

Although not all data are derived from Wyoming or New Mexico, Figure 3 and appendix A provide relevant carbon and oxygen isotopic data that my colleagues and I have collected which generally corroborate the hemispheric trends recorded in the ice core record. Statistical analysis using a bootstrapping routine indicates several relevant findings regarding the paleoclimate based on the $\delta^{18}O$ of bison tooth enamel. In Middle Park, Colorado (which I use as a nearby proxy for Wyoming), the Younger Dryas (represented by bison tooth enamel from the Barger Gulch and Upper Twin Mountains) was in fact cooler than the Early Holocene (represented by bison tooth enamel from the Jerry Craig site) ($p = 0.019$). The Younger Dryas (p 0.017) was cooler than the present in Middle Park, however the Early Holocene ($p = 0.188$) was not significantly cooler than the present. The Younger Dryas of Middle Park, Colorado was cooler ($p << 0.001$) than the Younger Dryas of New Mexico (represented by bison tooth enamel from the Boca Negra Wash site) just as modern Middle Park is cooler than either modern Northern (as represented by the $\delta^{18}O$ of bison tooth enamel from the Vermejo Park Ranch; $p << 0.001$)

or Southern New Mexico (as represented by the $\delta^{18}O$ of bison tooth enamel from the Ladder Ranch; $p << 0.001$) and Younger Dryas New Mexico was cooler than is Southern New Mexico ($p << 0.001$). However, Central New Mexico during the Younger Dryas was not significantly different in temperature from present Northern New Mexico ($p = 0.233$).

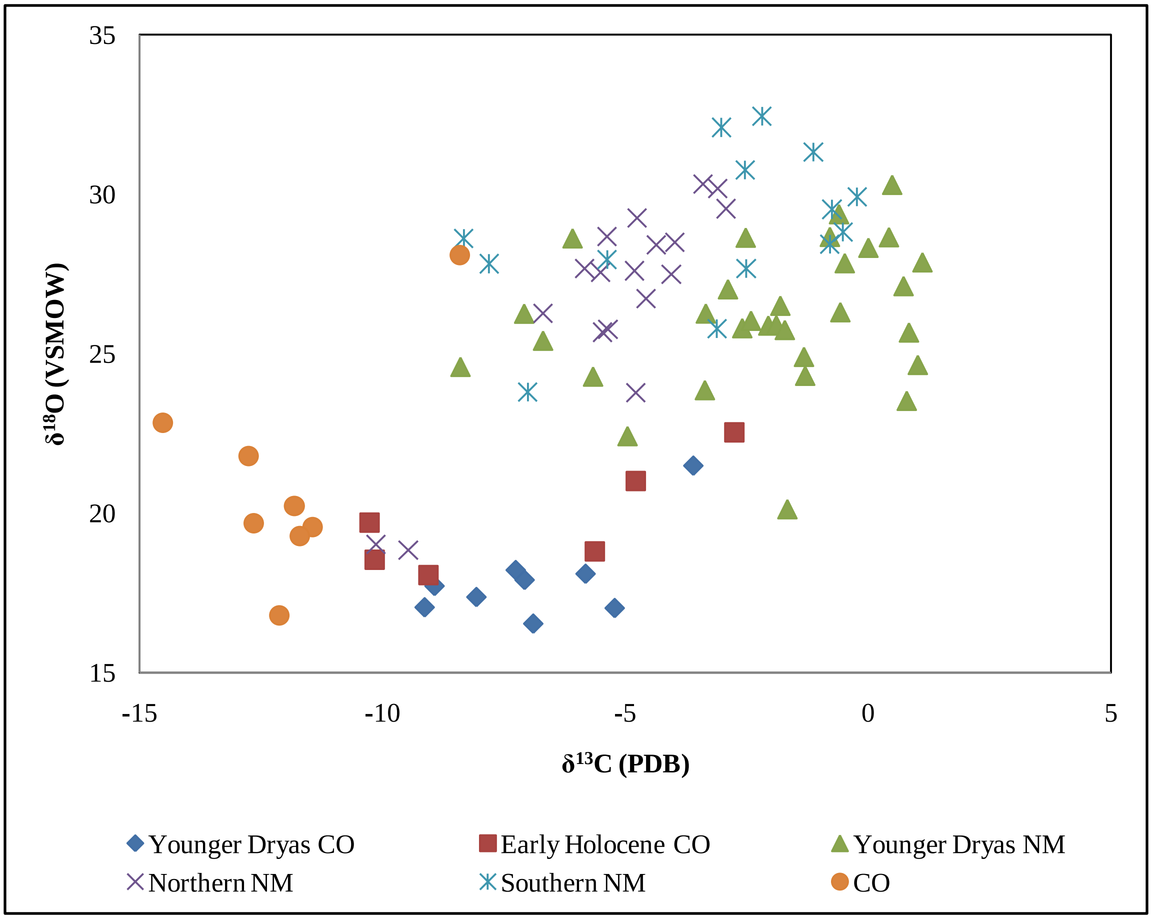

Figure 3. Isotopic values used to examine climate and environment based on data from appendix A.

In terms of grass flora as represented by $\delta^{13}C$ values of bison tooth enamel, in Middle Park there was no significant difference in vegetation between the Younger Dryas and the Early Holocene as measured by the $\delta^{13}C$ of the tooth enamel of bison from those sites ($p = 0.413$). Both the Younger Dryas ($p << 0.001$) and Early Holocene ($p = 0.006$) of Middle Park were less dominated by C3 grass flora than the present. The Younger Dryas age vegetation of New Mexico was more C4 dominated than that of Middle Park ($p < 0.001$). The dominance of C4 grass flora in the southwestern United States during the Younger Dryas is an issue which continues to confound researchers as it has been observed in multiple studies (Balakrishnan, et al. 2005; Connin, et al. 1998; Mullen 2005, 2007) and was in fact greater than C4 dominance is in modern New Mexico (Mullen 2005, 2007). Connin et al. (1998) suggest that this may be due low atmospheric CO_2 during the Younger Dryas or to a summer-dominated precipitation regime.

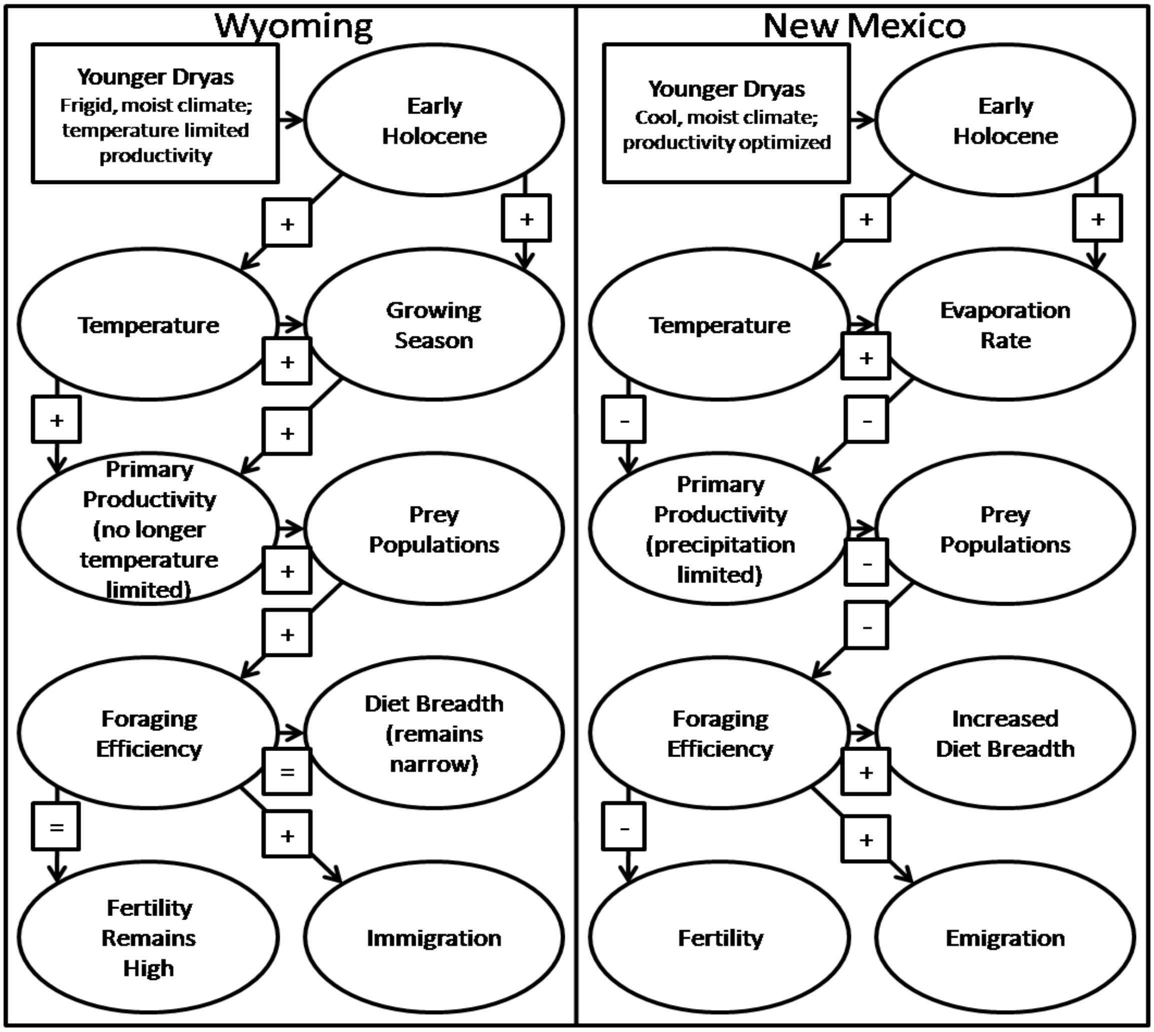

Figure 4. Schematic representation of the relationships described in the model.

By extension, during the Younger Dryas, primary productivity in Wyoming should have been limited by the cold temperatures (as opposed to precipitation). Contrary to Jodry (1999) I postulate that the Younger Dryas climate created an inhospitable environment with limited faunal resources available to Paleoindians in Wyoming, thus limiting their population densities. Following the Younger Dryas, the climate of Wyoming warmed into the Early Holocene which should have removed the temperature limitation on primary productivity and allowed forager populations in Wyoming to expand as the climate, environment, and faunal abundance improved. Although Ricklefs points out that “high temperatures lead to decreased production” (1990:262) it would seem that Early Holocene temperatures in Wyoming were not sufficiently high as to be limiting. These relationships are shown diagrammatically in Figure 5.

Expansion and contraction of populations could have occurred through a number of ways or combinations of ways. Net fertility is a function of births, deaths, immigration, and emigration, all of which could have played a role in the changes being investigated here. Clearly better nutrition through improved environment due to climate change could decrease mortality rates of a population and increased fertility rates. Furthermore, if these highly-mobile people were aware of improvements and deteriorations in regional environmental quality, then adaptation to changing climates via mobility and territory choices (emigration from deteriorating areas and immigration into improving territories) could have also played a significant role in population dynamics. Furthermore, this population balancing through migration could have also resulted in the maintenance of diet breadth through changing climates and environments.

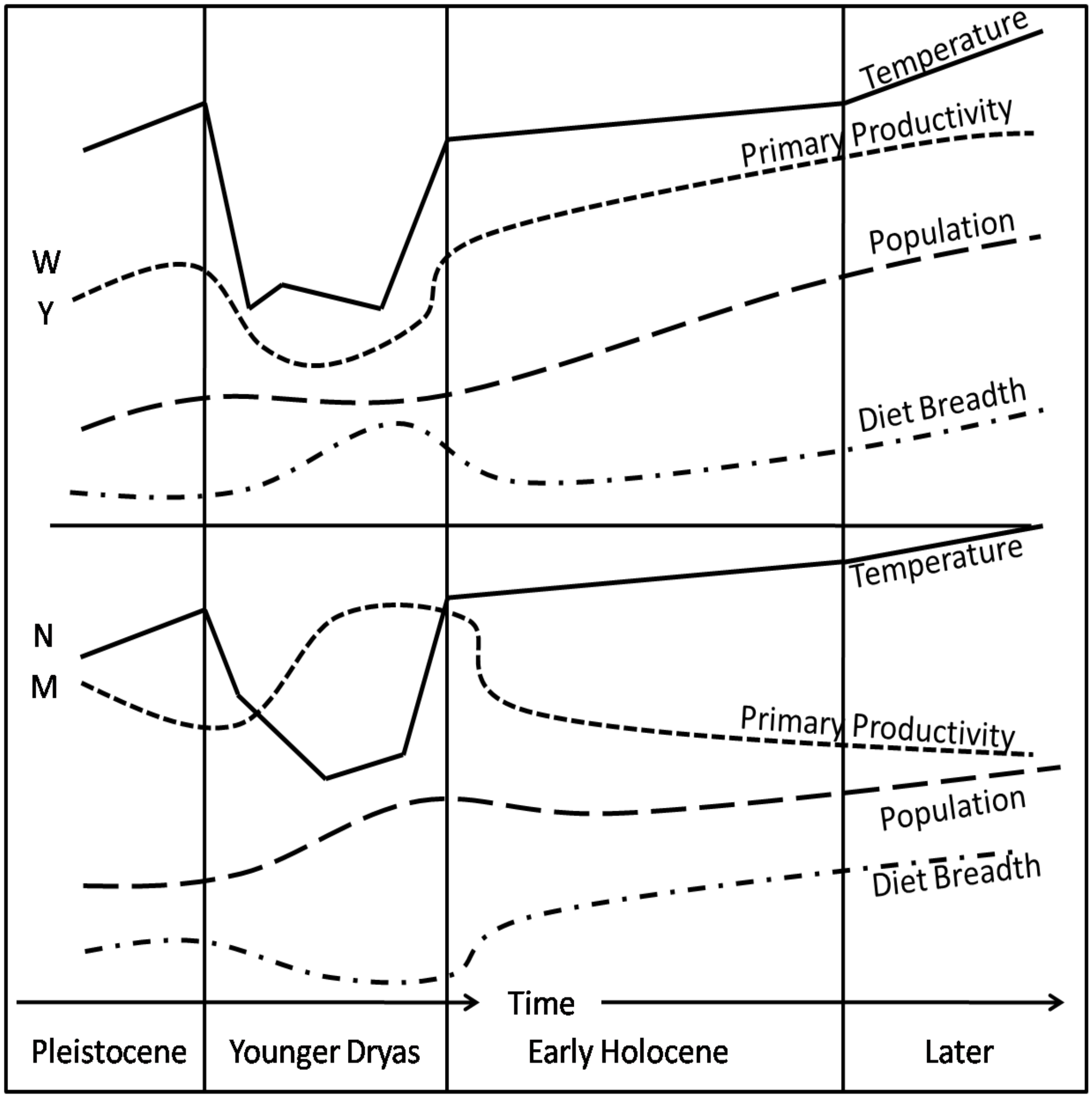

Figure 5. A generalized representation of the proposed causal relationships between climate, primary productivity, and forager populations in Wyoming and New Mexico from the Pleistocene through the Early Holocene. Variables are shown with the independent variable (temperature) at the top and increasing levels of dependency moving downward.

Similarly, New Mexico was also cooler during the Younger Dryas than in the Early Holocene or at present, although not as cool as Younger Dryas Wyoming (Armour, et al. 2002; Balakrishnan, et al. 2005; Dansgaard, et al. 1989; Taylor, et al. 1997). Although it is disputed (Holliday 2000b), Haynes (Haynes 1991, 1995, 1999, 2008) has provided evidence that the Younger Dryas was significantly more moist across this study area than either the preceding or following periods. This moisture could have been due to increased precipitation or just decreased evapo-transportation with the cooler Younger Dryas. Either way, the increased moisture would have increased primary productivity across the study area and could have also affected the competition of C3 and C4 flora. Geomorphologically also, the Younger Dryas climate of New Mexico appears to have been cooler and more moist than the Pleistocene or Early Holocene (Armour, et al. 2002). This moisture effected the environment in a manner which improved habitat for Paleoindians as is seen isotopically at Folsom (Balakrishnan, et al. 2005; Meltzer 2006; Meltzer, et al. 2002) and by the presence of a playa lake at Boca Negra Wash (Huckell and Kilby 2000; Huckell, et al. 2001; Huckell, et al. 2002). As temperatures increased into the Early Holocene primary productivity in New Mexico should have diminished and become precipitation limited. The dryer climate should have limited primary productivity, primary consumer populations, and ultimately Paleoindian populations in the Early Holocene. The net result of this would have been higher population growth in New Mexico during the Younger Dryas, followed by slowed growth or even population decrease during the Early Holocene. In contrast, warming from the Younger Dryas into the early Holocene should have increased population growth rates in Wyoming during the Early Holocene such that the ratio of Younger Dryas to Early Holocene age sites (YD:EH) would be expected to be lower in Wyoming than in New Mexico.

In sum and as shown in Figure 4 and Figure 5, the same Younger Dryas stadial climatic event is expected to have had different consequences for Wyoming and New Mexico. In Wyoming, the generally cool climate was warming and primary productivity was rising when the colonizing Clovis populations arrived. As Pleistocene megafauna as well as other game were available and populations were low, their diet breadth was narrow and appropriately focused on the most profitable animals on the landscape: megafauna (Frison 1978, 1991). With the cooling of the Younger Dryas, primary productivity became temperature limited and decreased. Due to their recent colonization of the area, populations grew through this period though perhaps slowly. Their diet breadth may have increased or more likely emigration may have allowed those that remained to maintain a relatively narrow diet breadth. With the rapid warming at the end of the Younger Dryas, primary productivity correspondingly rose and the forager population grew through a combination of increased fertility, decreased mortality, and immigration. Forager populations also likely adapted to the increased productivity by narrowing diet breadth to the extent that the expanded population allowed. Archaeologically, these population changes should be reflected by increasing numbers of Paleoindian sites through time with the most rapid growth in the Early Holocene and diet breadth should slowly broaden except for a possible brief expansion and contraction during the Younger Dryas.

In New Mexico, the model shown in Figure 4 and Figure 5 indicates that the climate changes associated with the Younger Dryas should have had very different effects from those expected and observed in Wyoming. Colonizing Clovis populations faced drought conditions (Haynes 1991, 1995, 1999, 2008), but due to low initial population, diet breadth was narrow. With the cooling of the Younger Dryas, the amount of water available may have increased and certainly the available water went further with the lowered temperature. The increased available moisture in turn led to increased primary productivity and biomass which created the classic “black mat” stratum which is present at many Younger Dryas age sites (Haynes 2008). These optimal conditions allowed Younger Dryas forager populations to expand rapidly. However, with the end of the Younger Dryas and start of the Early Holocene came rapid and dramatic warming and drying of the climate which lowered primary productivity. Population levels diminished or at least stagnated and those that remained likely adapted by expanding their diet breadths. Archaeologically, we should expect to see more Younger Dryas age sites (associated with the black mat) than Early Holocene age sites and narrower diet breadths represented in the faunal record of the Younger Dryas than of the Early Holocene.

Methods

Paleodemography is an issue that interests archaeologists as both a cause of phenomena of interest such as the switch to agriculture, the occurrences of warfare, and the development of social stratification and as an affect of climate/environment change. In assessments of paleodemography, it is generally and logically assumed that more people create more archaeological residues whether those residues be sites (Holliday 1997; LaBelle 2005), hearths or other radiocarbon datable materials (Gamble, et al. 2004; Kuzmin and Keats 2005; Rick 1987), projectile points, faunal remains (Stiner, et al. 2000; Surovell, et al. 2005), room blocks, sherds, or any other part of the archaeological record. However Surovell and Brantingham (2007) have shown that taphonomic processes can make even population decline appear to be population increase through site attrition over time. They summarize three factors that can affect our efforts to measure demographic trends in archaeology “(1) the original distribution of the population sampled; (2) factors which introduce biases into the distributions we observe; and (3) chance in sampling" (Surovell and Brantingham 2007: 1869). By examining a large sample in this study, I have minimized potential problems that may occur with a small sample. Fortunately, taphonomic processes can only skew proxies for demography toward population growth over time which is partially contrary to the results shown below. Furthermore, comparison between two states should reveal meaningful differences in demographic trends assuming constant taphonomic bias. If both states showed increasing population through time, it could be said that taphonomic bias had obscured the actual trend. However, given that the trend seen in New Mexico is contrary to the pattern created by taphonomic bias, it adds confidence to the assessment of demographic trends in both states leaving only the actual populations of hunter gatherers.

In order to obtain a proxy for changes in paleodemographic trends, I examined the numbers of applicable Paleoindian sites and components in the states that comprise the study area. I obtained information on Paleoindian sites in Wyoming and New Mexico directly from the site files maintained by the states. I was granted access to the New Mexico Cultural Resource Inventory System (NMCIRS) by its managers with New Mexico's Office of Cultural Affairs Historic Preservation Division who operate Archaeological Records Management System (ARMS). In Wyoming, I was granted access to the Wyoming Cultural Resource Information System (WYCRIS) system by its managers at the State Historic Preservation Office, a division of the Wyoming Department of State Parks and Cultural Resources. However, in both cases my work was tremendously aided by the willingness and ability of employees of those organizations to use the more powerful searching algorithms available to them to provide me with lists of likely Paleoindian sites in their databases. I requested any sites that returned a positive match for any Paleoindian occupation or any date that would put them into the Paleoindian time period. This resulted in a total of 1,358 Paleoindian site files between the two states.

Upon obtaining the lists of possible Paleoindian sites from each state, I reviewed each component to determine its cultural affiliation. For sites with multiple Paleoindian occupations, I listed them Site Number b, c, d, etc. so that each Paleoindian component would be counted separately. This resulted in a total of 1,511 Paleoindian sites and components between the two states. A list of all sites and components as well as their temporal affiliations is provided in appendix B.

Not all of the 1,511 sites and components counted toward the tally of Younger Dryas or Early Holocene age sites. This is because many sites lack sufficient documentation or sufficiently diagnostic artifacts to allow for confident assessment of their cultural affiliation. Whenever these sites or components were encountered, they were assigned to the "Other" category along with components that fall beyond the scope of this work. This was compensated for by the large sample size.

When determining the cultural affiliation, I attempted to defer to the archaeologists that actually recorded the site. Because Paleoindian sites are comparatively rare, Paleoindian artifacts are not encountered frequently and require skill and research to properly identify. However, perhaps due to their rarity, I have personally observed that they also tend to spark a particular interest even in seasoned field archaeologists. I believe that this often elaborate attention results in high levels of interest, documentation, and research when artifacts are found which may be Paleoindian in age. I find that this added attention aids in the proper identification of Paleoindian sites. Thus I trusted site forms and reports except when later evaluations or illustrations demonstrated that different interpretations were more likely correct.

For example, many New Mexico sites assigned to the “other” category were listed in the site files as “Late Paleoindian” or “Late Paleoindian to Terminal Paleoindian”. However, I disregarded such statements because many site forms listed points such as Agate Basin, Hell Gap and other un-fluted lanceolate points, but listed “Late” Paleoindian as the temporal affiliation. Clearly, such a designation as “Late Paleoindian” could be Younger Dryas or Early Holocene in the system used here.

I based my chronology, shown in Figure 6, upon the dates and culture history provided by Frison (1978, 1991), Holliday (2000a), and Kornfeld et al. (1999). I then searched through the site documentation and sorted the sites and their relevant components into the following categories. The first category chronologically is Pleistocene which I eliminate from this study. I applied this category to Clovis sites and components. Although there is some evidence that Clovis extended into the Younger Dryas (Holliday 2000), the majority of the materials predate the Younger Dryas and therefore all Clovis sites and components were assigned to the Pleistocene. For the most recent discussion of Clovis dating see Waters and Stafford (2007). Pleistocene age sites are excluded from the subsistence discussion because fauna such as mammoth were hunted by Clovis people (Surovell, et al. 2005; Waguespack and Surovell 2003) and occur in Clovis assemblages within the study area (Frison and Todd 1986) but appear to be extinct by later periods (Agenbroad 2005; Meltzer and Mead 1985).

The next category consists of sites and components which are Younger Dryas in Age. Younger Dryas age sites and components include Goshen, Folsom, Midland, 90%

of Agate Basin, 50% of Hell Gap, 30% of Plainview, 30% of Milnesand, 30% of Lubbock, and 5% of Alberta/Alberta-Cody materials.

Early Holocene age sites and components include Cody, Eden, Scottsbluff, Texas Angostura, St. Mary's Hall, Golondrina, Lusk, Firstview, 95% of Alberta/Alberta-Cody, 90% of Jimmy Allen, 90% of Fredrick, 90% of Angostura, 90% of other parallel obliquely flaked points, 40% of Pryor Stemmed, and 50% of Lovell Constricted sites and components in this chronology. Other, later materials were assigned to the other, too late, category as were 60% of Pryor Stemmed, 50% of Lovell Constricted, 10% of Angostura, Jimmy Allen, Fredrick, and other Parallel Oblique sites and components.

I recognize the overlap among these categories in both archaeological and geologic units. However, I made an effort to evaluate in what time periods the date range lay and assign them proportionally to those categories. I made the assumption that archaeologists in both states are equally familiar with Paleoindian materials and their identification. Furthermore, I see no reason that over such regions as large as Wyoming and New Mexico, there would be preferential exposure of materials of one particular time period. I find it reasonable that whatever local variation in geologic visibility there may be from area to area will be averaged out in a study of sufficient size such as this.

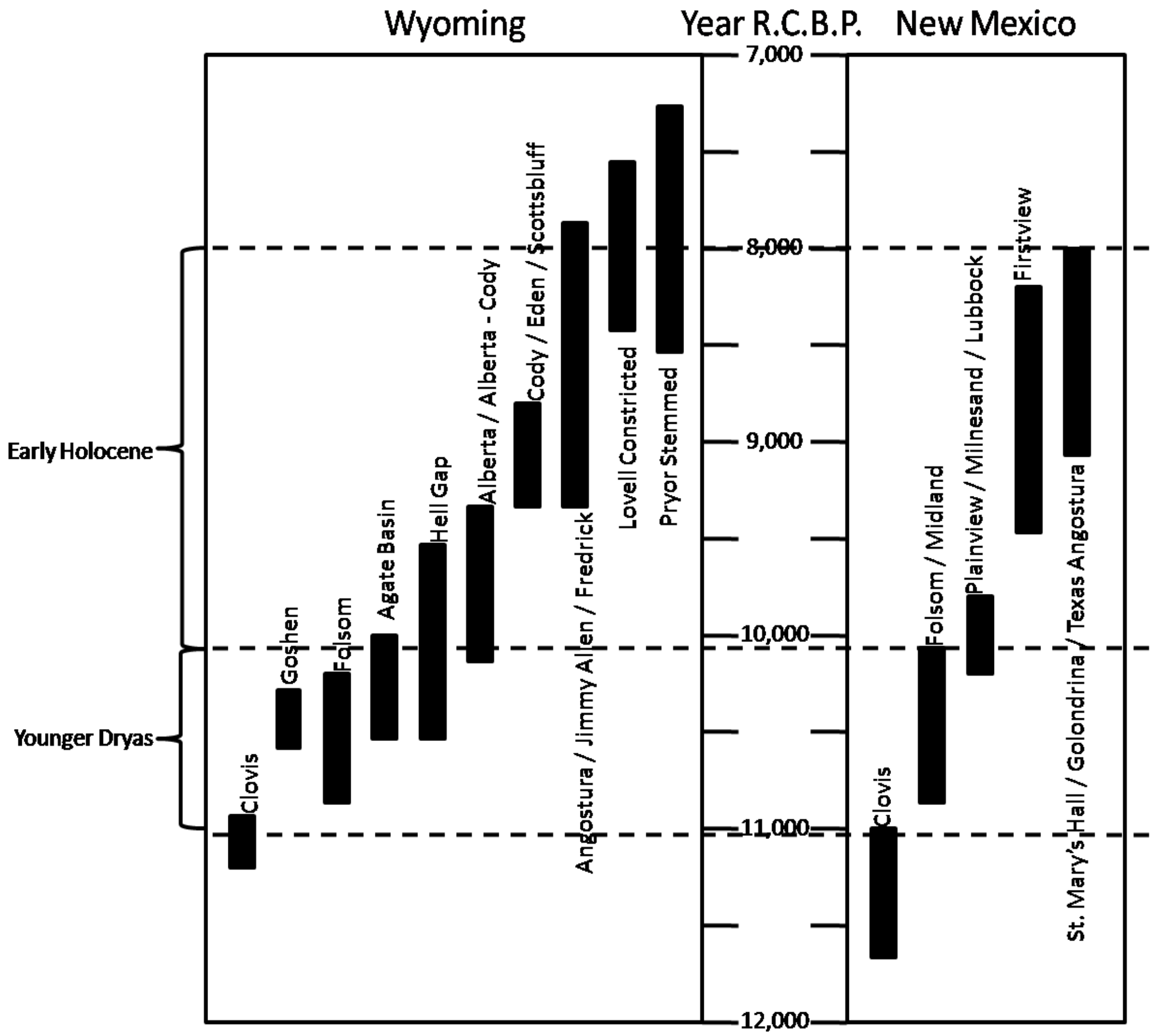

Figure 6. Culture history and geologic period used in this study based on Frison (1978 and 1991) for the Wyoming dates, Holliday (2000) for Wyoming and New Mexico dates, and Kornfeld et al. (1999) for Goshen dates. Dates for the Younger Dryas are derived from Alley (2000), Roberts (1998), Ruddiman (2000), and Bever (2006) and were calibrated using OxCal by Ramsey (2007).

Clearly, there are several variables that affect the number of sites from a given time period that archaeologists are likely to find - the rate at which people made and discarded artifacts, the nature of their patterns of mobility, the preservation of their sites through time, the archaeological visibility of their sites as distinct from others such as the channels of Folsom points or Megafauna remains at Clovis kill sites (Meltzer and Mead

1985). However, all of these factors are mitigated in this study through sample size and comparison.

When archaeologically-defined culture periods occur in both states with similar subsistence, mobility, and technological strategies, the rates of manufacture and discard of artifacts should likewise be similar. In the faunal record, diet breadth could play a role in the number of sites as megafauna specialization could result in higher visibility due to literal visibility (Meltzer 1995) and to preservation bias (Grayson and Meltzer 2002). While this would not seem to be an issue within a single archaeological culture, physiographic differences may have led to differences in Paleoindian subsistence (Hill 2007a, b).

I assume that individual archaeological cultures (i.e. Folsom) in either state are similar in archaeological visibility. A case could be made that climate change could differentially affect the preservation of sites in the two states resulting in very different numbers of sites from the same time period. However, had that occurred in say, the Early Holocene destroying many sites as they were made, but in only one state, then would the same processes not also destroy extant sites? Yet, as is demonstrated below, the two states have very similar numbers of recorded Pleistocene age and Younger Dryas age sites. Had there been a period of high site mortality in one state, it would have removed the Pleistocene and Younger Dryas age sites as well. This fact should eliminate doubt that differential preservation may have altered the record and our interpretations to favor one location over another.

Finally, the extent of archaeological investigations could dramatically alter the numbers of sites known, even more so if surveys were conducted to find and record sites only from a particular time period (e.g. Judge 1970, 1973). However, given the management rather than research orientation of the databases used to obtain data in this study, these temporally specific research surveys are overwhelmed by contract surveys which are not biased toward any one time period.

Results

Site Frequency

As shown in Table 1, of the 1,511 Paleoindian sites and components, 974 could be assigned to a specific time period. Of these, 61 are Pleistocene in age and are excluded from faunal analysis due to the availability of fauna which were later extinct. However, the Pleistocene populations are presumably the foundations of later populations. Thus a comparison of the Pleistocene and Younger Dryas age sites in the two states is relevant as the basis for later changes. Statistically, a chi-square test comparing the Pleistocene, Younger Dryas, and Early Holocene age sites from New Mexico and Wyoming ($X^2 = 136$, df = 2, $p << 0.001$) reveals that both Pleistocene and Younger Dryas age sites in New Mexico are overrepresented. The overrepresentation of Younger Dryas age sites in New Mexico supports the above model as an indication of growth in New Mexico during the Younger Dryas relative to Wyoming as predicted by the relationships between climate and environmental change followed by relatively high population in Wyoming during the Early Holocene when warming increased primary productivity there. However, the abundance of Pleistocene age sites in New Mexico contradicts the predictions of the model. However, as Clovis is thought to represent a founding population, this may be a signature of the migrations of a colonizing population rather than a function of the dynamics of climate and environment (Kelly and Todd 1988). As a colonizing population, absolute numbers of individuals in a given area would be expected to be very low (Kelly and Todd 1988) and growth would be expected to be logistic. However, very low populations are susceptible to random events which could skew the record with such a low sample size of just 61 sites in two states. Therefore, I treat the results of Pleistocene age sites with caution.

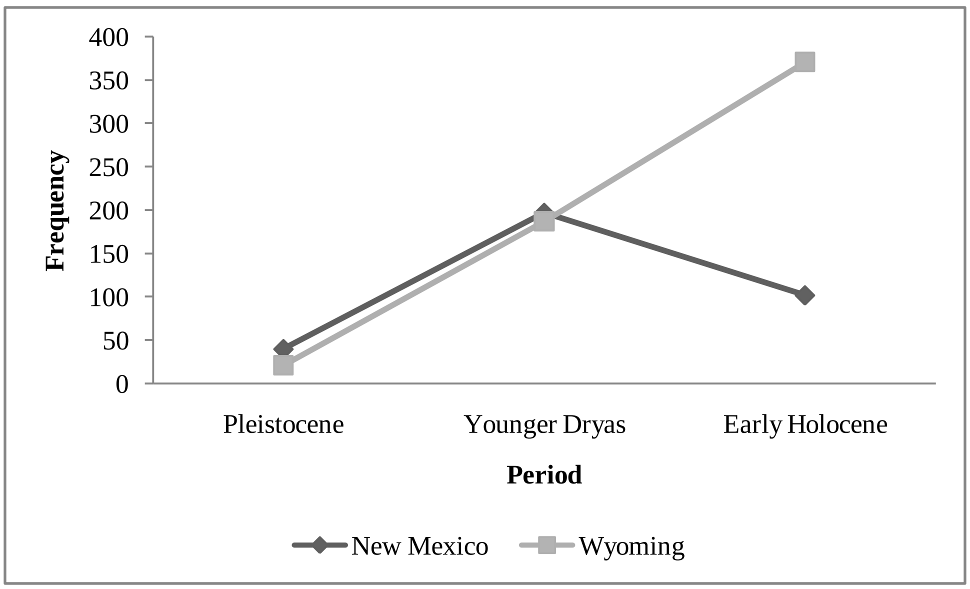

Figure 7. Overall demographic trends through time and by state.

Pleistocene age sites include 21 from Wyoming and 40 from New Mexico. In Wyoming, the Pleistocene sites include 20 Clovis sites and one site (48SW13621) which is comprised of camel bones and lithic debitage, but lacks described diagnostic artifacts. The Pleistocene age sites of New Mexico include 38 Clovis sites, one site (LA 32614) that was listed as Pre-Clovis, and one site (LA 129073) which is comprised of mammoth teeth and lithic debitage, but lacks described diagnostic artifacts. I did not include Sandia Cave, the Lucy site, or other sites with "Sandia" points in the Pleistocene age sites sample due to the continuing controversy over the validity of their nature and dates

(Preston 1995; Thompson, et al. 2008). For the most recent update on Sandia issue, I refer readers to Thompson et al. (2008). Regardless of the acceptance or rejection of “Sandia” sites, their number is so few that they would not have made a difference in this study.

Naturally, there are some well-known sites among the Pleistocene age sites of New Mexico and Wyoming. The sample from New Mexico includes the Clovis type site at Blackwater Draw (LA 3324) (Hester 1972) and Mockingbird Gap (LA 26748) (Huckell, et al. 2006). The Pleistocene age sites from Wyoming include the Colby Mammoth Site (48WA322) (Frison and Todd 1986), Carter Kerr-McGee (48CA12) (Frison 1984b), Hell Gap (48GO305) (Frison 1978, 1991), Agate Basin (48NO201) (Frison and Stanford 1982), and the Sheaman Site (48NO211) (Frison 1982b).

Table 1. Results of the Paleoindian site study for Wyoming and New Mexico.

Period	New Mexico	Wyoming	Total
Pleistocene	6% (40)	3% (21)	4% (61)
Younger Dryas	28% (197)	23% (187)	25% (384)
Early Holocene	15% (102)	46% (371)	31% (473)
Other	51% (359)	29% (234)	39% (593)
Total	100% (698)	100% (813)	100% (1511)

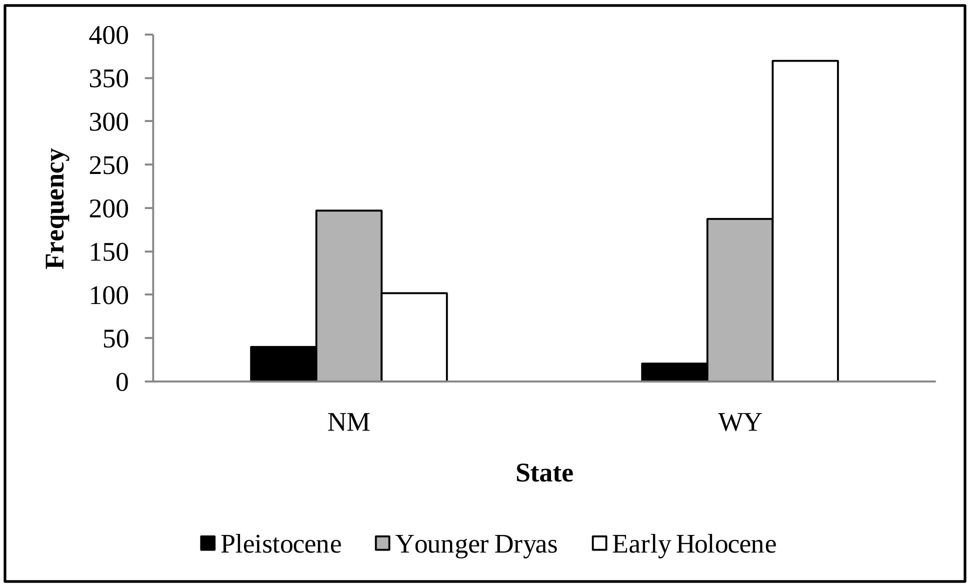

Figure 8. Chart of all Paleoindian sites by state and age.

Results are similar for the two states in total number of Paleoindian sites and components (NM = 698, WY = 813), Pleistocene-age sites (NM = 40, WY = 21), and Younger Dryas-age sites (NM = 197, WY = 187). The two states differ dramatically in numbers of Early Holocene-age sites, and in the numbers of sites assigned to the “other” category (Table 1, Figure 7, and Figure 8). Some of the sites from New Mexico that were not able to be assigned to a specific time period beyond “Unspecified Paleoindian” may actually date to the Early Holocene. Whatever the proportion of the sites in the “other” that may actually date to the Early Holocene, it would not be sufficient to eliminate the staggering difference between the two states in number of Early Holocene age sites.

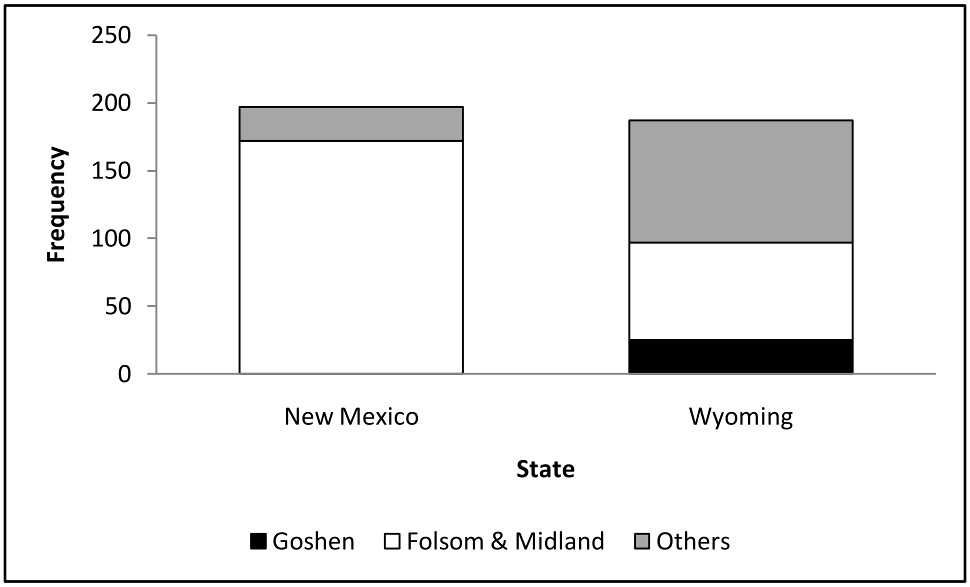

Figure 9. Younger Dryas age sites by state and type.

Table 2. Summary of Younger Dryas age sites by state and type.

Type	New Mexico	Wyoming
Goshen	0% (0)	13% (25)
Folsom & Midland	87% (172)	39% (72)
Agate Basin	4% (8)	27% (50)
Hell Gap	1% (2)	19% (35)
Plainview	5% (10)	1% (2)
Milnesand	1% (2)	0% (0)
Alberta	0% (0)	1% (1)
Meserve	2% (3)	1% (2)
TOTAL	1% (197)	1% (187)

Of the 187 Younger Dryas age sites in Wyoming, 25 are Goshen, 72 are Folsom or Midland, 50 are Agate Basin, 35 are Hell Gap, two are Plainview, one is Alberta, and two are Meserve (Figure 9 and Table 2). Of the 197 Younger Dryas age sites in New Mexico, 172 are Folsom or Midland, eight are Agate Basin, two are Hell Gap, 10 are Plainview, two are Milnesand, and three are Meserve.

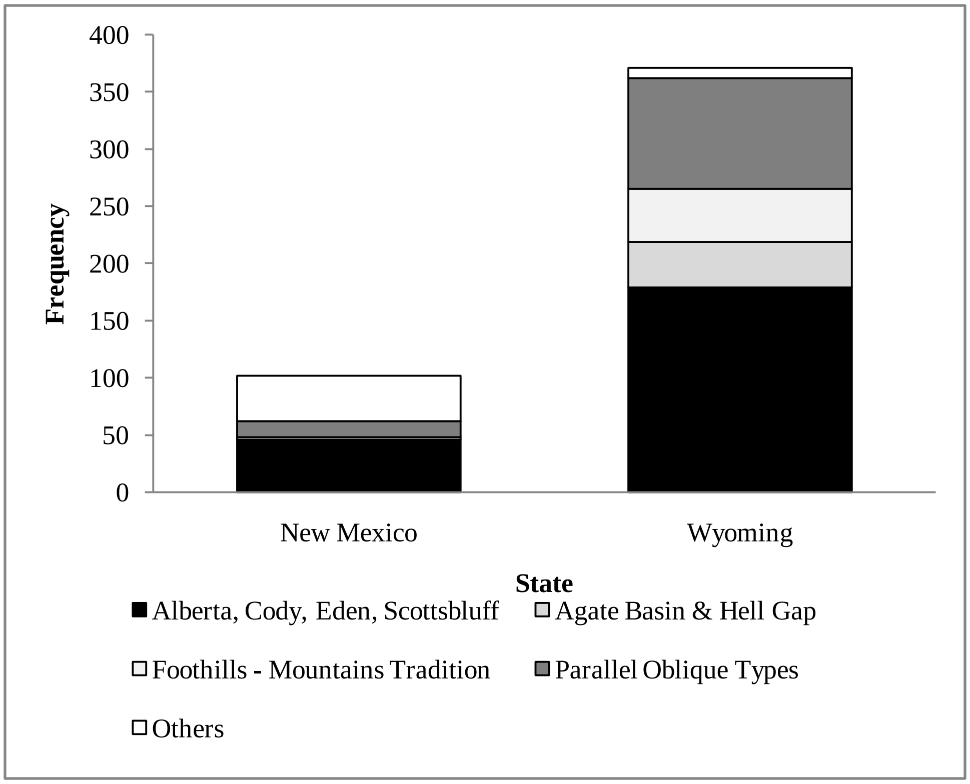

Figure 10. Early Holocene age sites for each state. In this figure, similar point types are grouped for simplification.

Table 3. Summary of Early Holocene age sites by state and type.

Type	New Mexico	Wyoming
Alberta, Cody, Eden, Scottsbluff	45% (46)	48% (179)
Agate Basin & Hell Gap	2% (2)	11% (40)
Foothills - Mountains Tradition	0% (0)	13% (46)
Parallel Oblique Types	14% (14)	26% (97)
Others	39% (40)	2% (9)
Total	100% (102)	100% (371)

Of the 371 Early Holocene age sites in Wyoming, 179 are Cody Complex (Alberta, Cody, Eden, and Scottsbluff), 40 are Agate Basin or Hell Gap, 46 are Foothills-Mountians tradition, 97 are Parallel Oblique types, and 9 are others. Of the 102 Early Holocene age sites in New Mexico, 46 are Cody Complex, 2 are Agate Basin or Hell Gap, 14 are Parallel Oblique types, and 40 are others (Figure 10 and Table 3).

If, as is suggested above, the changing climates between the Younger Dryas and Early Holocene affected human populations in North America demographically, I expect that much of this demographic change was due to food stress and changes in available diet items as a result of climatic and environmental change. It has already been demonstrated above that the climates of Wyoming and New Mexico changed between the Younger Dryas and Early Holocene. It has also been demonstrated above that there are significantly different demographic trends in the two states through the time period in question. However the question remains of how, if at all, the diets of Paleoindians may have changed in response.

Subsistence

With the changing climates of New Mexico and Wyoming how *could* Paleoindians have adapted? How *did* they adapt? They could have broadened their diet breadth, taking species that had previously been ignored. This would have decreased their foraging efficiency, but could have allowed their populations to continue to grow. As Winterhalder et al. (1988:291) stated, "[f]oraging theory offers us a rough prediction about the effects of harvest: as highly ranked species (those within the optimal diet) diminish in numbers due to exploitation [or non-anthropogenic factors such as climate and environment change], the diet should expand." Archaeologically, we would expect to see species present at Early Holocene age sites that are absent or very rare in Younger Dryas age sites.

However, as Stiner et al. (2000) have demonstrated, demographic pressure and food stress may not be seen in the number of species represented in the record, but the nature of those species, the technology required to efficiently capture and process them, and their sizes and frequencies. To use the example examined by Stiner et al. (2000), the presence of lagomorphs, turtles and birds in an assemblage all contribute to diet breadth. However, turtles should be high-ranked despite their relatively small size due to their low handling time. In contrast, lagomorphs and birds either require high handling times due to their swiftness or an investment in specialized technology such as nets to decrease their handling times and should be low ranked. Two assemblages with x species each may have the same diet breadth, but if one contains birds or lagomorphs and the other contains turtles, then the assemblage with the turtles contains higher-ranked species even if the same in number all other things being equal.

Furthermore, there is a general trend over a longer time-scale toward a broadened diet breadth including the introduction of grinding stones which mark the Archaic (Cordell 1997). It is important to remember that expanded diet breadth or otherwise decreased foraging efficiency may not have necessarily caused a decline in Paleoindian populations, but could have been limited to a decreased population growth rate (Winterhalder and Goland 1993). If there are superior quality patches to exploit and Paleoindians had information of those patches, then emigration could have also regulated diet breadth by mediating the population density of foragers between better and worse areas.

Paleoindians could have simply increased their use of each resource obtained. Instead of performing a "gourmet" butchering of a bison, Paleoindians could have thoroughly butchered the animal down to breaking the bones to extract marrow and preserving every bit of meat by drying what would otherwise spoil (LaBelle 2005; Lupo 2006). This thrifty solution would be expected to have distinct consequences archaeologically. Specifically, if such a strategy had been adapted, we would expect to see butchery marks on low-value elements that had previously only rarely been exploited, green-bone fractures on long bones to extract marrow, and the transport of lower-value elements to campsites that would have previously been left at the site of the kill.

Increasing the time spent foraging could also be an adaptive strategy in times of food stress (Belovsky 1988). If encounter rates of high-ranked prey diminishes it could be off-set with increased foraging time to reach the same number of encounters. However, as Winterhalder et al. demonstrated (1988), increasing the foraging time can ultimately lead to even lower foraging efficiency and populations, "the longer these hunter-gatherers forage, the fewer of them the environment will sustain" (Winterhalder et al. 1988:307). Thus working longer hours could ultimately created an autocatalytic system resulting in continually diminishing foraging efficiency and population.

An alternative possibility is that people may have just emigrated from low quality patches to more profitable ones. If Paleoindians, known for their high mobility (Amick 1996; Kelly 1988; Kelly and Todd 1988; Surovell 2000) simply emigrated whenever food became scarce, those that remained would have had minimal competition. If this were the case, the expected archaeological results would be a static zooarchaeological record in terms of diet breadth and extent of animal use, but the numbers of sites would be expected to decrease dramatically and most likely to increase in adjacent regions.

To test these hypotheses, I have compiled zooarchaeological data from Younger Dryas and Early Holocene-age Paleoindian sites in New Mexico and Wyoming in Table 4. Data in the table were selected according to two criteria. First, all sites in the table are in either Wyoming or New Mexico. Second, although it is difficult to determine, all fauna presented in the table were thought by the original investigators to represent contributions to subsistence at the site or what Haynes and Stanford (1984) call utilization. Including in the table all fauna reported at the sites regardless of utilization would increase the numbers of rodents and other small mammals. However, outside of Medicine Lodge Creek, utilized rodents are rare in the assemblages. Variation in the quality of faunal data available is large. Some documents provide precise MNIs and their basis by element. Others provide only presence or absence of species. As such, the sample of published data on extent of butchery and presence of elements with known Food Utility Index (FUI) is too small for the study area to be statistically viable.

From the extant data shown in Table 4, several generalities are apparent. First off, fewer sites from New Mexico (n = 6) have available faunal data than from Wyoming (n = 23). Second, the numbers of Younger Dryas (n = 15) and Early Holocene (n = 14) age sites in the sample is well balanced. Third and most importantly there are some significant differences in diet between the Younger Dryas and the Early Holocene in this sample. Frequencies of fauna were calculated with the data shown in Table 4. MNIs and presence were tallied with presence of a genus being counted as an MNI of one.

Statistically, a chi-square test ($X^2 = 17.77$, df = 1, $p < 0.0001$) comparing of the frequency of lagomorphs (*Sylvilagus* and *Lepus*) and bison in Younger Dryas and Early Holocene assemblages demonstrates that bison are more common than expected in the Younger Dryas and lagomorphs are more common than expected during the Early Holocene. Percentages of bison and lagomorphs are shown by period in Figure 11. Bison and lagomorphs were chosen for several reasons. First is the pragmatic reason that their numbers are high enough in this sample to allow statistical testing using the chi-square test without violating any assumptions or rules of the test. Second, at least modern bison and lagomorphs co-exist ecologically such that both were likely available simultaneously to Paleoindian foragers indicating that their presence or absence should represent foraging decisions rather than land-use decisions. Third, bison should be very highly ranked in a prey choice model whereas lagomorphs should be comparatively low. The statistically significant differences in their frequencies in the two time periods indicate that during the Younger Dryas generally, people were able to exploit higher-ranked resources more frequently than during the Early Holocene. This indicates a general decrease in foraging efficiency through time. Unfortunately, there is insufficient data to run a viable test comparing the data by state.

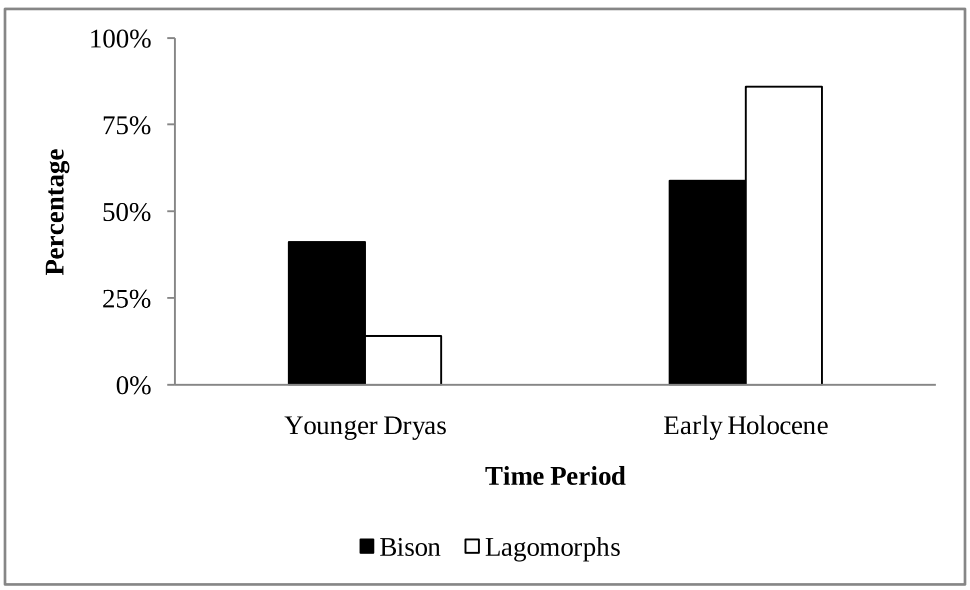

Figure 11. Percentages of bison and lagomorphs by time period.

A chi-square test (X^2 = 0.27, df = 1, p = 0.60) comparing the frequency of bison in Younger Dryas and Early Holocene assemblages of New Mexico and Wyoming indicates no statistically significant differences between the two states. The percentages of bison are shown by time period and state in Figure 12Figure 12. By grouping large mammals (*Cervus*, *Odocoileus*, *Ovis*, and *Antilocapra*) and comparing their frequencies between the Younger Dryas and Early Holocene of each state in a Fisher's Exact Test, no significant differences were observed (p = 0.268). In absolute quantity, some small rodents such as *Neotoma*, *Thomomys*, *Lemmiscus*, and *Microtus* make up more of the sample (over 42%) than bison. However, the distribution of these utilized rodents is very patchy with large numbers present at a few sites while they are completely absent from other sites. For instance, all of the *Lemmicus* in the sample represented in Table 4 are from the Medicine Lodge Creek Site.

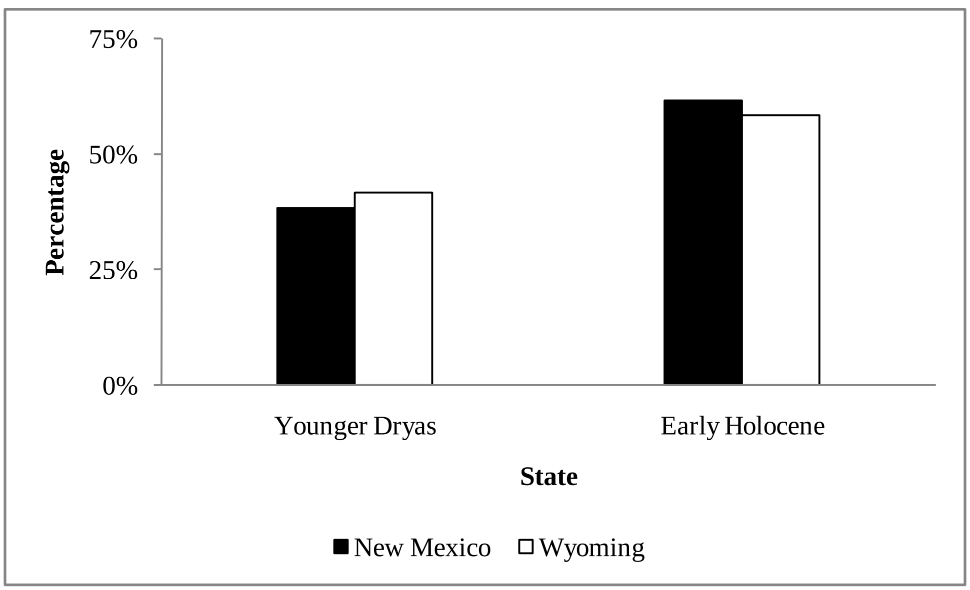

Figure 12. Percentages of bison by time and state.

By grouping faunal data from Paleoindian sites in a larger study area of the entirety of the Great Plains, Hill (2007b) was able to demonstrate that there were differences in Paleoindian diets across time and space and between kill and camp sites. Not surprisingly, Hill (2007b) found that more diverse environments had more diverse faunal assemblages. Also, camp sites had more diverse faunal assemblages than did kill sites. However, the most important difference for my purpose is the differences through time. To quote from Hill:

> "During the early Holocene, small game made a greater contribution in the diet of Paleoindians, possibly in response to changing environmental conditions and/or increased hunting pressure." (Hill 2007b:417)

Thus, although the sample size limited by the study area does not reveal significant trends in diet breadth or processing, the larger study area of Hill does. Although Hill's conclusions are not surprising, it is relative validation that diet breadth generally broadened through time in the region. However the lack of viable data in my study area limits our understanding of the causes of this broadening of diet breadth and also of the possible transportation, butchering, and hunting decisions associated with it.

Table 4. Faunal assemblages of New Mexico and Wyoming Paleoindian sites.

Site Name	Site Type	Period	State	Mammilian Genus			
				Bison	Cervus	Odocoileus	Ovis
San Jon	Firstview	EH	NM	12		+	
Milnesand	Milnesand	EH	NM	33			
48SW8842	8,490 RCYBP	EH	WY				
48SW13156	9,430 RCYBP	EH	WY			+	
Blue Point Site	Alberta	EH	WY			+	
Horner	Cody	EH	WY	265		4	
Vegan Site	Early Holocene	EH	WY				
48LN1185	Early Holocene	EH	WY				
48UT375	Foothills - Mountains	EH	WY				
Deep Hearth Site	Foothills - Mountains	EH	WY				
Bottleneck Cave	Lovell Constricted	EH	WY	1		1	1
Medicine Lodge Creek	MLC Local Fauna	EH	WY	5	1	10	8
Bottleneck Cave	Pryor Stemmed	EH	WY			3	2
Mummy Cave	Strata 15-24	EH	WY		1	5	29
Ake	Folsom	YD	NM	+			
Blackwater Draw	Folsom	YD	NM	+			
Boca Negra Wash	Folsom	YD	NM	+			
Folsom	Folsom	YD	NM	25		1	
Hell Gap	Agate Basin	YD	WY	14		2	
Hell Gap	Agate Basin	YD	WY	9		+	
Agate Basin	Agate Basin	YD	WY	53			
Agate Basin	Folsom	YD	WY	9	1		
Carter Kerr-McGee	Folsom	YD	WY	1		1	
Hanson	Folsom	YD	WY	4			1
Hell Gap	Folsom	YD	WY	+			
Rattlesnake Pass	Folsom	YD	WY	2			
Finley	Folsom	YD	WY	38			
Casper	Hell Gap	YD	WY	46			
Agate Basin	Hell Gap	YD	WY	16			
Total				533	3	27	41
Percent of Total				35.20	0.20	1.78	2.71

Table 4 cont. Faunal assemblages of New Mexico and Wyoming Paleoindian sites.

Site Name	**Mammilian Genus**										
	Antilocapra	Ursus	Canis	Vulpes	Platygonus	Ondatra	Marmota	Lepus	Sylvilagus	Erethizon	Mephitis
San Jon								+			
Milnesand											
48SW8842									+		
48SW13156									+		
Blue Point Site									+		
Horner	2		1						2		
Vegan Site									+		
48LN1185									+		
48UT375									1		
Deep Hearth Site									+		
Bottleneck Cave											
Medicine Lodge Creek		1				3	2	5	16	3	
Bottleneck Cave				1				1			
Mummy Cave			1	1			5	22	1		
Ake						+					
Blackwater Draw	+		+			+		+			
Boca Negra Wash											
Folsom								1			
Hell Gap											
Hell Gap			+								+
Agate Basin	1										
Agate Basin	4		4	1	1			2	1		1
Carter Kerr-McGee											
Hanson							1	1			
Hell Gap							+	+			
Rattlesnake Pass	1										
Finley											
Casper	1		1	1				2			
Agate Basin	1										
Total	10	1	7	4	1	3	8	34	21	3	1
Percent of Total	0.66	0.07	0.46	0.26	0.07	0.20	0.53	2.25	1.39	0.20	0.07

Table 4 cont. Faunal assemblages of New Mexico and Wyoming Paleoindian sites.

Site Name	**Mammilian Genus**										
	Spermophilus	Castor	Neotoma	Tamiasciurus	Thomomys	Sorex	Ochotona	Cynomys	Peromyscus	Mustela	Clethrionomys
San Jon											
Milnesand											
48SW8842											
48SW13156											
Blue Point Site			+								
Horner											
Vegan Site											
48LN1185											
48UT375			1								
Deep Hearth Site											
Bottleneck Cave											
Medicine Lodge Creek	3	4	144	1	105	7	2		47	5	
Bottleneck Cave	1										
Mummy Cave		2	33								
Ake											
Blackwater Draw											
Boca Negra Wash											
Folsom	1							1			
Hell Gap											
Hell Gap											
Agate Basin											
Agate Basin	3				5				2		2
Carter Kerr-McGee											
Hanson											
Hell Gap	+								+		
Rattlesnake Pass					1						
Finley											
Casper	4				2						
Agate Basin											
Total	12	6	178	1	113	7	2	1	49	5	2
Percent of Total	0.79	0.40	11.76	0.07	7.46	0.46	0.13	0.07	3.24	0.33	0.13

Table 4 cont. Faunal assemblages of New Mexico and Wyoming Paleoindian sites.

Site Name	**Mammilian Genus**				**Other**					
	Lagurus	Lemmiscus	Microtus	Phenacomys	Bird	Snake	Lizard	Fish	Frog	Turtle
San Jon										
Milnesand										
48SW8842										
48SW13156										
Blue Point Site			+							
Horner					3					1
Vegan Site										
48LN1185										
48UT375										
Deep Hearth Site										
Bottleneck Cave			+							
Medicine Lodge Creek		182	151		31	7	6	17	5	
Bottleneck Cave										
Mummy Cave					4					
Ake										
Blackwater Draw			+							+
Boca Negra Wash										
Folsom										
Hell Gap										
Hell Gap										
Agate Basin										
Agate Basin	2		25	3	1	1			1	
Carter Kerr-McGee										
Hanson										
Hell Gap			+							
Rattlesnake Pass										
Finley										
Casper					1					
Agate Basin										
Total	2	182	176	3	40	8	6	17	6	1
Percent of Total	0.13	12.02	11.62	0.20	2.64	0.53	0.40	1.12	0.40	0.07

Table 4 cont. Faunal assemblages of New Mexico and Wyoming Paleoindian sites.

Site Name	Reference
San Jon	Hill et al. 1995
Milnesand	Hill 2002
48SW8842	Byers et al. 2005; Pool 2001
48SW13156	Byers et al. 2005; Craven 2005
Blue Point Site	Byers 2005; Johnson 1999; Johnson & Pastor 2003; Smith 2003
Horner	Frison and Todd 1987; Walker 1987
Vegan Site	McKearn and Creasman 1991; Smith et al. 2003
48LN1185	McDonald 1993; Smith et al. 2003
48UT375	Smith et al. 2003
Deep Hearth Site	Rood and Clark 1993; Smith et al. 2003
Bottleneck Cave	Husted 1969
Medicine Lodge Creek	Walker 1975; Walker 2007
Bottleneck Cave	Husted 1969
Mummy Cave	Hughes 2003
Ake	Amick 1994; Harris and Porter 1980
Blackwater Draw	Amick 1994; Hester 1972; Slaughter 1975
Boca Negra Wash	Huckell and Kilby 2000; Huckell et al. 2001 and 2002
Folsom	Amick 1994; Meltzer 2006
Hell Gap	Byers 2001; Rapson and Niven 2000
Hell Gap	Byers 2002; Knell et al. 2002
Agate Basin	Hill 2001
Agate Basin	Amick 1994; Hill 1994 & 2001; Walker 1982
Carter Kerr-McGee	Amick 1994; Frison 1984
Hanson	Amick 1994; Frison and Bradley 1980
Hell Gap	Amick 1994; Roberts 1970
Rattlesnake Pass	Amick 1994; Smith and McNees 1990
Finley	Frison 1974; Hill 2007
Casper	Frison 1974; Wilson 1974
Agate Basin	Hill 2001
Total	1514
Percent of Total	100%

Conclusions

This study provides evidence of differential demographic trends in Wyoming and New Mexico from the Younger Dryas into the Early Holocene. The general climatic and environmental trends of the Younger Dryas and Early Holocene in Wyoming and New Mexico were already known, but local isotopic data were added which support extant data.

The causal nexus between the climate changes associated with the Younger Dryas and two different Paleoindian demographic trends has been established by a theoretically driven model and tested with empirical data which were found to support the model. Younger Dryas Wyoming appears to have been characterized by a primary productivity regime which was limited by cold temperatures. This limitation on primary productivity in turn limited the populations of primary consumers and ultimately of Paleoindian foragers who appear to have adapted through emigration. The warming of the Early Holocene removed the temperature limitation on primary productivity, primary consumer populations, and Paleoindian forager populations grew in Wyoming while maintaining their subsistence strategies.

In New Mexico, the Younger Dryas was cool and moist which optimized primary productivity and Paleoindians adapted to this through a combination of immigration and increased net fertility. However, this was replaced by a warmer Early Holocene which was dryer because of increased evapo-transportation. This created a precipitation-limited primary productivity regime which in turn diminished primary consumer populations and ultimately Paleoindian populations in New Mexico adapted by emigrating and broadening their diet breadth.

Faunal remains have been assessed for evidence of changes in diet breadth and significant results indicate that more bison and fewer lagomorphs were consumed in the Younger Dryas than expected and the opposite is true of the Early Holocene. Significant differences are also available for the larger region (Hill 2007a, b) by type of site and physiographic context. Additionally, when Hill (2007a, b) evaluated the greater plains region, he demonstrated that there is a tendency toward broader diet breadth through time. This could simply be a function of increased hunting pressure due to population growth, or to food stress caused by climate change.

Finally, this study is relevant to the present and the future. Modern and future global warming is expected to have significant impacts on human migration and subsistence (IPCC 2007). By examining the relationships between climate, environment, and their effects on the populations, migrations, and subsistence patterns of ancient foragers, we are better equipped to predict how modern people may need to adapt to climate change. We now know what the consequences of climate change were for ancient Europeans (Gamble et al. 2004) and Paleoindians so we can be better prepared to face current and future challenges.

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Appendix A

Carbon and Oxygen isotopic data from Paleoindian sites in Northern Colorado and New Mexico. Data from the Barger Gulch, Upper Twin Mountain, and Jerry Craig sites were derived with Travis Gilchrist and Abbey Wick. Data from Boca Negra Wash, Ladder Ranch, and Vermejo Park Ranch are also presented in Mullen 2005 and 2007. Modern samples from Middle Park, Colorado are from Elk (MP-1, 2, 5, and 6), Antelope (MP-3 and 4), and Cow (MP-7 and 8). All other samples are from Bison.

Sample	Site	Age	State	δ13C (PDB)	%C4	δ18O (VSMOW)
UT-1	Upper Twin Mountain	YD	CO	-8.06	38%	17.36
UT-2	Upper Twin Mountain	YD	CO	-8.92	31%	17.71
UT-3	Upper Twin Mountain	YD	CO	-7.07	46%	17.90
UT-4	Upper Twin Mountain	YD	CO	-9.13	30%	17.04
UT-5	Upper Twin Mountain	YD	CO	-5.21	60%	17.02
UT-6	Upper Twin Mountain	YD	CO	-3.60	72%	21.48
BG-1	Barger Gulch	YD	CO	-6.89	47%	16.53
BG-2	Barger Gulch	YD	CO	-7.25	44%	18.21
BG-3	Barger Gulch	YD	CO	-5.81	55%	18.09
JC-1	Jerry Craig	EH	CO	-5.62	57%	18.80
JC-2	Jerry Craig	EH	CO	-4.78	63%	21.00
JC-3	Jerry Craig	EH	CO	-10.25	21%	19.70
JC-4	Jerry Craig	EH	CO	-10.14	22%	18.53
JC-5	Jerry Craig	EH	CO	-9.05	30%	18.05
JC-6	Jerry Craig	EH	CO	-2.75	79%	22.54
MP-1	Middle Park	Modern	CO	-8.40	35%	28.08
MP-2	Middle Park	Modern	CO	-12.65	3%	19.68
MP-3	Middle Park	Modern	CO	-14.52	0%	22.82
MP-4	Middle Park	Modern	CO	-11.81	9%	20.22
MP-5	Middle Park	Modern	CO	-12.75	2%	21.78
MP-6	Middle Park	Modern	CO	-11.43	12%	19.56
MP-7	Middle Park	Modern	CO	-12.11	7%	16.79
MP-8	Middle Park	Modern	CO	-11.69	10%	19.28
BNW-1	Boca Negra Wash	YD	NM	-8.38	36%	24.58
BNW-2	Boca Negra Wash	YD	NM	-7.07	46%	26.25
BNW-3	Boca Negra Wash	YD	NM	-6.68	49%	25.40
BNW-4	Boca Negra Wash	YD	NM	-6.08	53%	28.61
BNW-5	Boca Negra Wash	YD	NM	-5.66	57%	24.27
BNW-6	Boca Negra Wash	YD	NM	-2.88	78%	27.01
BNW-7	Boca Negra Wash	YD	NM	-2.59	80%	25.79
BNW-8	Boca Negra Wash	YD	NM	-2.51	81%	28.63
BNW-9	Boca Negra Wash	YD	NM	-2.41	82%	26.02
BNW-10	Boca Negra Wash	YD	NM	-2.05	84%	25.87
BNW-11	Boca Negra Wash	YD	NM	-1.88	86%	25.89
BNW-12	Boca Negra Wash	YD	NM	-1.80	86%	26.50
BNW-13	Boca Negra Wash	YD	NM	-1.71	87%	25.74
BNW-14	Boca Negra Wash	YD	NM	-1.66	87%	20.11
BNW-15	Boca Negra Wash	YD	NM	-1.32	90%	24.89

BNW-16	Boca Negra Wash	YD	NM	-1.29	90%	24.30
BNW-17	Boca Negra Wash	YD	NM	-0.78	94%	28.66
BNW-18	Boca Negra Wash	YD	NM	-0.59	95%	29.37
BNW-19	Boca Negra Wash	YD	NM	-0.57	96%	26.29
BNW-20	Boca Negra Wash	YD	NM	-0.48	96%	27.83
BNW-21	Boca Negra Wash	YD	NM	0.01	100%	28.31
BNW-22	Boca Negra Wash	YD	NM	0.43	100%	28.65
BNW-23	Boca Negra Wash	YD	NM	0.50	100%	30.29
BNW-24	Boca Negra Wash	YD	NM	0.73	100%	27.11
BNW-25	Boca Negra Wash	YD	NM	0.80	100%	23.51
BNW-26	Boca Negra Wash	YD	NM	0.85	100%	25.66
BNW-27	Boca Negra Wash	YD	NM	1.03	100%	24.64
BNW-28	Boca Negra Wash	YD	NM	1.12	100%	27.86
BNW-29	Boca Negra Wash	YD	NM	-4.95	62%	22.41
BNW-30	Boca Negra Wash	YD	NM	-3.35	74%	23.85
BNW-31	Boca Negra Wash	YD	NM	-3.33	74%	26.25
LM1M1	Ladder Ranch	Modern	NM	-7.00	46%	23.79
LM1M2	Ladder Ranch	Modern	NM	-2.50	81%	27.68
LM1P2	Ladder Ranch	Modern	NM	-2.18	83%	32.46
LM1P4	Ladder Ranch	Modern	NM	-1.12	91%	31.32
LM1P3	Ladder Ranch	Modern	NM	-0.74	94%	29.53
LM1M3	Ladder Ranch	Modern	NM	-0.22	98%	29.93
LM2M1	Ladder Ranch	Modern	NM	-8.32	36%	28.61
LM2M2	Ladder Ranch	Modern	NM	-7.80	40%	27.82
LM2M3	Ladder Ranch	Modern	NM	-5.37	59%	27.95
LM2P4	Ladder Ranch	Modern	NM	-2.53	81%	30.77
LM3M2	Ladder Ranch	Modern	NM	-3.11	76%	25.79
LM3P4	Ladder Ranch	Modern	NM	-3.02	77%	32.10
LM3P3	Ladder Ranch	Modern	NM	-0.78	94%	28.44
LM3M3	Ladder Ranch	Modern	NM	-0.51	96%	28.81
V1M1	Vermejo Park Ranch	Modern	NM	-6.70	48%	26.26
V1P3	Vermejo Park Ranch	Modern	NM	-5.84	55%	27.67
V1P4	Vermejo Park Ranch	Modern	NM	-5.38	59%	28.67
V1M3	Vermejo Park Ranch	Modern	NM	-4.81	63%	27.60
V1P2	Vermejo Park Ranch	Modern	NM	-4.58	65%	26.72
V1M2	Vermejo Park Ranch	Modern	NM	-4.37	66%	28.42
V2M1	Vermejo Park Ranch	Modern	NM	-10.13	22%	19.03
V2P3	Vermejo Park Ranch	Modern	NM	-5.36	59%	25.77
V2M3	Vermejo Park Ranch	Modern	NM	-4.78	63%	23.78
V2M2	Vermejo Park Ranch	Modern	NM	-4.05	69%	27.50
V2P4	Vermejo Park Ranch	Modern	NM	-3.98	69%	28.49
V2P2	Vermejo Park Ranch	Modern	NM	-3.09	76%	30.19
V3M1	Vermejo Park Ranch	Modern	NM	-9.47	27%	18.84
V3M3	Vermejo Park Ranch	Modern	NM	-5.51	58%	27.56
V3P2	Vermejo Park Ranch	Modern	NM	-5.47	58%	25.68
V3P3	Vermejo Park Ranch	Modern	NM	-4.76	63%	29.26
V3P4	Vermejo Park Ranch	Modern	NM	-3.40	74%	30.32
V3M2	Vermejo Park Ranch	Modern	NM	-2.93	77%	29.55

Appendix B

Paleoindian sites from Wyoming and New Mexico. Site number is either Laboratory of Anthropology number for New Mexico or Smithsonian number for Wyoming sites. Letters were added to site numbers to separate out each occupation although lettering is not necessarily in chronological order. Periods are Pleistocene (PL), Younger Dryas (YD), Early Holocene (EH), or other (OT). Point types are by component, not necessarily by site. Site names are provided when available and commonly used.

Site Number	State	Period	Point Type	Site Name
LA 105084	NM	EH	Angostura	
LA 107638	NM	EH	Angostura	
LA 112527e	NM	EH	Angostura	La Caja del Rio Paleoindian Site
LA 113600b	NM	EH	Angostura	
LA 117467b	NM	EH	Angostura	
LA 144834	NM	EH	Angostura	
LA 25668	NM	EH	Angostura	
LA 3324g	NM	EH	Angostura	Blackwater Draw
LA 37931	NM	EH	Angostura	
LA 66627	NM	EH	Angostura	
LA 102817b	NM	EH	Cody	
LA 103040	NM	EH	Cody	
LA 106148	NM	EH	Cody	
LA 110561	NM	EH	Cody	
LA 126615	NM	EH	Cody	
LA 136497	NM	EH	Cody	
LA 4003	NM	EH	Cody	
LA 4558b	NM	EH	Cody	
LA 5146e	NM	EH	Cody	Rattlesnake Draw
LA 6310b	NM	EH	Cody	
LA 67906	NM	EH	Cody	
LA 70454b	NM	EH	Cody	
LA 99914	NM	EH	Cody	
LA 109374b	NM	EH	Eden	Rio Rancho Folsom Site
LA 109473	NM	EH	Eden	
LA 111432	NM	EH	Eden	
LA 112393	NM	EH	Eden	
LA 112558	NM	EH	Eden	
LA 112867	NM	EH	Eden	

LA 113594b	NM	EH	Eden	
LA 113600	NM	EH	Eden	
LA 123196	NM	EH	Eden	
LA 131003	NM	EH	Eden	
LA 132212	NM	EH	Eden	
LA 16667	NM	EH	Eden	
LA 21750b	NM	EH	Eden	
LA 21844c	NM	EH	Eden	
LA 21865b	NM	EH	Eden	
LA 21867	NM	EH	Eden	
LA 21870	NM	EH	Eden	
LA 21872b	NM	EH	Eden	
LA 32713	NM	EH	Eden	
LA 3324e	NM	EH	Eden	Blackwater Draw
LA 55730	NM	EH	Eden	
LA 6214e	NM	EH	Eden	
LA 75764	NM	EH	Eden	
LA 78235b	NM	EH	Eden	
LA 80603	NM	EH	Eden	
LA 81720	NM	EH	Eden	
LA 93422	NM	EH	Eden	
LA 9500	NM	EH	Eden	Bajada Type Site
LA 5995	NM	EH	Eden or Scottsbluff	
LA 107651	NM	EH	Firstview	
LA 108699	NM	EH	Firstview	
LA 118093	NM	EH	Firstview	
LA 6437	NM	EH	Firstview	San Jon
LA 67513	NM	EH	Firstview	Horizon Site
LA 82574	NM	EH	Firstview	
LA 111304	NM	EH	Jimmy Allen	
LA 145364	NM	EH	Jimmy Allen	
LA 148951	NM	EH	Jimmy Allen	
LA 43553b	NM	EH	Jimmy Allen	
LA 55749	NM	EH	Jimmy Allen	
LA 104043	NM	EH	Plano	Buckhorn Spring C
LA 110550	NM	EH	Plano	
LA 113594c	NM	EH	Plano	
LA 117481c	NM	EH	Plano	
LA 38782	NM	EH	Plano	
LA 43312	NM	EH	Plano	
LA 112394	NM	EH	Scottsbluff	

LA 148949	NM	EH	Scottsbluff	
LA 3324f	NM	EH	Scottsbluff	Blackwater Draw
LA 9348b	NM	EH	Scottsbluff	Ojito Dune
LA 81508b	NM	EH	Unspecified Paleo	
LA 91288b	NM	EH	Unspecified Paleo	
LA 48095	NM	OT	Bajada	Triple Deuce Site
LA 20784	NM	OT	Belen	
LA 21771	NM	OT	Belen	
LA 21844d	NM	OT	Belen	
LA 21848	NM	OT	Belen	
LA 21853b	NM	OT	Belen	
LA 38424b	NM	OT	Belen	
LA 70454	NM	OT	Clovis / Folsom	
LA 142666	NM	OT	Sandia	
LA 60972	NM	OT	Sandia	
LA 107927	NM	OT	Unspecidied Paleo	
LA 6224	NM	OT	Unspecified Pale	
LA 101203	NM	OT	Unspecified Paleo	
LA 101223	NM	OT	Unspecified Paleo	
LA 101546	NM	OT	Unspecified Paleo	
LA 103048	NM	OT	Unspecified Paleo	Arroyo Negro Site
LA 103169	NM	OT	Unspecified Paleo	
LA 105080	NM	OT	Unspecified Paleo	
LA 105082	NM	OT	Unspecified Paleo	
LA 105148	NM	OT	Unspecified Paleo	
LA 106850	NM	OT	Unspecified Paleo	
LA 107032	NM	OT	Unspecified Paleo	
LA 107588	NM	OT	Unspecified Paleo	
LA 107601	NM	OT	Unspecified Paleo	
LA 108301	NM	OT	Unspecified Paleo	
LA 108303	NM	OT	Unspecified Paleo	
LA 10845	NM	OT	Unspecified Paleo	
LA 108705	NM	OT	Unspecified Paleo	
LA 108910	NM	OT	Unspecified Paleo	Ponil Bend Site
LA 109455	NM	OT	Unspecified Paleo	
LA 109487	NM	OT	Unspecified Paleo	
LA 109741	NM	OT	Unspecified Paleo	
LA 112368	NM	OT	Unspecified Paleo	
LA 112369	NM	OT	Unspecified Paleo	
LA 112377	NM	OT	Unspecified Paleo	
LA 112380	NM	OT	Unspecified Paleo	

LA 112450	NM	OT	Unspecified Paleo	
LA 113595	NM	OT	Unspecified Paleo	
LA 114299	NM	OT	Unspecified Paleo	
LA 114726	NM	OT	Unspecified Paleo	
LA 116576	NM	OT	Unspecified Paleo	Site V Station
LA 116623	NM	OT	Unspecified Paleo	
LA 117137	NM	OT	Unspecified Paleo	
LA 117138	NM	OT	Unspecified Paleo	
LA 117140	NM	OT	Unspecified Paleo	
LA 117141	NM	OT	Unspecified Paleo	
LA 117147	NM	OT	Unspecified Paleo	
LA 117150	NM	OT	Unspecified Paleo	
LA 117459	NM	OT	Unspecified Paleo	
LA 117464	NM	OT	Unspecified Paleo	
LA 117468	NM	OT	Unspecified Paleo	
LA 117479	NM	OT	Unspecified Paleo	
LA 117970	NM	OT	Unspecified Paleo	
LA 120569	NM	OT	Unspecified Paleo	
LA 122580	NM	OT	Unspecified Paleo	
LA 123142	NM	OT	Unspecified Paleo	
LA 12348	NM	OT	Unspecified Paleo	
LA 124532	NM	OT	Unspecified Paleo	
LA 126972	NM	OT	Unspecified Paleo	
LA 127123	NM	OT	Unspecified Paleo	
LA 127719	NM	OT	Unspecified Paleo	
LA 12773	NM	OT	Unspecified Paleo	
LA 12790	NM	OT	Unspecified Paleo	
LA 127961	NM	OT	Unspecified Paleo	
LA 129208	NM	OT	Unspecified Paleo	
LA 129466	NM	OT	Unspecified Paleo	
LA 130518	NM	OT	Unspecified Paleo	
LA 132045	NM	OT	Unspecified Paleo	
LA 133292	NM	OT	Unspecified Paleo	
LA 133447	NM	OT	Unspecified Paleo	
LA 134642	NM	OT	Unspecified Paleo	
LA 134761	NM	OT	Unspecified Paleo	
LA 135979	NM	OT	Unspecified Paleo	
LA 144799	NM	OT	Unspecified Paleo	
LA 148950	NM	OT	Unspecified Paleo	
LA 14904	NM	OT	Unspecified Paleo	Comanche Springs
LA 15400	NM	OT	Unspecified Paleo	

LA 16256	NM	OT	Unspecified Paleo	
LA 16468	NM	OT	Unspecified Paleo	
LA 16585	NM	OT	Unspecified Paleo	
LA 17372	NM	OT	Unspecified Paleo	
LA 19619	NM	OT	Unspecified Paleo	
LA 19902	NM	OT	Unspecified Paleo	
LA 20996	NM	OT	Unspecified Paleo	
LA 21022	NM	OT	Unspecified Paleo	
LA 21024	NM	OT	Unspecified Paleo	
LA 21044	NM	OT	Unspecified Paleo	
LA 21751	NM	OT	Unspecified Paleo	
LA 21773	NM	OT	Unspecified Paleo	
LA 22226	NM	OT	Unspecified Paleo	
LA 23920	NM	OT	Unspecified Paleo	
LA 23950	NM	OT	Unspecified Paleo	
LA 24060	NM	OT	Unspecified Paleo	
LA 25334	NM	OT	Unspecified Paleo	
LA 25460	NM	OT	Unspecified Paleo	
LA 25493	NM	OT	Unspecified Paleo	
LA 25542	NM	OT	Unspecified Paleo	
LA 25677	NM	OT	Unspecified Paleo	
LA 25852	NM	OT	Unspecified Paleo	
LA 26443	NM	OT	Unspecified Paleo	
LA 26748b	NM	OT	Unspecified Paleo	
LA 26983	NM	OT	Unspecified Paleo	
LA 27227	NM	OT	Unspecified Paleo	
LA 27676	NM	OT	Unspecified Paleo	
LA 28355	NM	OT	Unspecified Paleo	
LA 28541	NM	OT	Unspecified Paleo	
LA 28763	NM	OT	Unspecified Paleo	
LA 29509	NM	OT	Unspecified Paleo	
LA 30292	NM	OT	Unspecified Paleo	
LA 30342	NM	OT	Unspecified Paleo	
LA 31674	NM	OT	Unspecified Paleo	Pigeon Cliffs
LA 31849	NM	OT	Unspecified Paleo	
LA 32239	NM	OT	Unspecified Paleo	
LA 32262	NM	OT	Unspecified Paleo	
LA 32395	NM	OT	Unspecified Paleo	
LA 33108	NM	OT	Unspecified Paleo	
LA 33205	NM	OT	Unspecified Paleo	
LA 33206	NM	OT	Unspecified Paleo	

LA 33207	NM	OT	Unspecified Paleo	
LA 33981	NM	OT	Unspecified Paleo	
LA 34087	NM	OT	Unspecified Paleo	
LA 35570	NM	OT	Unspecified Paleo	
LA 35651	NM	OT	Unspecified Paleo	
LA 35660	NM	OT	Unspecified Paleo	
LA 35665	NM	OT	Unspecified Paleo	
LA 35667	NM	OT	Unspecified Paleo	
LA 35671	NM	OT	Unspecified Paleo	
LA 35673	NM	OT	Unspecified Paleo	
LA 35677	NM	OT	Unspecified Paleo	
LA 35678	NM	OT	Unspecified Paleo	
LA 36446	NM	OT	Unspecified Paleo	
LA 3670	NM	OT	Unspecified Paleo	
LA 36720	NM	OT	Unspecified Paleo	
LA 36954	NM	OT	Unspecified Paleo	
LA 36962	NM	OT	Unspecified Paleo	
LA 37034	NM	OT	Unspecified Paleo	Pendejo Cave / Orogrande Cave
LA 37341	NM	OT	Unspecified Paleo	
LA 38240	NM	OT	Unspecified Paleo	
LA 38285	NM	OT	Unspecified Paleo	
LA 38290	NM	OT	Unspecified Paleo	
LA 38291	NM	OT	Unspecified Paleo	
LA 38300	NM	OT	Unspecified Paleo	
LA 38355	NM	OT	Unspecified Paleo	
LA 38656	NM	OT	Unspecified Paleo	McCrory Meadow / McCrory Vega
LA 39145	NM	OT	Unspecified Paleo	
LA 39446	NM	OT	Unspecified Paleo	
LA 39937	NM	OT	Unspecified Paleo	
LA 40249	NM	OT	Unspecified Paleo	
LA 40330	NM	OT	Unspecified Paleo	
LA 40382	NM	OT	Unspecified Paleo	
LA 40649	NM	OT	Unspecified Paleo	
LA 41431	NM	OT	Unspecified Paleo	
LA 42265	NM	OT	Unspecified Paleo	
LA 42403	NM	OT	Unspecified Paleo	
LA 42624	NM	OT	Unspecified Paleo	
LA 42630	NM	OT	Unspecified Paleo	
LA 42637	NM	OT	Unspecified Paleo	
LA 42705	NM	OT	Unspecified Paleo	
LA 42814	NM	OT	Unspecified Paleo	

LA 42895	NM	OT	Unspecified Paleo	
LA 42966	NM	OT	Unspecified Paleo	
LA 43028	NM	OT	Unspecified Paleo	
LA 43029	NM	OT	Unspecified Paleo	
LA 43345	NM	OT	Unspecified Paleo	Elephant Site
LA 43386	NM	OT	Unspecified Paleo	
LA 43387	NM	OT	Unspecified Paleo	
LA 43388	NM	OT	Unspecified Paleo	
LA 43391	NM	OT	Unspecified Paleo	
LA 43410	NM	OT	Unspecified Paleo	
LA 43467	NM	OT	Unspecified Paleo	
LA 43474	NM	OT	Unspecified Paleo	
LA 43475	NM	OT	Unspecified Paleo	
LA 43476	NM	OT	Unspecified Paleo	
LA 43481	NM	OT	Unspecified Paleo	
LA 43482	NM	OT	Unspecified Paleo	
LA 43526	NM	OT	Unspecified Paleo	
LA 43538	NM	OT	Unspecified Paleo	
LA 43721	NM	OT	Unspecified Paleo	Lusk Ranch Site
LA 43909	NM	OT	Unspecified Paleo	
LA 43951	NM	OT	Unspecified Paleo	
LA 45468	NM	OT	Unspecified Paleo	
LA 45694	NM	OT	Unspecified Paleo	
LA 45695	NM	OT	Unspecified Paleo	
LA 45698	NM	OT	Unspecified Paleo	
LA 46162	NM	OT	Unspecified Paleo	
LA 46424	NM	OT	Unspecified Paleo	Cebolleta Park Site
LA 46448	NM	OT	Unspecified Paleo	
LA 47438	NM	OT	Unspecified Paleo	
LA 47663	NM	OT	Unspecified Paleo	
LA 48267	NM	OT	Unspecified Paleo	Madden Canyon Site 1
LA 49089	NM	OT	Unspecified Paleo	
LA 49353	NM	OT	Unspecified Paleo	
LA 49928	NM	OT	Unspecified Paleo	West Otto Site
LA 50198	NM	OT	Unspecified Paleo	
LA 50199	NM	OT	Unspecified Paleo	
LA 50313	NM	OT	Unspecified Paleo	
LA 50314	NM	OT	Unspecified Paleo	
LA 50315	NM	OT	Unspecified Paleo	
LA 50621	NM	OT	Unspecified Paleo	
LA 51037	NM	OT	Unspecified Paleo	

LA 51293	NM	OT	Unspecified Paleo	
LA 51340	NM	OT	Unspecified Paleo	Nogal Canyon Site
LA 52289	NM	OT	Unspecified Paleo	
LA 52362	NM	OT	Unspecified Paleo	
LA 52848	NM	OT	Unspecified Paleo	
LA 53500	NM	OT	Unspecified Paleo	
LA 53536	NM	OT	Unspecified Paleo	
LA 53856	NM	OT	Unspecified Paleo	
LA 54128	NM	OT	Unspecified Paleo	
LA 54385	NM	OT	Unspecified Paleo	
LA 54389	NM	OT	Unspecified Paleo	
LA 54494	NM	OT	Unspecified Paleo	
LA 54661	NM	OT	Unspecified Paleo	
LA 54670	NM	OT	Unspecified Paleo	
LA 54799	NM	OT	Unspecified Paleo	
LA 55272	NM	OT	Unspecified Paleo	
LA 55287	NM	OT	Unspecified Paleo	
LA 55700	NM	OT	Unspecified Paleo	
LA 56044	NM	OT	Unspecified Paleo	
LA 56987	NM	OT	Unspecified Paleo	
LA 57001	NM	OT	Unspecified Paleo	
LA 57190	NM	OT	Unspecified Paleo	
LA 57462	NM	OT	Unspecified Paleo	
LA 57616	NM	OT	Unspecified Paleo	
LA 59157	NM	OT	Unspecified Paleo	Dunas Altas
LA 59922	NM	OT	Unspecified Paleo	
LA 60663	NM	OT	Unspecified Paleo	
LA 60696	NM	OT	Unspecified Paleo	
LA 60961	NM	OT	Unspecified Paleo	
LA 60963	NM	OT	Unspecified Paleo	
LA 60965	NM	OT	Unspecified Paleo	
LA 60967	NM	OT	Unspecified Paleo	
LA 60968	NM	OT	Unspecified Paleo	Kincheloe Homestead
LA 60973	NM	OT	Unspecified Paleo	
LA 60978	NM	OT	Unspecified Paleo	Section Line
LA 60979	NM	OT	Unspecified Paleo	Big Sink
LA 60980	NM	OT	Unspecified Paleo	North Pinos Mountains
LA 60981	NM	OT	Unspecified Paleo	Lammon Ranch
LA 60984	NM	OT	Unspecified Paleo	Buck Harvey Ranch
LA 60987	NM	OT	Unspecified Paleo	Fence Line
LA 61081	NM	OT	Unspecified Paleo	

LA 61725	NM	OT	Unspecified Paleo	
LA 6204	NM	OT	Unspecified Paleo	Black Mesa Tunyo
LA 6205	NM	OT	Unspecified Paleo	
LA 6207	NM	OT	Unspecified Paleo	
LA 6211	NM	OT	Unspecified Paleo	
LA 6212	NM	OT	Unspecified Paleo	Anderson Basin AKA Blackwater Draw Locality #2
LA 62124	NM	OT	Unspecified Paleo	
LA 6215	NM	OT	Unspecified Paleo	
LA 6216	NM	OT	Unspecified Paleo	
LA 6217	NM	OT	Unspecified Paleo	
LA 62178	NM	OT	Unspecified Paleo	
LA 6218	NM	OT	Unspecified Paleo	
LA 6219	NM	OT	Unspecified Paleo	
LA 6220	NM	OT	Unspecified Paleo	
LA 6223	NM	OT	Unspecified Paleo	
LA 6226	NM	OT	Unspecified Paleo	
LA 6227	NM	OT	Unspecified Paleo	
LA 6228	NM	OT	Unspecified Paleo	
LA 6229	NM	OT	Unspecified Paleo	
LA 6230	NM	OT	Unspecified Paleo	
LA 6231	NM	OT	Unspecified Paleo	
LA 6232	NM	OT	Unspecified Paleo	
LA 6233	NM	OT	Unspecified Paleo	
LA 6234	NM	OT	Unspecified Paleo	
LA 6235	NM	OT	Unspecified Paleo	
LA 6237	NM	OT	Unspecified Paleo	
LA 6249	NM	OT	Unspecified Paleo	
LA 6257	NM	OT	Unspecified Paleo	
LA 62695	NM	OT	Unspecified Paleo	
LA 62988	NM	OT	Unspecified Paleo	
LA 63086	NM	OT	Unspecified Paleo	
LA 63326	NM	OT	Unspecified Paleo	
LA 63384	NM	OT	Unspecified Paleo	
LA 63418	NM	OT	Unspecified Paleo	
LA 63665	NM	OT	Unspecified Paleo	
LA 63668	NM	OT	Unspecified Paleo	
LA 63715	NM	OT	Unspecified Paleo	
LA 63756	NM	OT	Unspecified Paleo	
LA 63782	NM	OT	Unspecified Paleo	
LA 63927	NM	OT	Unspecified Paleo	
LA 64136	NM	OT	Unspecified Paleo	

LA 6439	NM	OT	Unspecified Paleo	
LA 64902	NM	OT	Unspecified Paleo	
LA 66141	NM	OT	Unspecified Paleo	
LA 66360	NM	OT	Unspecified Paleo	
LA 66361	NM	OT	Unspecified Paleo	
LA 66362	NM	OT	Unspecified Paleo	
LA 66363	NM	OT	Unspecified Paleo	
LA 66364	NM	OT	Unspecified Paleo	
LA 66365	NM	OT	Unspecified Paleo	
LA 66366	NM	OT	Unspecified Paleo	
LA 66369	NM	OT	Unspecified Paleo	
LA 66370	NM	OT	Unspecified Paleo	
LA 66371	NM	OT	Unspecified Paleo	
LA 66372	NM	OT	Unspecified Paleo	
LA 66375	NM	OT	Unspecified Paleo	
LA 66881	NM	OT	Unspecified Paleo	
LA 67205	NM	OT	Unspecified Paleo	
LA 6776	NM	OT	Unspecified Paleo	
LA 68456	NM	OT	Unspecified Paleo	
LA 69434	NM	OT	Unspecified Paleo	
LA 69443	NM	OT	Unspecified Paleo	
LA 69576	NM	OT	Unspecified Paleo	
LA 69579	NM	OT	Unspecified Paleo	
LA 70285	NM	OT	Unspecified Paleo	
LA 71338	NM	OT	Unspecified Paleo	
LA 71339	NM	OT	Unspecified Paleo	
LA 71438	NM	OT	Unspecified Paleo	
LA 73060	NM	OT	Unspecified Paleo	
LA 73353	NM	OT	Unspecified Paleo	
LA 73823	NM	OT	Unspecified Paleo	
LA 73833	NM	OT	Unspecified Paleo	
LA 75066	NM	OT	Unspecified Paleo	
LA 75163	NM	OT	Unspecified Paleo	Bob Crosby Draw / Funny Fence Site
LA 75981	NM	OT	Unspecified paleo	
LA 76763	NM	OT	Unspecified Paleo	
LA 76831	NM	OT	Unspecified Paleo	
LA 76833	NM	OT	Unspecified Paleo	
LA 76842	NM	OT	Unspecified Paleo	
LA 77027	NM	OT	Unspecified Paleo	
LA 77453	NM	OT	Unspecified Paleo	
LA 77468	NM	OT	Unspecified Paleo	

LA 78504	NM	OT	Unspecified Paleo	
LA 78644	NM	OT	Unspecified Paleo	
LA 79553	NM	OT	Unspecified Paleo	
LA 80320	NM	OT	Unspecified Paleo	
LA 81123	NM	OT	Unspecified Paleo	
LA 8129	NM	OT	Unspecified Paleo	
LA 81973	NM	OT	Unspecified Paleo	
LA 82127	NM	OT	Unspecified Paleo	
LA 82135	NM	OT	Unspecified Paleo	
LA 82144	NM	OT	Unspecified Paleo	
LA 82185	NM	OT	Unspecified Paleo	
LA 82272	NM	OT	Unspecified Paleo	
LA 82935	NM	OT	Unspecified Paleo	
LA 83741	NM	OT	Unspecified Paleo	
LA 87149	NM	OT	Unspecified Paleo	
LA 87153	NM	OT	Unspecified Paleo	
LA 87905	NM	OT	Unspecified Paleo	
LA 8801	NM	OT	Unspecified Paleo	
LA 88023	NM	OT	Unspecified Paleo	
LA 8804	NM	OT	Unspecified Paleo	
LA 88057	NM	OT	Unspecified Paleo	Atencio
LA 88233	NM	OT	Unspecified Paleo	
LA 89909	NM	OT	Unspecified Paleo	
LA 91220	NM	OT	Unspecified Paleo	Coe Lake Early Man Site
LA 95930	NM	OT	Unspecified Paleo	
LA 98741	NM	OT	Unspecified Paleo	
LA 98820	NM	OT	Unspecified Paleo	
LA 99154	NM	OT	Unspecified Paleo	
LA 99846	NM	OT	Unspecified Paleo	
LA 99848	NM	OT	Unspecified Paleo	
LA 99849	NM	OT	Unspecified Paleo	
LA 6208	NM	OT	Unspecified Paleoindian	
LA 6210	NM	OT	Unspecified Paleoindian	
LA 6213	NM	OT	Unspecified Paleoindian	
LA 100950	NM	PL	Clovis	
LA 101034	NM	PL	Clovis	
LA 102485	NM	PL	Clovis	
LA 105244	NM	PL	Clovis	
LA 107436	NM	PL	Clovis	
LA 111429	NM	PL	Clovis	

LA 112381	NM	PL	Clovis	
LA 112527	NM	PL	Clovis	La Caja del Rio Paleoindian Site
LA 117467	NM	PL	Clovis	
LA 117481	NM	PL	Clovis	
LA 121645	NM	PL	Clovis	
LA 138201	NM	PL	Clovis	
LA 138211	NM	PL	Clovis	
LA 143295	NM	PL	Clovis	
LA 144815	NM	PL	Clovis	
LA 21844	NM	PL	Clovis	
LA 26748	NM	PL	Clovis	Mockingbird Gap
LA 29436	NM	PL	Clovis	
LA 3324	NM	PL	Clovis	Blackwater Draw Locality #1
LA 3647	NM	PL	Clovis	La Manga Site AKA…
LA 37476	NM	PL	Clovis	
LA 38698	NM	PL	Clovis	
LA 3909	NM	PL	Clovis	
LA 39142	NM	PL	Clovis	
LA 46584	NM	PL	Clovis	
LA 48098	NM	PL	Clovis	
LA 4974	NM	PL	Clovis	Lucy Site
LA 5146	NM	PL	Clovis	Rattlesnake Draw
LA 5529	NM	PL	Clovis	North Spring Mesa Canyon Site
LA 59284	NM	PL	Clovis	
LA 59496	NM	PL	Clovis	
LA 6214	NM	PL	Clovis	
LA 6221	NM	PL	Clovis	
LA 66891	NM	PL	Clovis	
LA 69112	NM	PL	Clovis	
LA 77421	NM	PL	Clovis	
LA 87069	NM	PL	Clovis	
LA 93330	NM	PL	Clovis	
LA 32614	NM	PL	Pre-Clovis	
LA 129073	NM	PL	Unspecified Paleo	
LA 101196	NM	YD	Agate Basin	
LA 105141	NM	YD	Agate Basin	
LA 115351	NM	YD	Agate Basin	
LA 123118	NM	YD	Agate Basin	
LA 127494	NM	YD	Agate Basin	Town of Delphos?
LA 138603	NM	YD	Agate Basin	
LA 20078	NM	YD	Agate Basin	

LA 3324c	NM	YD	Agate Basin	Blackwater Draw
LA 5146b	NM	YD	Agate Basin	Rattlesnake Draw
LA 102817	NM	YD	Folsom	
LA 104254	NM	YD	Folsom	
LA 104267	NM	YD	Folsom	
LA 107617	NM	YD	Folsom	
LA 108091	NM	YD	Folsom	
LA 108103	NM	YD	Folsom	
LA 108111	NM	YD	Folsom	
LA 108299	NM	YD	Folsom	
LA 109374	NM	YD	Folsom	Rio Rancho Folsom Site
LA 110809	NM	YD	Folsom	
LA 110828	NM	YD	Folsom	
LA 111428	NM	YD	Folsom	
LA 111429b	NM	YD	Folsom	
LA 112378	NM	YD	Folsom	
LA 112381b	NM	YD	Folsom	
LA 112395	NM	YD	Folsom	
LA 112527b	NM	YD	Folsom	La Caja del Rio Paleoindian Site
LA 113066	NM	YD	Folsom	
LA 113587	NM	YD	Folsom	
LA 113594	NM	YD	Folsom	
LA 113997	NM	YD	Folsom	
LA 114277	NM	YD	Folsom	
LA 114730	NM	YD	Folsom	
LA 115186	NM	YD	Folsom	
LA 116583	NM	YD	Folsom	
LA 117161	NM	YD	Folsom	
LA 117477	NM	YD	Folsom	
LA 117481b	NM	YD	Folsom	
LA 117494	NM	YD	Folsom	
LA 117502	NM	YD	Folsom	
LA 117732	NM	YD	Folsom	
LA 117818	NM	YD	Folsom	
LA 118102	NM	YD	Folsom	
LA 11814	NM	YD	Folsom	
LA 119992	NM	YD	Folsom	
LA 122575	NM	YD	Folsom	
LA 124474	NM	YD	Folsom	Boca Negra Wash Site
LA 125778	NM	YD	Folsom	
LA 126127	NM	YD	Folsom	Cloverdale Creek Paleo-Indian Site

LA 128579	NM	YD	Folsom	
LA 128615	NM	YD	Folsom	
LA 128644	NM	YD	Folsom	
LA 129056	NM	YD	Folsom	
LA 131026	NM	YD	Folsom	
LA 13423	NM	YD	Folsom	Ake Site
LA 134644	NM	YD	Folsom	Deann's Site
LA 145436	NM	YD	Folsom	
LA 21748	NM	YD	Folsom	
LA 21750	NM	YD	Folsom	
LA 21836	NM	YD	Folsom	
LA 21840	NM	YD	Folsom	
LA 21853	NM	YD	Folsom	
LA 21859	NM	YD	Folsom	
LA 21865	NM	YD	Folsom	
LA 21872	NM	YD	Folsom	
LA 21882	NM	YD	Folsom	
LA 22122	NM	YD	Folsom	Laguna Archaeological District
LA 22183	NM	YD	Folsom	
LA 31592	NM	YD	Folsom	
LA 32227	NM	YD	Folsom	Burro Tanks
LA 32246	NM	YD	Folsom	
LA 3324b	NM	YD	Folsom	Frank's Folsom Site AKA Blackwater Draw
LA 3647c	NM	YD	Folsom	La Manga Site
LA 38295	NM	YD	Folsom	Folsom # 2
LA 38592	NM	YD	Folsom	
LA 3908	NM	YD	Folsom	
LA 3909b	NM	YD	Folsom	
LA 39142b	NM	YD	Folsom	
LA 4558	NM	YD	Folsom	
LA 49036	NM	YD	Folsom	Tucson Springs
LA 4974b	NM	YD	Folsom	Lucy Site
LA 5531	NM	YD	Folsom	Todsen Cave
LA 5559	NM	YD	Folsom	
LA 55687	NM	YD	Folsom	
LA 55693	NM	YD	Folsom	
LA 55991	NM	YD	Folsom	Black Canyon Quary
LA 5725	NM	YD	Folsom	
LA 5726	NM	YD	Folsom	
LA 5886	NM	YD	Folsom	
LA 58874	NM	YD	Folsom	

LA 61029	NM	YD	Folsom	
LA 61756	NM	YD	Folsom	
LA 6209	NM	YD	Folsom	Milnesand Site
LA 6214b	NM	YD	Folsom	
LA 6221b	NM	YD	Folsom	
LA 6222	NM	YD	Folsom	
LA 6225	NM	YD	Folsom	Elida Site
LA 6294	NM	YD	Folsom	Lone Butte Site
LA 6310	NM	YD	Folsom	
LA 6437b	NM	YD	Folsom	San Jon
LA 7128	NM	YD	Folsom	
LA 73057	NM	YD	Folsom	Hot Well
LA 7871	NM	YD	Folsom	
LA 8121	NM	YD	Folsom	Folsom Man Site
LA 8135	NM	YD	Folsom	
LA 81601	NM	YD	Folsom	Trinity Site National Historic Landmark
LA 87784	NM	YD	Folsom	
LA 89556	NM	YD	Folsom	
LA 89561	NM	YD	Folsom	
LA 9075	NM	YD	Folsom	
LA 91466	NM	YD	Folsom	
LA 91540	NM	YD	Folsom	
LA 92447	NM	YD	Folsom	
LA 92528	NM	YD	Folsom	
LA 93311	NM	YD	Folsom	
LA 93330b	NM	YD	Folsom	
LA 93332	NM	YD	Folsom	
LA 93336	NM	YD	Folsom	
LA 93404	NM	YD	Folsom	
LA 9348	NM	YD	Folsom	Ojito Dune
LA 96592	NM	YD	Folsom	
LA 97582	NM	YD	Folsom	
LA 97583	NM	YD	Folsom	
LA 97589	NM	YD	Folsom	
LA 101435	NM	YD	Folsom / Midland	Burnet Cave
LA 102127	NM	YD	Folsom / Midland	Martin Site
LA 116505	NM	YD	Folsom / Midland	
LA 132816	NM	YD	Folsom / Midland	
LA 140463	NM	YD	Folsom / Midland	
LA 45271	NM	YD	Folsom / Midland	
LA 46520	NM	YD	Folsom / Midland	La Caceria

LA 46583	NM	YD	Folsom / Midland	
LA 54147	NM	YD	Folsom / Midland	Cornado's Campsite / Spanish Entrada Site
LA 54951	NM	YD	Folsom / Midland	
LA 60694	NM	YD	Folsom / Midland	
LA 60720	NM	YD	Folsom / Midland	
LA 67166	NM	YD	Folsom / Midland	
LA 76449	NM	YD	Folsom / Midland	
LA 77421b	NM	YD	Folsom / Midland	
LA 8006	NM	YD	Folsom / Midland	
LA 81508	NM	YD	Folsom / Midland	
LA 81553	NM	YD	Folsom / Midland	
LA 85929	NM	YD	Folsom / Midland	
LA 86767	NM	YD	Folsom / Midland	
LA 87517	NM	YD	Folsom / Midland	
LA 87913	NM	YD	Folsom / Midland	
LA 89100	NM	YD	Folsom / Midland	
LA 89642	NM	YD	Folsom / Midland	
LA 89643	NM	YD	Folsom / Midland	
LA 89888	NM	YD	Folsom / Midland	
LA 91288	NM	YD	Folsom / Midland	
LA 99155	NM	YD	Folsom / Midland	
LA 2334	NM	YD	Folsom/Midland	
LA 69539	NM	YD	Hell Gap	
LA 78693	NM	YD	Hell Gap	Road Site
LA 89894	NM	YD	Hell Gap	
LA 108103c	NM	YD	Meserve	
LA 111186	NM	YD	Meserve	
LA 121494	NM	YD	Meserve	
LA 101190	NM	YD	Midland	
LA 105504	NM	YD	Midland	
LA 108099	NM	YD	Midland	
LA 108103b	NM	YD	Midland	
LA 108111b	NM	YD	Midland	
LA 109475	NM	YD	Midland	
LA 110458	NM	YD	Midland	
LA 112527d	NM	YD	Midland	La Caja del Rio Paleoindian Site
LA 116582	NM	YD	Midland	
LA 116708	NM	YD	Midland	
LA 117223	NM	YD	Midland	
LA 120498	NM	YD	Midland	
LA 120951	NM	YD	Midland	

LA 120952	NM	YD	Midland	
LA 127899	NM	YD	Midland	
LA 135667	NM	YD	Midland	
LA 21836b	NM	YD	Midland	
LA 21844b	NM	YD	Midland	
LA 25678b	NM	YD	Midland	
LA 29351b	NM	YD	Midland	
LA 30487	NM	YD	Midland	
LA 34743	NM	YD	Midland	
LA 43553	NM	YD	Midland	
LA 68956	NM	YD	Midland	
LA 73057b	NM	YD	Midland	Hot Well
LA 78235	NM	YD	Midland	
LA 98744	NM	YD	Midland	Burro Cienega No. 9
LA 99591	NM	YD	Midland	
LA 111290	NM	YD	Milnesand	
LA 120498b	NM	YD	Milnesand	
LA 15180	NM	YD	Milnesand	
LA 5146d	NM	YD	Milnesand	Rattlesnake Draw
LA 6214d	NM	YD	Milnesand	
LA 6221d	NM	YD	Milnesand	
LA 71934	NM	YD	Milnesand	
LA 105916	NM	YD	Plainview	
LA 107276	NM	YD	Plainview	
LA 107738	NM	YD	Plainview	
LA 110563	NM	YD	Plainview	
LA 112527c	NM	YD	Plainview	La Caja del Rio Paleoindian Site
LA 120142	NM	YD	Plainview	
LA 126620	NM	YD	Plainview	
LA 131754	NM	YD	Plainview	
LA 134764	NM	YD	Plainview	Water Canyon Site
LA 138620	NM	YD	Plainview	
LA 138624	NM	YD	Plainview	
LA 140721	NM	YD	Plainview	
LA 145459	NM	YD	Plainview	
LA 25678	NM	YD	Plainview	
LA 29351	NM	YD	Plainview	
LA 3324d	NM	YD	Plainview	Blackwater Draw
LA 3647b	NM	YD	Plainview	La Manga Site
LA 37927	NM	YD	Plainview	
LA 38424	NM	YD	Plainview	

LA 44497	NM	YD	Plainview	
LA 5146c	NM	YD	Plainview	Rattlesnake Draw
LA 55085	NM	YD	Plainview	Town of Sawyer
LA 55753	NM	YD	Plainview	
LA 5635	NM	YD	Plainview	Gallegos Wash Archaeological District
LA 5671	NM	YD	Plainview	
LA 5673	NM	YD	Plainview	
LA 6214c	NM	YD	Plainview	
LA 6221c	NM	YD	Plainview	
LA 73057c	NM	YD	Plainview	Hot Well
LA 76883	NM	YD	Plainview	
LA 78075	NM	YD	Plainview	
LA 81561	NM	YD	Plainview	
LA 97546	NM	YD	Plainview	
48BH341	WY	EH	Alberta	Crystal Creek Site
48CK1828	WY	EH	Alberta	
48GO305d	WY	EH	Alberta	Hell Gap Site
48LN3492	WY	EH	Alberta	
48SU2205	WY	EH	Alberta	
48SU2230b	WY	EH	Alberta	
48SW12470	WY	EH	Alberta	
48SW3566	WY	EH	Alberta	
48SW3594	WY	EH	Alberta	
48SW3665	WY	EH	Alberta	
48SW4824	WY	EH	Alberta	
48SW5734	WY	EH	Alberta	Blue Point Site
48SW8783	WY	EH	Alberta	
48YE126	WY	EH	Alberta	
48CR5773b	WY	EH	Alberta - Cody	
48HO656	WY	EH	Alberta - Cody	
48CR2353	WY	EH	Alberta-Cody	
48CK227	WY	EH	Angostura	
48CR7630	WY	EH	Angostura	
48FR49	WY	EH	Angostura	
48JO369b	WY	EH	Angostura	
48SU5228	WY	EH	Angostura	
48SW12506	WY	EH	Angostura	
48SW13817	WY	EH	Angostura	
48SW606b	WY	EH	Angostura	Wild Horse Ridge
48BH345	WY	EH	Cody	Laddie Creek Site
48BH701b	WY	EH	Cody	Claude A. Lewis Site

48BH731	WY	EH	Cody	
48CA1030b	WY	EH	Cody	
48CA1099	WY	EH	Cody	
48CA3897	WY	EH	Cody	
48CA6100	WY	EH	Cody	
48CK1100	WY	EH	Cody	
48CR1307b	WY	EH	Cody	
48CR1317	WY	EH	Cody	
48CR1929	WY	EH	Cody	
48CR2089	WY	EH	Cody	
48CR2101b	WY	EH	Cody	
48CR2960	WY	EH	Cody	
48CR3050	WY	EH	Cody	
48CR307	WY	EH	Cody	
48CR3475	WY	EH	Cody	
48CR3641	WY	EH	Cody	
48CR4094	WY	EH	Cody	
48CR5920	WY	EH	Cody	
48CR6358	WY	EH	Cody	
48CR6912	WY	EH	Cody	
48CR7031	WY	EH	Cody	
48FR180c	WY	EH	Cody	
48GO305e	WY	EH	Cody	Hell Gap Site
48JO2167	WY	EH	Cody	
48LA1071	WY	EH	Cody	
48LN252	WY	EH	Cody	
48LN329	WY	EH	Cody	
48LN788	WY	EH	Cody	
48NA2499	WY	EH	Cody	
48NA2777	WY	EH	Cody	
48PA1726	WY	EH	Cody	
48PA2405	WY	EH	Cody	
48PA29	WY	EH	Cody	Horner Site
48SU389b	WY	EH	Cody	
48SW0c	WY	EH	Cody	Tyrrell Tie Rod Site
48SW101c	WY	EH	Cody	
48SW10710	WY	EH	Cody	
48SW11370	WY	EH	Cody	
48SW13620	WY	EH	Cody	
48SW13622d	WY	EH	Cody	Scoggin Chain Lakes Site
48SW13624	WY	EH	Cody	Keith Allen / Black Buttes Site

b				
48SW14436	WY	EH	Cody	
48SW1455	WY	EH	Cody	
48SW1687	WY	EH	Cody	
48SW1705	WY	EH	Cody	
48SW2695	WY	EH	Cody	
48SW2771	WY	EH	Cody	
48SW3050	WY	EH	Cody	
48SW3273	WY	EH	Cody	
48SW328b	WY	EH	Cody	
48SW542	WY	EH	Cody	
48SW5841c	WY	EH	Cody	
48SW5d	WY	EH	Cody	Finley Site
48SW6785	WY	EH	Cody	
48TE509d	WY	EH	Cody	Lawrence site
48UT361	WY	EH	Cody	
48YE1	WY	EH	Cody	
48YE409b	WY	EH	Cody	
48AB1133	WY	EH	Eden	
48AB1138	WY	EH	Eden	
48AB1243	WY	EH	Eden	
48AB190	WY	EH	Eden	
48BH732b	WY	EH	Eden	Brown Springs
48CA1069	WY	EH	Eden	
48CA12e	WY	EH	Eden	Carter Kerr-McGee
48CA1782	WY	EH	Eden	
48CA188	WY	EH	Eden	Porcupine Creek Site
48CA832	WY	EH	Eden	
48CH1474b	WY	EH	Eden	
48CK601	WY	EH	Eden	
48CR1072	WY	EH	Eden	
48CR1112	WY	EH	Eden	
48CR126	WY	EH	Eden	
48CR1494b	WY	EH	Eden	
48CR1926	WY	EH	Eden	
48CR3495	WY	EH	Eden	
48CR5795	WY	EH	Eden	
48CR612	WY	EH	Eden	
48CR6206	WY	EH	Eden	
48CR6512	WY	EH	Eden	
48CR6964	WY	EH	Eden	

48FR577c	WY	EH	Eden	
48JO2028	WY	EH	Eden	
48JO369	WY	EH	Eden	
48NA96	WY	EH	Eden	
48SH97	WY	EH	Eden	
48SU2651b	WY	EH	Eden	
48SU4431	WY	EH	Eden	
48SW10085	WY	EH	Eden	
48SW11666	WY	EH	Eden	
48SW13622g	WY	EH	Eden	Scoggin Chain Lakes Site
48SW13623c	WY	EH	Eden	Roby Site
48SW13712c	WY	EH	Eden	
48SW142	WY	EH	Eden	
48SW14968	WY	EH	Eden	
48SW1694b	WY	EH	Eden	
48SW1930	WY	EH	Eden	
48SW2056	WY	EH	Eden	
48SW2745	WY	EH	Eden	
48SW287	WY	EH	Eden	
48SW289	WY	EH	Eden	
48SW328	WY	EH	Eden	
48SW4770	WY	EH	Eden	
48SW500	WY	EH	Eden	
48SW5104	WY	EH	Eden	
48SW5829	WY	EH	Eden	
48SW5841b	WY	EH	Eden	
48SW5950	WY	EH	Eden	
48SW5c	WY	EH	Eden	Finley Site
48SW994	WY	EH	Eden	Lost Soldier Creek Hearths
48UT390	WY	EH	Eden	
48NA2526	WY	EH	Foothill - Mountain	Natrona Housepit Site
48SW15298	WY	EH	Foothills - Mountain	
48HO656b	WY	EH	Foothills - Mountains	
48NA3396	WY	EH	Foothills - Mountains	Knapweed Spring I
48SH595	WY	EH	Foothills - Mountains	
48SH805	WY	EH	Foothills - Mountains	
48SU3632	WY	EH	Foothills - Mountains	
48SW13617	WY	EH	Foothills - Mountains	
48SW13623e	WY	EH	Foothills - Mountains	Roby Site

48UT786	WY	EH	Foothills - Mountains	Deep Hearth Site
48SW13374	WY	EH	Foothills - Mountians	
48YE243	WY	EH	Foothills - Mountians	
48PA2497	WY	EH	Foothills - Moutains	
48AB122	WY	EH	Fredrick	
48GO305f	WY	EH	Fredrick	Hell Gap Site
48LN1185	WY	EH	Fredrick	
48PL68	WY	EH	Fredrick	
48UT60b	WY	EH	Fredrick	
48AB4	WY	EH	Jimmy Allen	Jimmy Allen Site
48BH340	WY	EH	Jimmy Allen	Porcupine Jaws Site
48BH616	WY	EH	Jimmy Allen	
48BH657b	WY	EH	Jimmy Allen	Eagle Shelter
48CA1770	WY	EH	Jimmy Allen	
48CK1810	WY	EH	Jimmy Allen	
48CR2625	WY	EH	Jimmy Allen	
48CR2626	WY	EH	Jimmy Allen	
48CR3368	WY	EH	Jimmy Allen	
48FR579b	WY	EH	Jimmy Allen	
48HO362	WY	EH	Jimmy Allen	
48LN2948	WY	EH	Jimmy Allen	
48LN373b	WY	EH	Jimmy Allen	
48NA3847b	WY	EH	Jimmy Allen	
48SH232	WY	EH	Jimmy Allen	
48SH45d	WY	EH	Jimmy Allen	Camp Creek Site
48SU1421b	WY	EH	Jimmy Allen	
48SU2448	WY	EH	Jimmy Allen	
48SU2506	WY	EH	Jimmy Allen	
48SU4376	WY	EH	Jimmy Allen	
48SU5307	WY	EH	Jimmy Allen	
48SW13712	WY	EH	Jimmy Allen	
48SW14532	WY	EH	Jimmy Allen	
48SW4992	WY	EH	Jimmy Allen	
48UT1609	WY	EH	Jimmy Allen	
48BH206b	WY	EH	Lovell Constricted	Bottleneck Cave
48CA1393	WY	EH	Lovell Constricted	
48FR2034	WY	EH	Lovell Constricted	
48LN315	WY	EH	Lovell Constricted	
48LN3452	WY	EH	Lovell Constricted	
48NA1943	WY	EH	Lovell Constricted	
48NA2427	WY	EH	Lovell Constricted	

48PA201	WY	EH	Lovell Constricted	Mummy Cave
48PA598	WY	EH	Lovell Constricted	
48SU918	WY	EH	Lovell Constricted	
48SW4462	WY	EH	Lovell Constricted	
48SW4796	WY	EH	Lovell Constricted	
48SW5044	WY	EH	Lovell Constricted	
48SW5232	WY	EH	Lovell Constricted	
48UT390b	WY	EH	Lovell Constricted	
48GO305i	WY	EH	Lusk	Hell Gap Site
48NO203	WY	EH	Lusk	
48AB611	WY	EH	Paralell Oblique	
48CA1494	WY	EH	Paralell Oblique	
48CA1806	WY	EH	Paralell Oblique	Tree 11
48CA560	WY	EH	Paralell Oblique	
48CA4152	WY	EH	Parallel Oblique	
48CK1588	WY	EH	Parallel Oblique	
48CK1740	WY	EH	Parallel Oblique	
48CO1774	WY	EH	Parallel Oblique	
48CO2267	WY	EH	Parallel Oblique	
48CO905	WY	EH	Parallel Oblique	
48CR1494c	WY	EH	Parallel Oblique	
48CR1559b	WY	EH	Parallel Oblique	
48CR183	WY	EH	Parallel Oblique	
48CR2085	WY	EH	Parallel Oblique	
48CR2731	WY	EH	Parallel Oblique	
48CR2947	WY	EH	Parallel Oblique	
48CR3495b	WY	EH	Parallel oblique	
48CR6b	WY	EH	Parallel Oblique	
48FR308b	WY	EH	Parallel Oblique	Helen Lookingbill Site
48FR3144	WY	EH	Parallel Oblique	
48JO1442	WY	EH	Parallel Oblique	
48LN1132	WY	EH	Parallel Oblique	
48LN1208	WY	EH	Parallel Oblique	
48LN206	WY	EH	Parallel Oblique	
48LN548	WY	EH	Parallel Oblique	
48LN74	WY	EH	Parallel Oblique	
48NA1312	WY	EH	Parallel Oblique	
48NA1407	WY	EH	Parallel Oblique	
48NA1862b	WY	EH	Parallel Oblique	
48NA2838	WY	EH	Parallel Oblique	
48NO234	WY	EH	Parallel Oblique	

48PA201b	WY	EH	Parallel Oblique	Mummy Cave
48PA2468	WY	EH	Parallel Oblique	
48PL589	WY	EH	Parallel Oblique	
48PL785b	WY	EH	Parallel Oblique	
48PL924	WY	EH	Parallel Oblique	
48SH42	WY	EH	Parallel Oblique	
48SU348b	WY	EH	Parallel Oblique	
48SU3621	WY	EH	Parallel Oblique	
48SU3791	WY	EH	Parallel Oblique	
48SW10276	WY	EH	Parallel Oblique	
48SW10940	WY	EH	Parallel Oblique	
48SW11453	WY	EH	Parallel Oblique	
48SW12522	WY	EH	Parallel Oblique	
48SW13622h	WY	EH	Parallel Oblique	Scoggin Chain Lakes Site
48SW13623g	WY	EH	Parallel Oblique	Roby Site
48SW13624	WY	EH	Parallel Oblique	Keith Allen / Black Buttes Site
48SW13699	WY	EH	Parallel Oblique	
48SW14150	WY	EH	Parallel Oblique	
48SW15455	WY	EH	Parallel Oblique	
48SW15843	WY	EH	Parallel Oblique	
48SW1673	WY	EH	Parallel Oblique	
48SW1694	WY	EH	Parallel Oblique	
48SW2006	WY	EH	Parallel Oblique	
48SW3386	WY	EH	Parallel Oblique	
48SW3610	WY	EH	Parallel Oblique	
48SW4824b	WY	EH	Parallel Oblique	
48SW5950b	WY	EH	Parallel Oblique	
48SW641	WY	EH	Parallel Oblique	
48SW7924	WY	EH	Parallel Oblique	
48SW8174	WY	EH	Parallel Oblique	
48SW8347	WY	EH	Parallel Oblique	
48SW9195	WY	EH	Parallel Oblique	Bugas Mine
48TE509c	WY	EH	Parallel Oblique	Lawrence site
48UT27	WY	EH	Parallel Oblique	
48UT332	WY	EH	Parallel Oblique	
48UT684	WY	EH	Parallel Oblique	
48UT73	WY	EH	Parallel Oblique	
48YE504	WY	EH	Parallel Oblique	
48BH499	WY	EH	Plano	Medicine Lodge Creek
48CK238	WY	EH	Plano	

48SW212	WY	EH	Plano	
48BH1372	WY	EH	Pryor Stemmed	
48BH178	WY	EH	Pryor Stemmed	
48BH1827b	WY	EH	Pryor Stemmed	Two Moon Shelter
48BH206	WY	EH	Pryor Stemmed	Bottleneck Cave
48BH315	WY	EH	Pryor Stemmed	Paintrock 4
48BH349	WY	EH	Pryor Stemmed	Paintrock 5
48BH448	WY	EH	Pryor Stemmed	
48CA181	WY	EH	Pryor Stemmed	Thunder Creek Site
48CA2827	WY	EH	Pryor Stemmed	
48CA2953	WY	EH	Pryor Stemmed	
48CA3194	WY	EH	Pryor Stemmed	
48CA3389	WY	EH	Pryor Stemmed	
48CA366	WY	EH	Pryor Stemmed	
48CA5741	WY	EH	Pryor Stemmed	
48CK59	WY	EH	Pryor Stemmed	
48CO1139	WY	EH	Pryor Stemmed	
48CO1143	WY	EH	Pryor Stemmed	
48CO2263	WY	EH	Pryor Stemmed	
48CO455	WY	EH	Pryor Stemmed	
48CO462	WY	EH	Pryor Stemmed	
48CO485	WY	EH	Pryor Stemmed	
48FR131	WY	EH	Pryor Stemmed	
48FR132	WY	EH	Pryor Stemmed	
48FR3171	WY	EH	Pryor Stemmed	
48FR414	WY	EH	Pryor Stemmed	
48FR5005	WY	EH	Pryor Stemmed	
48FR5113	WY	EH	Pryor Stemmed	
48FR539	WY	EH	Pryor Stemmed	
48FR579c	WY	EH	Pryor Stemmed	
48HO396	WY	EH	Pryor Stemmed	
48JO3157	WY	EH	Pryor Stemmed	
48JO319	WY	EH	Pryor Stemmed	
48JO343	WY	EH	Pryor Stemmed	
48JO521	WY	EH	Pryor Stemmed	
48JO701	WY	EH	Pryor Stemmed	Scotch Corral
48LN1289	WY	EH	Pryor Stemmed	
48LN1296b	WY	EH	Pryor Stemmed	
48LN3655	WY	EH	Pryor Stemmed	
48NA1128	WY	EH	Pryor Stemmed	
48NA1982	WY	EH	Pryor Stemmed	

48NA2777b	WY	EH	Pryor Stemmed	
48NA3856	WY	EH	Pryor Stemmed	
48NA3978	WY	EH	Pryor Stemmed	
48NA959	WY	EH	Pryor Stemmed	
48SU1421	WY	EH	Pryor Stemmed	
48SU2130	WY	EH	Pryor Stemmed	
48SU3873	WY	EH	Pryor Stemmed	
48SU3874	WY	EH	Pryor Stemmed	
48SU582	WY	EH	Pryor Stemmed	
48SW389	WY	EH	Pryor Stemmed	
48SW4751	WY	EH	Pryor Stemmed	
48UT402	WY	EH	Pryor Stemmed	
48WA143	WY	EH	Pryor Stemmed	
48WA394	WY	EH	Pryor Stemmed	
48WA7	WY	EH	Pryor Stemmed	Company Springs
48WA82	WY	EH	Pryor Stemmed	
48YE334	WY	EH	Pryor Stemmed	
48CA184	WY	EH	Scottsbluff	Knife Site
48CA3094	WY	EH	Scottsbluff	
48CA4269	WY	EH	Scottsbluff	
48CR153	WY	EH	Scottsbluff	
48CR1873	WY	EH	Scottsbluff	
48CR2001	WY	EH	Scottsbluff	
48CR2911	WY	EH	Scottsbluff	
48CR3488	WY	EH	Scottsbluff	
48CR4052	WY	EH	Scottsbluff	
48CR6361	WY	EH	Scottsbluff	
48FR2586	WY	EH	Scottsbluff	
48FR3013	WY	EH	Scottsbluff	
48FR322	WY	EH	Scottsbluff	
48JO1269	WY	EH	Scottsbluff	
48JO1675	WY	EH	Scottsbluff	
48JO1676	WY	EH	Scottsbluff	
48JO1782	WY	EH	Scottsbluff	
48LN1294	WY	EH	Scottsbluff	
48LN2267	WY	EH	Scottsbluff	
48LN2874	WY	EH	Scottsbluff	
48LN314	WY	EH	Scottsbluff	
48LN3492b	WY	EH	Scottsbluff	
48LN3657	WY	EH	Scottsbluff	
48PA2489	WY	EH	Scottsbluff	

48PL1010	WY	EH	Scottsbluff	
48PL632	WY	EH	Scottsbluff	
48SH158	WY	EH	Scottsbluff	
48SH45c	WY	EH	Scottsbluff	Camp Creek Site
48SU2329	WY	EH	Scottsbluff	
48SU2707	WY	EH	Scottsbluff	
48SU3542	WY	EH	Scottsbluff	
48SU4095	WY	EH	Scottsbluff	
48SW101b	WY	EH	Scottsbluff	
48SW1079	WY	EH	Scottsbluff	
48SW1121	WY	EH	Scottsbluff	
48SW12003	WY	EH	Scottsbluff	
48SW12642	WY	EH	Scottsbluff	
48SW13622 f	WY	EH	Scottsbluff	Scoggin Chain Lakes Site
48SW13623 d	WY	EH	Scottsbluff	Roby Site
48SW13712 b	WY	EH	Scottsbluff	
48SW4712	WY	EH	Scottsbluff	
48SW537b	WY	EH	Scottsbluff	
48SW5663	WY	EH	Scottsbluff	
48SW5b	WY	EH	Scottsbluff	Finley Site
48SW7567	WY	EH	Scottsbluff	
48TE411	WY	EH	Scottsbluff	
48UT702	WY	EH	Scottsbluff	
48UT74	WY	EH	Scottsbluff	
48YD448	WY	EH	Scottsbluff	
48CR2039	WY	EH	Scottsbluff / Alberta	
48GO341	WY	EH	Unspecified Paleo	
48SW13156	WY	EH	Unspecified Paleo	
48SW8842	WY	EH	Unspecified Paleo	
48CA5807	WY	OT	Unsecified Paleo	
48CR318	WY	OT	Unsecified Paleo	
48AB1	WY	OT	Unspecified Paleo	8 Trout
48BH18	WY	OT	Unspecified Paleo	Earl Hindley Site / Deer Creek Site
48BH363	WY	OT	Unspecified Paleo	
48BH364	WY	OT	Unspecified Paleo	Southsider Cave
48BH633	WY	OT	Unspecified Paleo	
48BH840	WY	OT	Unspecified Paleo	Dry Tensleep Meadows
48CA1019	WY	OT	Unspecified Paleo	
48CA1391	WY	OT	Unspecified Paleo	
48CA2331	WY	OT	Unspecified Paleo	

48CA2446	WY	OT	Unspecified Paleo	
48CA2660	WY	OT	Unspecified Paleo	
48CA3355	WY	OT	Unspecified Paleo	
48CA3585	WY	OT	Unspecified Paleo	
48CA4361	WY	OT	Unspecified Paleo	
48CA468	WY	OT	Unspecified Paleo	
48CA4740	WY	OT	Unspecified Paleo	
48CA522	WY	OT	Unspecified Paleo	
48CA5723	WY	OT	Unspecified Paleo	
48CA68	WY	OT	Unspecified Paleo	
48CA708	WY	OT	Unspecified Paleo	
48CA722	WY	OT	Unspecified Paleo	
48CA797	WY	OT	Unspecified Paleo	
48CA920	WY	OT	Unspecified Paleo	
48CA963	WY	OT	Unspecified Paleo	
48CK810	WY	OT	Unspecified Paleo	
48CO102	WY	OT	Unspecified Paleo	
48CO1140	WY	OT	Unspecified Paleo	
48CO1144	WY	OT	Unspecified Paleo	
48CO138	WY	OT	Unspecified Paleo	
48CO287	WY	OT	Unspecified Paleo	
48CO419	WY	OT	Unspecified Paleo	
48CO441	WY	OT	Unspecified Paleo	
48CO446	WY	OT	Unspecified Paleo	
48CO515	WY	OT	Unspecified Paleo	
48CR1068	WY	OT	Unspecified Paleo	
48CR1250	WY	OT	Unspecified Paleo	
48CR1529	WY	OT	Unspecified Paleo	
48CR1583b	WY	OT	Unspecified Paleo	
48CR1644	WY	OT	Unspecified Paleo	
48CR1833	WY	OT	Unspecified Paleo	
48CR2103	WY	OT	Unspecified Paleo	
48CR2161	WY	OT	Unspecified Paleo	
48CR2191	WY	OT	Unspecified Paleo	
48CR2999	WY	OT	Unspecified Paleo	
48CR3080	WY	OT	Unspecified Paleo	
48CR3098	WY	OT	Unspecified Paleo	
48CR3122	WY	OT	Unspecified Paleo	
48CR5443	WY	OT	Unspecified Paleo	
48CR5784	WY	OT	Unspecified Paleo	
48CR828	WY	OT	Unspecified Paleo	

48CR8292	WY	OT	Unspecified Paleo	
48CR871	WY	OT	Unspecified Paleo	
48CR986	WY	OT	Unspecified Paleo	
48FR118	WY	OT	Unspecified Paleo	
48FR290	WY	OT	Unspecified Paleo	
48FR2959	WY	OT	Unspecified Paleo	
48FR3933	WY	OT	Unspecified Paleo	
48FR3942	WY	OT	Unspecified Paleo	
48FR3980	WY	OT	Unspecified Paleo	
48FR4989	WY	OT	Unspecified Paleo	
48FR75	WY	OT	Unspecified Paleo	
48GO164	WY	OT	Unspecified Paleo	
48GO323	WY	OT	Unspecified Paleo	
48GO49	WY	OT	Unspecified Paleo	
48GO9	WY	OT	Unspecified Paleo	
48HO472	WY	OT	Unspecified Paleo	
48HO634	WY	OT	Unspecified Paleo	
48JO1302	WY	OT	Unspecified Paleo	
48JO2223	WY	OT	Unspecified Paleo	Petrified Wood Site
48JO356	WY	OT	Unspecified Paleo	
48LA1050	WY	OT	Unspecified Paleo	
48LA1080	WY	OT	Unspecified Paleo	
48LA459	WY	OT	Unspecified Paleo	
48LN1101	WY	OT	Unspecified Paleo	
48LN1128	WY	OT	Unspecified Paleo	
48LN1297	WY	OT	Unspecified Paleo	
48LN1334	WY	OT	Unspecified Paleo	
48LN1658	WY	OT	Unspecified Paleo	
48LN1679	WY	OT	Unspecified Paleo	
48LN1880	WY	OT	Unspecified Paleo	Vegan Site
48LN3620	WY	OT	Unspecified Paleo	
48LN3800	WY	OT	Unspecified Paleo	
48LN919	WY	OT	Unspecified Paleo	
48NA157	WY	OT	Unspecified Paleo	
48NA1657	WY	OT	Unspecified Paleo	
48NA1831	WY	OT	Unspecified Paleo	Independence Rock Rest Area
48NA185	WY	OT	Unspecified Paleo	
48NA19	WY	OT	Unspecified Paleo	
48NA1967	WY	OT	Unspecified Paleo	
48NA254	WY	OT	Unspecified Paleo	
48NA656	WY	OT	Unspecified Paleo	

48NA657	WY	OT	Unspecified Paleo	
48NA671	WY	OT	Unspecified Paleo	
48NO11	WY	OT	Unspecified Paleo	
48PA1066	WY	OT	Unspecified Paleo	
48PA226	WY	OT	Unspecified Paleo	
48PA2353	WY	OT	Unspecified Paleo	The Simmons Site
48PA2383	WY	OT	Unspecified Paleo	
48PA328	WY	OT	Unspecified Paleo	Fireman's Memorial #12
48PA81	WY	OT	Unspecified Paleo	Pahaska Tepee
48PA949	WY	OT	Unspecified Paleo	
48PL65	WY	OT	Unspecified Paleo	Grey Rocks Site
48SH1236	WY	OT	Unspecified Paleo	
48SH17	WY	OT	Unspecified Paleo	
48SH331	WY	OT	Unspecified Paleo	
48SH6	WY	OT	Unspecified Paleo	Tepee Indian Campsite
48SH633	WY	OT	Unspecified Paleo	
48SH65	WY	OT	Unspecified Paleo	Schuler Park Site
48SH783	WY	OT	Unspecified Paleo	
48SU1145	WY	OT	Unspecified Paleo	
48SU1640	WY	OT	Unspecified Paleo	
48SU1974	WY	OT	Unspecified Paleo	
48SU2096	WY	OT	Unspecified Paleo	
48SU2458	WY	OT	Unspecified Paleo	
48SU2998	WY	OT	Unspecified Paleo	
48SU330	WY	OT	Unspecified Paleo	
48SU4000	WY	OT	Unspecified Paleo	SU4K
48SU4356	WY	OT	Unspecified Paleo	
48SU4985	WY	OT	Unspecified Paleo	
48SU602	WY	OT	Unspecified Paleo	
48SU725	WY	OT	Unspecified Paleo	
48SU851	WY	OT	Unspecified Paleo	
48SU867	WY	OT	Unspecified Paleo	
48SW10002	WY	OT	Unspecified Paleo	
48SW1155	WY	OT	Unspecified Paleo	
48SW1195	WY	OT	Unspecified Paleo	
48SW12423	WY	OT	Unspecified Paleo	
48SW13623 f	WY	OT	Unspecified Paleo	Roby Site
48SW13770	WY	OT	Unspecified Paleo	
48SW13805	WY	OT	Unspecified Paleo	
48SW15938	WY	OT	Unspecified Paleo	
48SW1645	WY	OT	Unspecified Paleo	

48SW1699	WY	OT	Unspecified Paleo	
48SW255	WY	OT	Unspecified Paleo	
48SW2985	WY	OT	Unspecified Paleo	
48SW304	WY	OT	Unspecified Paleo	Eden-Farson Site
48SW3067	WY	OT	Unspecified Paleo	
48SW336	WY	OT	Unspecified Paleo	Natural Corrals Site
48SW430	WY	OT	Unspecified Paleo	
48SW4410	WY	OT	Unspecified Paleo	
48SW4492	WY	OT	Unspecified Paleo	
48SW4658	WY	OT	Unspecified Paleo	
48SW4773	WY	OT	Unspecified Paleo	
48SW4775	WY	OT	Unspecified Paleo	
48SW5388	WY	OT	Unspecified Paleo	
48SW5823	WY	OT	Unspecified Paleo	
48SW6498	WY	OT	Unspecified Paleo	
48SW6911	WY	OT	Unspecified Paleo	
48SW7993	WY	OT	Unspecified Paleo	
48SW8000	WY	OT	Unspecified Paleo	
48SW9497	WY	OT	Unspecified Paleo	
48SW9518	WY	OT	Unspecified Paleo	
48SW9554	WY	OT	Unspecified Paleo	
48SW977	WY	OT	Unspecified Paleo	
48TE455	WY	OT	Unspecified Paleo	Goetz Site
48UT1746	WY	OT	Unspecified Paleo	
48UT244	WY	OT	Unspecified Paleo	
48UT2516	WY	OT	Unspecified Paleo	
48UT362	WY	OT	Unspecified Paleo	
48UT370	WY	OT	Unspecified Paleo	
48UT375	WY	OT	Unspecified Paleo	
48UT397	WY	OT	Unspecified Paleo	
48UT401	WY	OT	Unspecified Paleo	
48UT91	WY	OT	Unspecified Paleo	
48UT916	WY	OT	Unspecified Paleo	
48UT937	WY	OT	Unspecified Paleo	
48WA131	WY	OT	Unspecified Paleo	
48WA323	WY	OT	Unspecified Paleo	Little Canyon Creek Cave
48WA324	WY	OT	Unspecified Paleo	Bush Shelter
48WA53	WY	OT	Unspecified Paleo	Ten Sleep Ridge
48WE876	WY	OT	Unspecified Paleo	
48WY304	WY	OT	Unspecified Paleo	
48WY320	WY	OT	Unspecified Paleo	

48YD433	WY	OT	Unspecified Paleo	
48YE14	WY	OT	Unspecified Paleo	
48CA1849	WY	OT	Unspecified Paleoindian	
48BH1576	WY	OT	Unspecified Prehistoric	
48BH1577	WY	OT	Unspecified Prehistoric	
48AB1808	WY	PL	Clovis	Hill Clovis Site
48BH2871	WY	PL	Clovis	Cabin Creek
48BH89	WY	PL	Clovis	
48CA12	WY	PL	Clovis	Carter Kerr-McGee
48CA842	WY	PL	Clovis	
48CK619	WY	PL	Clovis	
48CO1401	WY	PL	Clovis	
48CR182	WY	PL	Clovis	Rawlins Mammoth Site
48FR180	WY	PL	Clovis	
48FR577	WY	PL	Clovis	
48LA481	WY	PL	Clovis	Hunter Ranch Mammoth Site
48LN2967	WY	PL	Clovis	
48NA304	WY	PL	Clovis	
48NO201	WY	PL	Clovis	Agate Basin Site
48NO211	WY	PL	Clovis	Sheaman Site
48SW1692	WY	PL	Clovis	
48TE372	WY	PL	Clovis	Astoria Hot Springs
48TE509	WY	PL	Clovis	Lawrence site
48UT63b	WY	PL	Clovis	
48WA322	WY	PL	Clovis	Colby Mammoth Site
48SW13621	WY	PL	Unspecified Paleo	
48BH217	WY	YD	Agate Basin	
48BH330	WY	YD	Agate Basin	Granite Creek Site
48BH657	WY	YD	Agate Basin	Eagle Shelter
48CA1246	WY	YD	Agate Basin	
48CA12d	WY	YD	Agate Basin	Carter Kerr-McGee
48CA2707	WY	YD	Agate Basin	
48CA2723	WY	YD	Agate Basin	
48CA2834	WY	YD	Agate Basin	
48CA3301	WY	YD	Agate Basin	
48CA5190	WY	YD	Agate Basin	Price's Luck Site
48CK806	WY	YD	Agate Basin	
48CK92	WY	YD	Agate Basin	
48CO297	WY	YD	Agate Basin	
48CO573	WY	YD	Agate Basin	

48CO649	WY	YD	Agate Basin	
48CR1307	WY	YD	Agate Basin	
48CR134	WY	YD	Agate Basin	
48CR143	WY	YD	Agate Basin	
48CR1458	WY	YD	Agate Basin	
48CR1474	WY	YD	Agate Basin	
48CR1494	WY	YD	Agate Basin	
48CR1559	WY	YD	Agate Basin	
48CR173	WY	YD	Agate Basin	
48CR5533	WY	YD	Agate Basin	
48CR5689	WY	YD	Agate Basin	
48CR635	WY	YD	Agate Basin	
48CR637	WY	YD	Agate Basin	
48CR6902	WY	YD	Agate Basin	
48CR801	WY	YD	Agate Basin	
48FR180b	WY	YD	Agate Basin	
48FR2360	WY	YD	Agate Basin	
48FR4772	WY	YD	Agate Basin	
48FR5348	WY	YD	Agate Basin	
48FR576	WY	YD	Agate Basin	
48GO305b	WY	YD	Agate Basin	Hell Gap Site
48LN1296	WY	YD	Agate Basin	
48LN359	WY	YD	Agate Basin	
48LN373	WY	YD	Agate Basin	
48NA1862	WY	YD	Agate Basin	Powerline Reservoir Site
48NA3847	WY	YD	Agate Basin	
48NO201d	WY	YD	Agate Basin	Agate Basin Site
48NO211b	WY	YD	Agate Basin	Sheaman Site
48PA447	WY	YD	Agate Basin	
48SH290	WY	YD	Agate Basin	
48SH45b	WY	YD	Agate Basin	Camp Creek Site
48SU2230	WY	YD	Agate Basin	
48SU4679	WY	YD	Agate Basin	
48SU850	WY	YD	Agate Basin	
48SW101	WY	YD	Agate Basin	
48SW11515	WY	YD	Agate Basin	
48SW12017	WY	YD	Agate Basin	
48SW539	WY	YD	Agate Basin	
48SW5809b	WY	YD	Agate Basin	
48SW606	WY	YD	Agate Basin	Wild Horse Ridge
48UT63	WY	YD	Agate Basin	

48AB302	WY	YD	Folsom	Willow Springs
48AB304	WY	YD	Folsom	Bell Cave
48AB6	WY	YD	Folsom	City Springs
48BH1827	WY	YD	Folsom	Two Moon Shelter
48BH329	WY	YD	Folsom	Hansen Site
48BH701	WY	YD	Folsom	Claude A. Lewis Site
48BH732	WY	YD	Folsom	Brown Springs
48BH902	WY	YD	Folsom	Black Mountain Tanks
48CA12b	WY	YD	Folsom	Carter Kerr-McGee
48CA2162	WY	YD	Folsom	Adobe Folsom Site
48CK1317	WY	YD	Folsom	
48CK840	WY	YD	Folsom	Rocky Foolsm [sic] Site
48CO1289	WY	YD	Folsom	
48CO425	WY	YD	Folsom	
48CR4520	WY	YD	Folsom	Rattlesnake Pass
48CR5773	WY	YD	Folsom	
48CR6909	WY	YD	Folsom	
48CR6952	WY	YD	Folsom	
48FR248	WY	YD	Folsom	
48FR275	WY	YD	Folsom	
48FR556	WY	YD	Folsom	
48GO305h	WY	YD	Folsom	Hell Gap Site
48GO471	WY	YD	Folsom	
48JO884	WY	YD	Folsom	
48LA1113	WY	YD	Folsom	
48LA312	WY	YD	Folsom	
48LA663	WY	YD	Folsom	Foley Folsom Site
48LN2079	WY	YD	Folsom	
48LN2754	WY	YD	Folsom	
48NO201c	WY	YD	Folsom	Agate Basin Site
48NO313	WY	YD	Folsom	
48PA848	WY	YD	Folsom	
48PL330b	WY	YD	Folsom	Powars II
48SH45	WY	YD	Folsom	Camp Creek Site
48SH58	WY	YD	Folsom	Burgess Folsom Site
48SU1813	WY	YD	Folsom	
48SU3876	WY	YD	Folsom	
48SU389	WY	YD	Folsom	
48SU4645	WY	YD	Folsom	
48SU4748	WY	YD	Folsom	
48SU5066	WY	YD	Folsom	

48SU5333	WY	YD	Folsom	
48SW0b	WY	YD	Folsom	Tyrrell Tie Rod Site
48SW13622 b	WY	YD	Folsom	Scoggin Chain Lakes Site
48SW13623	WY	YD	Folsom	Roby Site
48SW13624 c	WY	YD	Folsom	Keith Allen / Black Buttes Site
48SW15544	WY	YD	Folsom	
48SW211	WY	YD	Folsom	
48SW2191	WY	YD	Folsom	
48SW3420	WY	YD	Folsom	
48SW3756	WY	YD	Folsom	
48SW5	WY	YD	Folsom	Finley Site
48SW5352	WY	YD	Folsom	
48SW5841	WY	YD	Folsom	
48SW773	WY	YD	Folsom	
48SW774	WY	YD	Folsom	
48SW97	WY	YD	Folsom	
48SW9826	WY	YD	Folsom	
48TE487	WY	YD	Folsom	
48UT60	WY	YD	Folsom	
48WA393	WY	YD	Folsom	
48WE62	WY	YD	Folsom	Lightning Flats
48YE417	WY	YD	Folsom	
48SW5809	WY	YD	Folsom - Midland	
48AB1131	WY	YD	Goshen	
48CA3082	WY	YD	Goshen	
48CA4270	WY	YD	Goshen	
48CA4402	WY	YD	Goshen	
48CA4718	WY	YD	Goshen	Dilts Site
48CK624	WY	YD	Goshen	
48CO1906	WY	YD	Goshen	
48FR2330	WY	YD	Goshen	
48FR4608	WY	YD	Goshen	
48FR6271	WY	YD	Goshen	
48GO305g	WY	YD	Goshen	Hell Gap Site
48LN2287	WY	YD	Goshen	
48LN2967b	WY	YD	Goshen	
48LN3192	WY	YD	Goshen	
48NO201b	WY	YD	Goshen	Agate Basin Site
48PA1738	WY	YD	Goshen	
48PL330	WY	YD	Goshen	Powars II

48SH1162	WY	YD	Goshen	
48SH301	WY	YD	Goshen	
48SU1565	WY	YD	Goshen	
48SW0	WY	YD	Goshen	Tyrrell Tie Rod Site
48SW13622	WY	YD	Goshen	Scoggin Chain Lakes Site
48SW15588	WY	YD	Goshen	
48SW15590	WY	YD	Goshen	
48UT2000	WY	YD	Goshen	
48AB1093	WY	YD	Hell Gap	
48AB806	WY	YD	Hell Gap	
48CA1030	WY	YD	Hell Gap	
48CA1074	WY	YD	Hell Gap	
48CA1191	WY	YD	Hell Gap	
48CA12c	WY	YD	Hell Gap	Carter Kerr-McGee
48CA2118	WY	YD	Hell Gap	
48CA2723b	WY	YD	Hell Gap	
48CK28	WY	YD	Hell Gap	
48CK619b	WY	YD	Hell Gap	
48CO2504	WY	YD	Hell Gap	
48CO379	WY	YD	Hell Gap	
48CO38	WY	YD	Hell Gap	
48CO388	WY	YD	Hell Gap	
48CO516	WY	YD	Hell Gap	
48CO59	WY	YD	Hell Gap	
48CO998	WY	YD	Hell Gap	
48CR1166	WY	YD	Hell Gap	
48CR145	WY	YD	Hell Gap	
48CR1583	WY	YD	Hell Gap	
48CR188	WY	YD	Hell Gap	
48CR2101	WY	YD	Hell Gap	
48CR5194	WY	YD	Hell Gap	
48CR6	WY	YD	Hell Gap	
48FR308	WY	YD	Hell Gap	Helen Lookingbill Site
48FR3141	WY	YD	Hell Gap	
48FR3309	WY	YD	Hell Gap	Miller Spring
48FR4326	WY	YD	Hell Gap	
48FR577b	WY	YD	Hell Gap	
48FR579	WY	YD	Hell Gap	
48GO305c	WY	YD	Hell Gap	Hell Gap Site
48JO175	WY	YD	Hell Gap	
48JO314	WY	YD	Hell Gap	

48JO54	WY	YD	Hell Gap	
48LN3805	WY	YD	Hell Gap	
48NA2146	WY	YD	Hell Gap	
48NA258	WY	YD	Hell Gap	
48NA3033	WY	YD	Hell Gap	
48NA304b	WY	YD	Hell Gap	
48NO201e	WY	YD	Hell Gap	Agate Basin Site
48PL330c	WY	YD	Hell Gap	Powars II
48PL604	WY	YD	Hell Gap	
48PL668	WY	YD	Hell Gap	
48PL785	WY	YD	Hell Gap	
48SH1134	WY	YD	Hell Gap	
48SU2227	WY	YD	Hell Gap	
48SU2581	WY	YD	Hell Gap	
48SU2651	WY	YD	Hell Gap	
48SU2786	WY	YD	Hell Gap	
48SU348	WY	YD	Hell Gap	
48SU3839	WY	YD	Hell Gap	
48SW10415	WY	YD	Hell Gap	
48SW11442	WY	YD	Hell Gap	
48SW13618	WY	YD	Hell Gap	
48SW13622e	WY	YD	Hell Gap	Scoggin Chain Lakes Site
48SW13623b	WY	YD	Hell Gap	Roby Site
48SW1480	WY	YD	Hell Gap	
48SW14871	WY	YD	Hell Gap	
48SW14909	WY	YD	Hell Gap	
48SW2949	WY	YD	Hell Gap	
48SW4672	WY	YD	Hell Gap	
48SW537	WY	YD	Hell Gap	
48SW5809c	WY	YD	Hell Gap	
48SW967	WY	YD	Hell Gap	
48SW9872	WY	YD	Hell Gap	
48TE509b	WY	YD	Hell Gap	Lawrence site
48WY319	WY	YD	Hell Gap	
48YE397	WY	YD	Hell Gap	
48YE409	WY	YD	Hell Gap	
48YE456	WY	YD	Hell Gap	
48CR1706	WY	YD	Meserve	
48SU2442	WY	YD	Meserve	
48CA804	WY	YD	Midland	

48FR126	WY	YD	Midland	
48GO305	WY	YD	Midland	Hell Gap Site
48NA964	WY	YD	Midland	
48PL11	WY	YD	Midland	
48SW13622c	WY	YD	Midland	Scoggin Chain Lakes Site
48SW3385	WY	YD	Midland	
48SW5982	WY	YD	Midland	
48NA2794	WY	YD	Milnesand	
48FR4140	WY	YD	Plainview	
48SW12542	WY	YD	Plainview	
48SW13684	WY	YD	Plainview	
48SW5721	WY	YD	Plainview	
48SW5828	WY	YD	Plainview	
48SW5833	WY	YD	Plainview	
48UT798	WY	YD	Plainview	