PaleoArchaic (ca. 11,400-7000BC)

The period of time known as the Terminal Pleistocene-Early Holocene (TP-EH) was characterized by repeated and rapid climate change from full glacial “ice age” conditions to climates familiar to us now. These changes happened quickly, often in a decade or two and within the experience of people living at the time. The deserts west of the Wasatch Front were a vast treeless sagebrush steppe flanked on the valley slopes by a mosaic of large shrubs. Forests of limber pine, fir, and bristlecone pine covered the desert mountain ranges that today are largely barren. The Wasatch Mountains were heavily forested and capped by perennial snowfields and even a few small glaciers. During much of the TP-EH wetland areas may have been restricted in size and affected by rapid climate change (Simms 2008: 99-100). Around 8000 BC the climate may have been extremely dry and cooler than today but trended toward warmer temperatures by 6000 BC. At first lakes and wetlands were scattered across the Great Basin where only dry lakebeds are found today. At around 7700 BC the Great Salt Lake extended to the Nevada border and waters reached downtown Salt Lake City (Simms 2008). A vast area of wetlands covered what are now the salt flats and playas of Dugway Proving Ground until about 6800 BC.

Evidence of the earliest colonists and settlers in the Great Basin and Colorado Plateau began around 11,000 BC despite the fact that people had entered the Americas from Asia several thousand years earlier. For years, Paleoindian studies in North America were dominated by the "big-game hunting" hypothesis, the notion that the focus of subsistence efforts by the first human groups was the large herbivores that became extinct at the close of the Pleistocene. This idea was based on a handful of associations, primarily in the Southwest and Great Plains, of Clovis points and extinct megafauna (Beck and Jones 1997:217).

The big-game-hunting hypothesis is no longer widely accepted in its narrow view of Paleoindian adaptation. This is especially true in the Great Basin and northern Colorado Plateau where there is no direct evidence of humans hunting megafauna. Still, there is a persuasive logic in the idea that people did place a heavy reliance on large terrestrial fauna in view of what can be predicted about dietary returns from alternative resources and what is deduced from Paleoarchaic lithic technology. Citing the variety of both animal and plant resources from several Clovis sites, Meltzer argues that, although Clovis peoples in the Great Basin may have focused on large terrestrial game (camels, short-faced bear, giant bison, mastodon, and mammoth) in certain areas, they were primarily generalists utilizing a wide range of fauna and flora. (Beck and Jones 1997:217).
Evidence for consumption of large fauna such as deer, bear, bighorn sheep and pronghorn as well as jack rabbits, birds, insects, and fish during the Paleoarchaic is present throughout the Basin-Plateau (Hockett 2007; Simms 2008).

Paleoarchaic residential mobility was initially high and people moved among base camps that may have been occupied for weeks at a time (Simms 2008:135). At the inception of the Paleoarchaic period in the Great Basin a low population of hunters and gatherers lived mostly in valleys, often near or on the terraces of extinct Pleistocene lakes, presumably good grazing land for megafauna but also ideal areas for marshland resources. People may have utilized rockshelters and caves or they may have slept in the open when necessary. Toward the end of the Paleoarchaic period the strong association of sites with beach ridges continues, but sites along relic channels and areas sustaining marshes and wet meadows are taken as evidence of a special affinity to marsh habitats, which seems to be borne out by the subsistence record in the western and northern sections of the Great Basin (Beck and Jones 1997:218). On the Colorado Plateau hunter-gathers exploited a much larger variety of ecological settings, particularly at the confluence of the Green and Colorado rivers (Copeland and Fike 1988, Schroedl 1991:9).

The most recognizable and distinctive technology from this period is the fluted point. Their bases were often ground and abraded and the stone points were affixed to a split shaft that was part of a thrusting spear, or possibly even an atlatl. Projectile points that post-date the fluted points, but are still part of the Paleoarchaic tradition include the Great Basin Stemmed series. Other tools used during this time are crescent shaped stone scrapers, bone tools, choppers, and gravers. Groundstone is rare during this time suggesting that the collection of plants that required extensive processing were not yet an important part of the diet. Instead, those that required little processing such as roots, shoots, greens, and berries would have been favored. Twined bags mats, and burden baskets were constructed in the western Great Basin as early as 9300BC and slightly later in the eastern Great Basin. Some aspects of the following Archaic period, such as clothing and ornament, were probably carried over from the PaleoArchaic period, but evidence is limited.

**Archaic Period (7000 BC-AD500)**

The Archaic Period is defined by major adaptive shifts in settlement, subsistence, and/or technology. By 10,000 years ago all of the megafauna became extinct (Grayson 1993:68) and this likely played a role in settlement and subsistence patterns although not to as great a degree as areas where hunting megafauna was of primary importance. Food choices expanded as well and seeds became an important part of the subsistence base by ca 6500 BC (Geib and Jolie 2008: 87). Ceramic technology was not discovered yet but milling stones became increasingly important and coiled basketry technology is now in use. The atlatl was the projectile weapon used and the recognizable fluted element on projectile points is replaced with side- and corner-notched hafting elements. Iconography becomes increasingly important as evidenced in monumental rock art panels and the split twig figurine complex. Personal adornment becomes increasingly popular and clothing is constructed of fur robes and animal hide. By the end of the Late Archaic, known as
Basketmaker II in southeastern Utah, corn and squash were introduced into the suite of consumables.

The Archaic Period of the Great Basin and northern Colorado Plateau can be divided into three phases which are identified by adaptive and technological changes: The Early Archaic (7000-5000BC), the Middle Archaic (5000-1000 BC), and the Late Archaic (1000 BC to AD 500).

**The Early Archaic (7000-5000 BC):**
Temperatures began cool in this period but gradually warmed, to temperatures perhaps even warmer than today, by around 6000 BC. Seasonal variation was greater, similar to today, and many lakes remained but were becoming increasingly shallow. Limber and bristlecone pine continued to grow at elevations much lower than they can be found today and animals that are now only found at high elevations, such as marmots and pikas, lived along the foothills (Simms 2008).

In the early Archaic, lowland sites in the eastern Great Basin were almost exclusively located in marshland settings. People lived in caves and rockshelters adjacent to fresh water springs on the periphery of the Great Salt Lake. It is believed that population around the lake was gradually increasing during this time (Madsen 1982). With the extinction of most of the megafauna and increased aridity, a major adaptive shift occurred in the Great Basin and northern Colorado Plateau. In particular, people began to expand their diet breadth to include food items that were previously shunned because of a high processing time, such as seeds.

Two technologies used to process seeds appear across the eastern Great Basin and Colorado Plateau in the Early Archaic: milling stones (9500 cal BP; Madsen 2007) and coiled basketry (9010-8620 cal BP; Geib and Jolie 2008). These two items signaled a change in the way people chose and acquired food, and consequently where they settled and for how long (Simms 2008: 142). People collected local plants, such as pickleweed, burroweed, cattail, prickly pear cactus, and bulrush. Some were consumed while others were used to make mats, baskets, and other woven objects. Animals hunted include fish, rodents, rabbits, and various birds (Madsen 1982; Simms 2008). The atlatl dates to the Early Archaic in the Great Basin, ca. 6500-6000 BC (Hester et al. 1974; Cressman 1977), and was the only projectile weapon used until the introduction of the bow and arrow to the area around 1500 years ago. Duration of settlement increased over the PaleoArchaic period although people were still highly mobile compared to later periods.

**The Middle Archaic (5000-1000BC)**
The time between 6000 and 2000 BC was a time of great climatic fluctuation but can generally be identified as a period of increased temperatures and decreased water sources. The Great Salt Lake nearly dried up between 7000 and 6000 years ago and expanded after 6000 years ago to create new wetlands only to regress again 5300 years ago (Simms 2008:156). Storminess increased and temperatures cooled after 2500 BC and the environment, over time, became wetter; this trend, known as the Neoglacial, lasted for about 2500 years. As water in the Great Salt Lake increased extant marshlands were
modified or eliminated and new marshlands were created. It was also during this period, sometime after 3000 BC, that Utah Lake was formed. Well-watered Utah Valley contained a variety of riparian and wetland habitats regardless of whether or not Utah Lake was present, but once the lake formed sometime after 5000 years ago it became the astonishing fishery we know from historic times. (Simms 2008: 91-99). About 1500 BC, at the end of the Middle Archaic, the Great Salt Lake breached the Eardley Threshold and spread a sheet of water west toward Nevada (Simms 2008:91)

By the Middle Archaic people were increasingly exploiting upland zones, and decreasing their occupation of the dwindling lake marshes, in the eastern Great Basin. This was likely part of a seasonal round of exploiting both uplands and lowlands at peak times of the year; this first hint of the desert-mountain settlement patterns dates to the Middle Archaic. In general, occupations were brief, people were mobile, and many sites were task-specific (e.g., hide preparation, seed processing, toolstone knapping, etc.). Many of the upland sites were used as hunting camps although some roots and grasses were also collected. Mountain sheep was hunted as well as deer, marmots, rabbit, and occasionally bison (Madsen 1982; Simms 2008:154). The decrease in marshlands does not mean that the lake areas were abandoned. Bison were taken in large numbers during this period at Hogup Cave and sites on the south end of the Great Salt Lake suggest that at least some marshlands were still active, especially after 2500 BC at the beginning of the Neoglacial period. Population was probably similar to that of the Early Archaic. Dunes were more widespread during the Middle Archaic as dry lake beds were scoured by the wind. These dunes contained water stored deep within and supported plant and animal life that were exploited by human hunting and gathering groups (Simms 2008:156).

The Late Archaic/ Basketmaker II (1000BC-AD500):
The Late Archaic corresponds with the latter half of the Neoglacial period and the cooling trend which began around 2500 BC continued. About 3,000 years ago the climate changed to one of increased storminess and evaporation decreased; this was a time when moisture was preserved not only in the lakes and wetlands but in the desert soils as well (Simms 2008: 91). Vegetation zones that we see today were essentially in place at this time with a few exceptions; junipers grew 300 feet lower than they do today and Mormon Tea (Ephedra viridis) may have arrived during this period. The growing Great Salt Lake would have inundated marshlands to the east as the water pressed up against the Wasatch Front, but would have created new marshlands such as areas west of Corinne, the northwest corner of the Salt Lake Valley, and along the Bear River below Cache Valley. Spring-fed marshes increased at this time as well (Simms 2008: 91-93).

The Late Archaic of the eastern Great Basin may be the time when we can say that there were concentrations of people in lowland villages and surrounding scattered populations of high desert foragers. The wetlands settlement pattern, different than that of the PaleoArchaic and Early Archaic periods, was added to the nascent desert-mountain pattern. There is evidence that village sites were occupied for at least part of a year, with goods transported and stored at these central bases. People were concentrated in these places, increasing the overall population of the region (Simms 2008).
In the Four Corners Area this time period is known as Basketmaker II. The pattern of high desert foraging continued but there are hints that some people settled down a little more in larger groups and social organization became increasingly complex (Simms 2008: 168). Settlement patterns in the early Basketmaker II period included long-term seasonal use of rockshelters, and caves for camping and storage with temporary brush structures and limited activity sites in open areas. Later in the period slab-lined pithouses, were constructed with small storage pits and dispersed settlements with small, low-density villages on Cedar Mesa (pithouse styles varied during this period based on region). Farming sites include both upland dry farming and floodplain farming (Janetski 1993; Lipe 1993:Table 1:1). Most settlements can be found on bluffs where people could easily access a diversity of food resources in nearby ecological zones, on promontories with a view over the surrounding areas, and in areas suitable for dry farming (Plog 1979; Thompson 2000; Lipe 1993).

In general, food choices in the eastern Great Basin did not change dramatically from the early Archaic; foraging and collecting a wide array of plants and animals continued to constitute the food base (Madsen 1982) although an increase in snare and trap usage may indicate an emphasis on smaller game. But by 200 BC on the Utah Plateau, domesticates were slowly introduced to the suite of consumables; the earliest known maize on the northern Colorado Plateau dates back to 1900 BC at a site northeast of Black Mesa in Arizona but the earliest known examples of maize in Utah do not appear until ca. 200 BC and AD 400 (Wilde and Newman 1989: Table 3).

In all areas of the Southwest the shift to food production was part of a pattern of increasing residential stability, an increase in food storage, and more substantially-built architecture. This adoption of corn signaled a spread of farming by small bands of explorers and colonists that would proceed in starts and stops over the next 10 centuries (Simms 2008:180-181). The people who lived on Cedar Mesa from AD200-400 grew corn and squash as supplements to their collection of wild plants and animals and were more dependent on the domestic crop than their neighbors to the north; four independent lines of evidence from analyses of settlement patterns, human coprolites, midden materials, and stable carbon isotope concentrations in human remains all indicated that maize cultivation played a major role in Basketmaker II subsistence across the Colorado Plateau (Matson 1999).

The volume of long-distant movement of stone and shell increased over time and the peak trading period between the Great Basin and California occurred during the transition between the Middle Archaic and Late Archaic (Simms 2008:175). In fact, trade in shell and exotics, typically used as ornaments, is more abundant during the Basketmaker II period than it is in later periods (Lipe 1993).

The atlatl and dart, with side- and corner-notched points, continued to be the projectile weapon used in the Great Basin and northern Colorado Plateau. People did not have ceramic technology yet but the people on the northern Colorado Plateau were expert weavers. They are known for their exquisite non-loomed woven textiles including baskets, bags, cradleboards and sandals. Also widely used at this time by all groups living
in present-day Utah were blankets made from strips of rabbit fur twisted around fiber cords and woven together. While milling stones continue to be used from the previous periods, the trough metate and larger manos, suggesting an intensity of corn processing, are first seen in the archaeological record in the Late Basketmaker II period (Lipe 1993).

**The Formative Period (AD500-1300)**

The Formative period in the Great Basin and northern Colorado Plateau is marked by the widespread adoption of corn horticulture (previously concentrated on Cedar Mesa), ceramic technology, bow and arrow technology, and an increasingly sedentary lifestyle (for those who chose to grow corn). Farming in Utah has always been a risky proposition. The climate of the high deserts of the northern Colorado Plateau and the eastern Great Basin promises erratic rainfall and a growing season often abbreviated by late freezes in June and early freezes in August. Water harbored in the mountain snowpack varies from year to year and there are plagues of bug infestations, mammals, hail, and wind. Prehistoric farmers generally went without irrigation, except in a few dozen places (Simms 2008:185). Two archaeological complexes are known to have existed in Utah at this time: the Fremont and the Anasazi.

**Fremont Archaeological Complex**

The Fremont Complex was named by Earl Morss in 1931 to describe the cultural entity that was discovered by the Claflin-Emmerson explorations along the Fremont River drainage. The Fremont culture label is used to identify several loosely-related people confined mostly to the state of Utah. The Fremont boundary was initially small, reached its peak of territorial expansion by AD1000-1200, and was then reduced to a relatively small area before the complex became unrecognizable in the archaeological record. The Fremont complex of the northern Colorado Plateau and the eastern Great Basin are characterized by variation and diversity much like the landscape in which they were found; they cannot be readily defined within a single description. During the agricultural period some people were primarily settled farmers growing maize, beans, and squash along streams at the base of mountain regions. Although substantial, they never developed to the extent that the Ancestral Puebloans did. Others were mobile hunter gatherers living primarily on wild flora and fauna and were found widely scattered across the landscape; this strategy was most prevalent in northern Utah where marshland and lacustral resources were widely available. Still others may have switched between farming and foraging given particular circumstances (Madsen and Simms 1998; Madsen 1989; Marwitt 1986). Yet despite the diversity of these lifestyles, and the varied geography that structured their actions, these people seem to have shared patterns of behavior and ways of living that tie them together. Today we call these scattered groups of hunters and farmers the Fremont (Madsen 1989).

The Fremont Complex exemplifies relatively little regionalization within the Fremont territory that can be identified by archaeologists. However, there are a few common Fremont traits that distinguish the Fremont Complex from the Anasazi Complex. One rod-and-bundle basketry, a moccasin with a dew claw on the heel, distinctive trapezoidal
clay figurines, polished stone balls, and thin-walled plain grayware pottery are all traits that typically characterize the Fremont. Not all groups used all of these items and some are exceptionally rare (Madsen 1989). Despite these similarities, “the landscape was large and there was surely a mosaic of ethnic groups, tribal enclaves, linguistic variation, and shades of difference in lifestyle (Simms 2008:187, verbatim).” For these reasons, the Fremont are no longer divided into variants by archaeologists.

After about AD500 farming became a substantial part of Fremont subsistence on the Colorado Plateau and by AD800 many hunter-gatherer groups on both sides of the Wasatch Plateau had settled into a farming way of life; by this time farming sites are located in all the major valley systems along the western margin of the Wasatch Mountains and Utah Plateaus. Group size was small and settled farming sites, with few exceptions, did not exceed three houses. However, the number of farming hamlets increased dramatically during this period. Sites along the Great Salt Lake range from rancherias with shallow circular pole and mud structures to hunting camps. On the western Wasatch Plateau adobe brick is the preferred construction method.

Fremont ceramics first appear ca. AD500-650 in the Great Salt Lake and Uinta Basin areas. Other areas soon follow until all regions have some form of ceramic technology by AD 900. In all areas the earliest forms are a plain grayware with virtually no decorative elements; decorative motifs, such as coffee bean appliqué in the northern regions and painting and corrugation in the central and southern regions, are introduced around AD700 (Madsen 1977). Bone tools, gaming pieces, and jewelry are found more often in Fremont sites than among the Anasazi, and are most common in large village sites. A shared symbolism develops among different Fremont groups albeit with regional variations. Clay figurines with hair bobs and trapezoidal rock art figures with headdresses, necklaces, and earrings are characteristic of the Fremont on the Colorado Plateau and Uinta Basin. Simpler triangular figures with horns and simple clay figurines that lack ornamentation are more common in the Great Basin (Madsen and Simms 1998).

From AD1000-1200 farming is at its maximum intensity and extent in most of the Fremont territory. However, it was during this period that a series of events occurred that further divided the Fremont peoples east and west of the Wasatch plateau and mountains. At this time marked demographic shifts and rapid assimilation of architecture and tools common to the Anasazi south and east of the Colorado River is now evident in the Fremont region north and west of the Colorado River. Many sites north of the river are now indistinguishable from those just south of the river and some even contain mealng bins identical to those of the Kayenta Anasazi. On the Colorado Plateau and Uinta Basin coursed masonry structures is the dominant form of architecture among a highly variable array of construction styles including jacal surface structures, coursed mud adobe, and deep pit structures lined with slabs and/or clay. At permanent farming sites on the Colorado Plateau multi-room granaries are built for the winter storage of domesticates. Storage structures can occur in association with houses and as smaller isolated granaries in cliff overhangs (Madsen and Simms 1998; Madsen 1989). Some of the larger sites along the eastern Wasatch Plateau contain multi-roomed granaries common to Anasazi sites in the south and a larger percentage of traded Anasazi ceramics. Anasazi projectile
points and rock art elements are found in what was exclusively Fremont territory in the previous period (Madsen and Simms 1998). In short, many sites are exhibiting traits of both Fremont and Anasazi culture. Settlement east of the Green River on the Tavaputs Plateau increases dramatically while farming sites in the Uinta Basin practically disappear. On the Tavaputs Plateau people on both sides of the Green River appear to be taking a defensive posture evidenced by the camouflaging of stored resources, construction of houses on high rock outcrops, dry-laid masonry towers and walled forts, and a degree of competition not noted in other areas. The conflict was likely violent at times as suggested by head hunter rock art panels in the Uinta Basin and the possibility of cannibalism in the Sevier River Valley, the Uinta Basin, and the Tavaputs Plateau (Madsen and Simms 1998).

In contrast to the Colorado Plateau, the Great Basin appears to have been a time of relative stability from AD1000-1200. In a number of areas farming communities exhibit marked growth both in size and complexity; many have contemporaneous houses and communal structures that would have required community effort to construct. In general, farming communities west of the Wasatch Plateau are larger and more homogenous than contemporaneous sites on the Colorado Plateau. Community settlement is almost exclusively at the base of large mountain ranges, and on alluvial terraces where a year-round water supply was available and access to wild resources is relatively easy. Some have suggested that these larger villages are a product of increased maize production due to favorable climatic conditions after AD1000. A breakdown of this system 200 years later was probably due to a climatic shift in the opposite direction (Madsen 1989; Madsen and Simms 1998).

The mid to late-1200s was a tumultuous time for the local farmers. The transition to the Protohistoric period is characterized by an apparent abandonment of agriculture, less investment in architecture and ceramics, and a shift to increased mobility. This would have been a difficult time for the part-time horticulturalists; a large migration of hunter-gatherers would have increased competition for the wild resources that allowed variability, and thus flexibility, to be a part of the Fremont diet. One group that lived coevally with the Fremont farmers was those of the Promontory Culture who arrived in the area around AD1200-1300. Current research (Ives 2008, personal communication) suggests that these hunter gatherers, possibly proto-Navajo, came from subarctic Canada and were heavily dependent on bison and local marshland resources. Whether they stayed in the area and mixed with later migratory groups or moved on before the Numic expansion is unknown at this time. Either way, evidence of the Promontory Culture is brief in the eastern Great Basin.

After about AD1250 the Fremont Complex began to disappear in much the same uneven fashion that it appeared. Farming ended across most of the region by about AD1400 although it persisted in northwestern Colorado until about AD1500. Classic traits of this complex, such as one rod-and-bundle basketry, thin-walled grayware pottery, and clay figurines disappear from the region as well. Possible factors contributing to the demise of the Fremont Complex include an increasingly dry climate unfavorable for corn agriculture and the influx of Numic-speaking people from the southwestern Great Basin.
who were competing for a limited amount of resources. The hunting and gathering immigrants were better able to compete for resources and, it is believed, successfully pushed out the Fremont. This argument is strengthened by the fact that the latest Fremont sites are located at the northwestern and eastern-most fringes of the prehistoric migration route of the Numic peoples (Madsen 1989; Madsen and Simms 1998)

**The Promontory Archaeological Complex**

One group that lived coevally with the Fremont farmers was those of the Promontory Culture who arrived in the area around AD1200-1300. The most well known site for this cultural group are the Promontory Caves north of the Great Salt Lake. The Promontory Caves were excavated by Julian Steward in 1930 and 1931. A highly distinctive type of ceramics was found that was vastly different than that of the Great Salt Lake Fremont. Stewart also found no similarities with regional Shoshonean (Ute, Shoshone, Goshute, Paiute) ceramics. In fact, there was little in the material culture of the caves that could be linked with the Fremont (with the exception of the basketry construction) or the Numic people. Steward named this “new” cultural group “Promontory” and suggested that they came from the Plains, lived in the Great Salt Lake area after AD 1000 and were contemporaneous with the Fremont until they pushed out the latter around AD 1300. He also theorized that the Promontory people were then later replaced by the northeastern expansion of the Shoshonean peoples. (Steward 1937)

For many years after there was controversy about who the Promontory people were, where they came from, and when they arrived. To answer the latter a series of direct dates were needed. Promontory Cave 1 yielded a staggering 248 moccasins and a large number of other organic objects. In order to determine a more accurate and direct date for the Promontory culture, samples from three of the moccasins and several other artifacts from the site were sent to a radiocarbon laboratory. The results indicate a range of calibrated midpoint dates from AD 1246 to 1281, just before the end of the Fremont Period in northwestern Utah, as Steward had surmised.

Current research (Ives 2008, personal communication) suggests that these hunter gatherers came from subarctic Canada and were heavily dependent on bison and local marshland resources. Whether they stayed in the area and mixed with later migratory groups or moved on before the Numic expansion is unknown at this time. Either way, evidence of the Promontory Culture is brief in the eastern Great Basin.

**Anasazi Archaeological Complex**

The Ancestral Pueblos were the prehistoric occupants of southern Utah, southwestern Colorado, northern Arizona, and northwestern New Mexico. Common cultural features include black on white pottery, a late appearance of villages (compared to the neighboring Hohokom and Mogollon), corn agriculture but with a continued importance of hunting and gathering, a complex system of trade and communication, and similarities in domestic architecture (Plog 1979). The Western Anasazi Complex is typically divided by archaeologists into regional variants (Virgin, Kayenta, and San Juan or Mesa Verde) and chronological phases (Basketmaker III, Pueblo I, Pueblo II, and Pueblo III).
Basketmaker III (AD500-750)
The beginning of the Basketmaker III Period was a time of population increase that resulted in an expansion of people over the entire Western Anasazi area. The Basketmaker III people are becoming increasingly dependent on agriculture (now with the addition of beans), but are still relying heavily on wild resources as their main food source. Turkeys were either extensively hunted or kept. Settlements are moving towards the rivers onto arable land on alluvial terraces and mesa tops. Most houses during this period are deep circular pithouses with separate storage units, and three to four houses per site is common. Some were unusually large and made have served a community function. The Basketmaker III people continued to weave baskets and excelled in sandal construction and design. However, the most important new technologies at this time were the bow and arrow, which replaced the atlatl as the main hunting weapon, and ceramics. It is during the BM III period where local ceramic technology really begins to take hold. The vast majority of ceramics were grayware, but by AD600 a black on white variety was added to the assemblage (Hurst 2008; Plog 1979; Thompson 2000).

Pueblo I (AD750-900)
Pueblo I is characterized by a number of significant innovations, although there is variation both spatially and temporally in the timing and significance of the changes. PI villages, similar to BIII villages, are located near good farmlands in valleys and highlands but they are now ordered in a more complex fashion. Jacal and masonry surface structures--which now begin to replace pithouses--are organized contiguously, sometimes around community plazas. Reliance on agriculture increased in some areas and farming techniques like terracing, irrigation, and gridding suggest a commitment to agriculture not seen before. Corrugated designs begin to appear on the necks of plainware pottery and new ceramic types like red on orange and black on orange appear during this time; the latter two were traded widely (Hurst 2008; Plog 1979; Thompson 2000) While basketmaking waned in popularity, the introduction of cotton to the Anasazi lead to a completely new technological innovation, textile weaving (Thompson 2000). Squash was added to the domestic crops and cotton was used but not locally grown. Classic sites of this type and period are located on Alkali Ridge in southeastern Utah (Cordell, Doyel, and Kintigh 1994).

Pueblo II (AD900-1100)
The tendency toward aggregation seen in Pueblo I sites reversed itself in this period, as the people dispersed themselves widely over the land in thousands of small stone houses; it was at this time that the Ancestral Puebloans reached their geographical extent. The dispersion was likely due to climate changes during this period that were favorable enough that agriculture could be possible in a greater range of elevations and physiographic settings. Improved strains of corn were developed and it was during this period that small cliff granaries for storing food became popular. The first construction of agricultural terraces and retaining walls for fields appear during this period. The PII period was a time of florescence for the Chaco Anasazi, who had been heavily influenced by contact with cultural groups in Mexico, and elements of this influence were manifested to a lesser extent in the layout of villages in the Mesa Verde region. Masonry
structures in rectangular or curved groupings, known as a unit pueblo, completely replaced the pole-and-adobe architecture of the Pueblo I period, except in the northern Anasazi region where this construction method persisted at some sites. Large subterranean pithouses, or kivas, at the center of the unit pueblos likely assumed a ceremonial role in the community. Ceramic types and styles become uniquely regional at this time; black on white designs from the Kayenta Anasazi area are now distinct from the Mesa Verde Anasazi region and by 1000 AD redware production shifted from the Mesa Verde area to Kayenta territory (Hurst 2008; Thompson 2000, Cordell, Doyel, and Kintigh 1994).

In this period, the Anasazi Complex also flourished in the Black Mesa region. Archaeological studies have revealed that in the northern area of Black Mesa, populations increased tenfold between 850 and 1080 A.D., exploding during this period from a few small settlements to dozens of villages. The increase was so great that only a combination of indigenous population growth and immigration can account for it (Grahame and Siske 2002).

**Pueblo III (AD1100-1300)**

At this time population began once again to aggregate into large villages in a form of territorial downsizing, possibly due to changes in local climatic conditions. Numerous small unit pueblos continued to be occupied during this period, but there was a tendency for them to become larger (from an average of 3 rooms in PII to an average of nine rooms in PIII) and to enclose the kivas within a room block. There was, however, great variation in site size across the Anasazi region with the western-most sites tending towards the small end of the scale. The larger sites were characterized by monumental structures that reached several stories high, plazas, and great kivas. There was a population aggregation in the northern San Juan area during this period. It was during this period that most of the famous cliff villages in Mesa Verde National Park, Grand Gulch, Canyon de Chelly, and Navajo National Monument were built (Hurst 2008; Matlock 1988; Plog 1979; Thompson 2000) and the towers at Hovenweep National Monument. Reservoirs and other water control features were built suggesting a level of community organization that could facilitate large scale projects (Thompson 2000). During the Pueblo III period the Mesa Verde Anasazi developed the thick-walled, highly polished, and incredibly beautiful pottery known as Mesa Verde Black-on-White (Hurst 2008) and new ceramic vessel forms, like canteens and mugs, were added to the ceramic assemblage (Thompson 2000; Cordell, Doyel, and Kintigh 1994).

Sometime around A.D. 1200-1250 a process of regional abandonment began in large areas of Arizona, Utah, and Colorado, albeit at varying rates. Areas like the Virgin River were abandoned by AD 1150 while northern New Mexico and Arizona were not abandoned at all. By AD1300 all of the Mesa Verde and most of the Kayenta areas had been vacated. Archaeologists believe the abandonment may have been a combination of “push” and “pull” factors. Push factors include warfare, factionalism, climatic fluctuations deleterious to agriculture, and collapses in trading systems. Pull factors include arable lands and increased rainfall in regions to the south (Thompson 2000).
In contrast, populations in the southern parts of Black Mesa began to increase as environmental conditions continued to decline. The southern escarpment of this mesa provided a dependable source of water from its many springs. By 1300, the entire population of northern Arizona was converged on the southern rim of Black Mesa. Over time, the climate shifted to more favorable conditions, allowing native peoples to spread out over the greater region. Many Puebloan peoples stayed on these mesas and their descendents are the modern Hopi (Grahame and Siske 2002).

**The Protohistoric Period (ca. AD1400-1825)**

The shift to a cool/dry environment featuring winter rainfall after AD1350 is more difficult to translate into lake level, but judging from state temperature and precipitation in the historic period, cool dry intervals around the turn of the century and a less marked interval at mid-century both correlate with low levels of the Great Salt Lake. This was a time when farmers and foragers were presented with a fundamentally different suite of circumstances and decisions. It is no wonder archaeologists detect a more marked cultural change at this time (Fawcett and Simms 1993:12-13, verbatim). After around 600 years ago the Fremont archaeological complex can no longer be found in the eastern Great Basin. Most scholars believe that the end of the Formative way of life was caused by a combination of environmental degradation and a slow population replacement of indigenous Fremont groups by newly arriving hunter-gatherer groups.

The best current evidence suggests that the predecessors of the historic aboriginal groups in the Great Salt Lake region arrived in the area about 500-600 years ago. The subsistence adaptation of historic Shoshonian groups (Shoshone, Goshute, Ute, and Paiute) was probably very similar for the Protohistoric people. In general, subsistence resources from the lake were based on a mixture of wild flora and fauna, especially waterfowl, small mammals, and fish. It was based on the movement of small groups from one area to another as differing resources became available. Occasionally when local resources were particularly abundant these small groups came together to participate in a variety of social activities (Madsen 1980; Simms and Heath 1990).

**Works Cited**

Beck, Charlotte, and George T. Jones

Copeland, James M., and Richard E. Fike

Cordell, Linda S., David E. Doyel, and Keith W. Kintigh
Cressman, Luther S. 

Fawcett, William B., and Steven R. Simms 
1993 *Archaeological Test Excavations in the Great Salt Lake Wetlands and Associated Analyses.* Utah State University Contributions to Anthropology, No. 14, Logan, Utah.

Geib, Phil R., and Edward A. Joli 

Grahame, John D. and Thomas D. Sisk (editors) 

Grayson, Donald K. 

Hester, Thomas R., M.P. Mildner, and L. Spencer 

Hockett, Bryan 

Hurst, Winston 
2008 Anasazi. [http://www.media.utah.edu/UHE/a/Anasazi.html](http://www.media.utah.edu/UHE/a/Anasazi.html)

Janetski, Joel C. 

Lipe, William D.

Madsen, David B.


Madsen, David B., and Steven R. Simms

Madsen, Rex E.

Marwitt, John P.

Matlock, Gary

Matson, R.G.
1999  The Spread of Maize to the Colorado Plateau. *Archaeology Southwest* 13: 10-11

Plog, Fred
Schroedl, Alan R.

Simms, Steven R.

Simms, Steven R. and Kathleen M. Heath

Thompson, Charmaine

Wilde, James A., and Deborah E. Newman