

3.0 CULTURAL CONTEXT

3.0 CULTURAL CONTEXT

3.1 Regional Prehistoric Context

There are five general periods regarding the chronological sequencing of Native American cultures of the Delmarva Peninsula: Paleoindian (13,000-6500 B.C.), Archaic (6500-3000 B.C.), Woodland I (3000 B.C.-A.D. 1000), Woodland II (A.D. 1000-1650), and the Contact Period (A.D. 1650-1750).

3.1.1 Paleoindian Period (13,000 to 6500 B.C.)

The question of human entry in the New World is perhaps one of the most fascinating and hotly debated topics in American archaeology today. Numerous finds throughout the Americas, including several in the Mid-Atlantic region, have questioned the primacy of the Clovis horizon, as well as the date, mode of entry, and nature of and human adaptation to the Late Pleistocene environment. Although no firm consensus exists concerning the date of initial human settlement of the New World, commonly known as the Paleoindian period, Paleoindian occupation of the southeastern United States is generally recognized to have commenced by ca. 12,000 B.C. and therefore may predate the earliest fluted point Clovis phase site in the northeastern United States (Haynes et al. 1984; Dincauze 1993; Dent 1995:102). Similarly, early dates were obtained from secure archaeological contexts such as Monteverde in Chile (Dillehay 1989, 2000) and from the Fell's Cave site in Patagonia, first reported by Junius Bird in 1938 (Dillehay 2000:36). Human occupation of southern South America by ca. 11,000 B.C. certainly raises questions as to when humans must have first arrived in this hemisphere.

Dates as old as ca. 12,000 B.C. were radiometrically determined for possible pre-Clovis archaeological deposits at Cactus Hill in southeastern Virginia (McAvoy and McAvoy 1997; Wagner and McAvoy 2004) and an undated pre-Clovis occupation may be indicated at Topper in South Carolina (Goodyear 1999; Marshall 2001). Both sites are controversial due to concerns relating to geochronology and contextual integrity. However, it is important to point out that Cactus Hill is situated on a river terrace within the Coastal Plain, highlighting the fact that similar environments in Delaware may have been attractive for Paleoindian occupation as well. In fact, researchers identified a cluster of fluted point finds designated as the Hughes Early Man

Complex of sites in central Kent County, Delaware (7K-E-10; -24; -33). The complex includes six Paleoindian artifact concentrations/surface finds located on well-drained knolls adjacent to a large freshwater swamp and several poorly drained areas (Custer 1989:105). The majority of the remaining Paleoindian sites in central Delaware and the Mid-Drainage Zone have taken the form of isolated point and tool finds on the surface (Custer 1984, 1989).

Any consideration of the peopling of the New World and the potential for Paleoindian sites to be present in the Mid-Drainage Zone of Delaware need to examine current thinking on environmental conditions during the dynamic Pleistocene-Holocene transition (14,000 to 10,000 B.C.). The Pleistocene Epoch witnessed a series of cold periods and associated glaciations, the most recent of which (Younger Dryas) terminated approximately 14,000 to 12,000 years ago. One of the most dramatic effects of these ice ages was the lowering of ocean levels worldwide as sea water was frozen and trapped in glaciers and continental ice sheets. Sea levels dropped as much as 425 feet during the final glaciation ca. 16,000 years ago. Along the Atlantic Coast, ocean beaches lay at the edge of the modern continental shelf, perhaps over 60 miles east of the current New Jersey coastline. The vastly expanded coastal plain would probably have been an attractive location for Paleoindian settlement. It is postulated that many of the Coastal Plain sites formerly occupied by Paleoindians are now under the Atlantic Ocean or drowned river drainages (Stright 1986; McWeeney and Kellogg 2001).

Climatic patterns changed on regional and continental scales during the Holocene interglacial, which began at the end of the Pleistocene, about 8000 B.C. Sea levels continued to rise as a result of the release of water from melting ice sheets. As the sea level rose, it began to transgress, or cover, the land mass of the modern submerged Atlantic continental shelf to the west. The late-Pleistocene-Holocene marine transgression, or sea level rise, began ca. 14,000 years ago and proceeded rapidly until ca. 7,000 years ago (Milliman and Emery 1968; Kraft et al. 1983). Custer (1994:337-338) suggested the slowing of sea level rise did not occur until ca. 3,000 B.C. Joseph Schuldenrein (1995) postulated that sea levels in the lower Hudson Estuary stabilized between 5,000 and 3,000 years ago. The same conditions and processes would have been active in the lower Delaware River and Bay.

The implications of such dynamic changes for any paleoenvironmental reconstruction of the Middle Atlantic region are profound. As important are changes in how paleoecologists (and increasingly, archaeologists) are conceptualizing paleoenvironments and paleoenvironmental change. According to Joyce (1988:190), Victor Carbone and other palynologists who have influenced the region's archaeologists adopted a conceptual framework developed in the late 1960s and early 1970s, in which "the paleoenvironmental record is viewed as reflecting a sequence of stable (i.e. climax) vegetational communities in equilibrium with the dominant climate." Climate was viewed as the prime mover in explaining changes in these communities. These studies are characterized by reference to "pollen zones" (i.e., vegetational communities), such as "Pre-Boreal" and "Boreal" (Bryson 1970; Bryson and Wendland 1967; Watts 1979). These periods were considered by Carbone (and others) relatively static, but were thought to have been "punctuated by periods of climatic-biotic disequilibrium resulting from rapid, step-like climatic change, followed by the reestablishment of new equilibrium conditions between climate and vegetation" (Joyce 1988:191).

This type of periodization of dynamic processes will be familiar to archaeologists, who have also traditionally ordered their data into discrete stages or time periods. Contemporary paleoecologists began to take a completely different approach to environmental reconstruction about twenty years ago. These more modern studies proceed from the belief that "the establishment of forest communities must be explained by reference to the migrational histories of the individual species that make up the 'community' rather than a superorganismic model of community development." Consequently, researchers have sought to reconstruct the history of individual forest taxon, and the origin, rate and direction of their migration during the late Pleistocene and Holocene periods. One consequence of this approach is to break the direct causal link between climate and climate change, with change in vegetational communities; factors other than climate are now viewed as having played an important role in the life histories of taxa and species (Davies 1981; Gaudreau and Webb 1985:254; Webb 1982). Another consequence is the realization that, prior to the emergence of an essentially modern forest about 5000 B.P., climax vegetation communities in the east have no modern analogs (Prentice et al. 1991; Overpeck et al. 1992; Williams et al. 2001). Modeling human adaptive responses to environmental conditions (at

least biotic resources) prior to about 5000 B.P. becomes increasingly problematic as the character of those environments becomes increasingly dissimilar to any known environment.

Modern paleoenvironmental reconstructions in eastern North America must therefore consider both the generally northward-moving species and vegetational patterns arising from the regional climatic shifts and the westward-moving coastal geomorphological changes associated with rising sea levels. McWeeney and Kellogg (2001) and others have provided detailed evaluations of the data for reconstructing these dynamic early post-glacial environments. Pollen analyses indicate that by 10,000 B.C. a mixed conifer-hardwood environment had emerged in the Northeast and was sustained during the Allerod warm period about 11,750 to 9,400 B.C., when conditions were warmer and wetter than today (McWeeney and Kellogg 2001). A mosaic of *Betula* sp. (birch) and *Alnus* sp. (alder) emerged with the more open conditions during the Youngest Dryas cold stadial between 10,800 and 10,300 years ago, although Carr and Adovasio (2002) argue that deciduous forests would have been sustained at least in sheltered river valleys. As temperatures generally warmed during the fluctuating conditions between 10,000 and 9,000 years ago, boreal forests of *Pinus* sp. (pine) with *Tsuga* sp. (hemlock) and deciduous elements emerged in the north and oak increased in the south (Dent 1995:131; McWeeney and Kellogg 2001). However, local variations in microenvironments due to topography, solar exposure, and surface water (ponds, lakes, and rivers) exerted a considerable influence on prehistoric subsistence and adaptations.

Most models developed to explain Paleoindian settlement patterns have emphasized movement due to a presumed emphasis on the hunting of larger herd animals such as caribou and, to a lesser extent, deer in more closed settings. The mobility strategy(ies) employed by Paleoindians is a topic of debate, with several authorities emphasizing an adaptation utilizing a highly curated tool assemblage to hunt large gregarious herd animals, such as caribou, and to a lesser extent, deer (Funk 1978; Meltzer 1988; Meltzer and Smith 1986). The question of Paleoindian mobility strategies within a generalized subsistence regime and mosaic environment has not been particularly well clarified by archaeologists. Paleoindian tool kits are typically described as heavily curated, as they appear to have been carefully produced and maintained to create a long tool use-life (Gardner 1989; Callahan 1979). According to Binford's (1979) original formulation

of logistical versus foraging mobility strategies, a highly curated tool kit is associated with a highly mobile foraging strategy.

Custer and Stewart (1990:313) do in fact envision Paleoindians in the Middle Atlantic region as highly mobile, even if following a generalist subsistence pattern. Other researchers suggest that there were limits to mobility. Gardner (1977) suggested that Paleoindian site location is closely linked (tethered) to the availability of high-quality lithic raw materials. High quality lithic materials (mostly cryptocrystallines) were nearly exclusively selected by Paleoindian peoples (ibid.), and quarry locations figured prominently in settlement patterns (Gardner 1989; Custer 1996). If, in fact, the paleoenvironment was as patchy as some authors now seem to think, that would also argue for a logistical mobility strategy more than a foraging strategy. From this perspective, mobile, kin-related bands of hunter/gatherers utilized a forager strategy, also referred to in the case of Paleoindians as a “High Technology Forager” strategy (Kelly and Todd 1988). Meltzer (1993) incorporated some environmental diversity in his argument by hypothesizing that northeastern Paleoindian groups occupied open habitats and pursued mobile game such as caribou, while southeastern groups in boreal forests exploited more diverse faunal and floral resources.

Other researchers argued for a more generalist Paleoindian subsistence strategy. Based on information derived from the Shawnee-Minisink Site, McNett (1986) suggested that these hunter/gatherers may have relied on a broad base of plant and animal resources and that megafauna played a minor role in their subsistence program. Moeller (1989) also questioned the subsistence/settlement interpretation for the Shoop Site. He (Moeller 1989:73) suggests that the site’s inhabitants may have operated within a “restricted seasonal round” and that the Paleoindians were generalists and not highly focused on a single resource. Custer and Stewart (1990:313) criticized Meltzer’s (1993) model, citing paleoenvironmental data that suggest a complex mosaic of grasslands and deciduous and boreal woodlands extended throughout much of the northeastern United States, replacing open tundra and parkland habitats. They also believe that Paleoindians followed a generalized subsistence strategy (Custer and Stewart 1990:306).

Models presuming movement within the Delmarva Peninsula Coastal Plain, particularly between the coast and the Piedmont, expanded on the Gardner cyclical model to argue for “serial” movement between raw material sources when such sources are relatively abundant (Custer et al. 1983). Jasper and chalcedony from the Delaware Chalcedony Complex (Iron Hill, located approximately 14.5 kilometers north of the APE) are believed to have been an important lithic source for Paleoindian inhabitants of this region (Custer and Galasso 1980; Custer, Ward, and Watson 1986; Custer 1989:103).

Custer (in Raber 1985) also postulated that poorly drained areas and freshwater swamps within the Coastal Plain could have provided rich plant and game resources for Paleoindian groups. Hunting sites may be located among the marshy sections of the Coastal Plain, with larger base camps and base camp maintenance sites potentially being located on the higher and drier landforms. Custer also infers similar site types for the Early Archaic inhabitants of the Coastal Plain. The estuarine margins of the Coastal Plain most likely would not have contained significant resources during the Late Pleistocene/Early Holocene due to instability caused by rapid sea-level rise (Custer 1984). Also, these estuarine areas may have not yet been formed along the lower Delaware River during this period. Dent (1995:133-139) postulated seasonal movement between summer locations on the outer Coastal Plain and winter occupations to exploit resources within the ecotone between the inner Coastal Plain and Piedmont. The lack of seasonality data is another disappointing result of the virtual absence of botanical remains.

3.1.2 Archaic Period (6500 to 3000 B.C.)

Environmentally, the Archaic period is marked by the gradual emergence of a fully Holocene environment. Warmer, moister climatic conditions prevailed with the disappearance of grasslands and the expansion of mesic forests of oak and hemlock. Mast foods were provided by the mesic forest, which also attracted small game animals, especially deer and turkey. A marked rise in sea level during the early Holocene had a profound effect on the Delmarva Peninsula. This rise caused lowland flooding and the inundation of river systems, which speeded the development of complex estuary systems. Numerous interior swamps were also created. These changes caused a net increase in floral and faunal resources associated with new wetland areas. As the climate grew warmer and plant and animal resources began to inhabit much wider areas,

human occupation spread into new settings. Hence, Archaic period sites are found in a much broader range of topographic settings. The frequency of Archaic sites is also much greater than for the preceding Paleoindian period.

While most scholars would agree that Archaic people utilized a wide variety of plant and animal resources, resulting in a wide range of subsistence activities and associated tool kits (Custer 1989:128), details as to the timing of this transition are not entirely clear. As noted above, archaeological interpretations of this change in subsistence regime to one of “Primary Forest Efficiency” (Caldwell 1958) were linked to climatic change. Joyce (1988:189) succinctly pointed out how dates for specific climatological events have had a tendency to “float” in the archaeological literature (Table 1).

Table 1. Dates Proposed by Archaeologists for the Xerothermic Interval.

Source	Reported Dates (B.P.)	Location
Custer 1976	6500-3200	Middle Atlantic
Custer 1978	4650-2150	Middle Atlantic
Curry and Custer 1982	4200-2200	Middle Atlantic
Custer and Wallace 1982	4950-2750	Piedmont Uplands
Catlin et al. 1983	6950-3950	Middle Atlantic
Custer 1984a	4650-2150	Middle Atlantic
Custer 1984b	5050-3550	Middle Atlantic

Source: Joyce (1988:Table 1).

In the intervening 20 years since Joyce’s article was published, this problem still persists to one extent or another. The Hypsithermal Period was variously reported as extending from 9270 to 8830 B.P. (McWeeney and Kellogg 2001:195), from 9900 to 8200 B.P. (Bartlein et al. 1984:364), and from 9000 to 5000 B.P. (Davies et al. 1980). Joyce (1988:190) appears to agree with Davies et al. that this period lasted until about 5000 B.P.

The environmental shift to more moderate conditions occurred simultaneously with a broadening of the subsistence base. Gardner (1989) and others (Custer 1994, 1996) combined the Early Archaic with the Paleoindian period into a broad late-Pleistocene/early-Holocene adaptational continuum. Changes in projectile point form and an increasing focus on locally available raw

materials are also indicated early in the Archaic period. Johnson (in Rudolph et al. 1996:17) has suggested that a change in projectile point design during the Early Archaic may be related to presumed pursuit of white-tailed deer in the deciduous forests but agreed with others who perceive little material change from the preceding Paleoindian period.

Dent (1995:188-190) argued for a post-Pleistocene adaptational break that extended until ca. 2200 B.C. The latter half of the Late Archaic/Transitional Archaic (2200 to 1000 B.C.) represents for Dent an “intensification” of resource extraction efforts. Intensification is frequently linked with the later Archaic, and it is important to note that Dent’s synthesis relates to occupation of the Coastal Plain and Piedmont in the general vicinity of Chesapeake Bay.

Whereas the Paleoindian period may have been dominated by the use of foraging strategies, several archaeologists perceive the Early (and Middle) Archaic period as a time dominated by strategies of logistical mobility (Gardner 1974; Custer et al 1986; Whyte 1990).¹ It is during the Early Archaic period that many researchers envision the emergence of an adaptation to the environment that relied on the seasonal fission/fusion of social bands within defined regional territories. Gardner (1974) was one of the first to suggest this form of settlement system as a result of climatic changes. He suggested that three functional site types—macro-social base camps, micro-social base camps, and special procurement sites—existed within the settlement system. The macro-social camps were inhabited during the summer and were the largest, as they formed through the congregation several bands. These macrobands fissioned during the winter and autumn at the micro-social base camps. Special procurement sites were foray camps used for the collection of selected resources, and were formed near both the macro- and micro- social base camps.

Custer (1980) elaborated on Gardner’s model by tethering macro-social base camps to large floodplain locations and extending their seasonal occupation to the spring and summer seasons, after which they fissioned into smaller extended family groupings for the autumn and winter. Anderson and Hanson’s (1988) interpretation of the Early Archaic period in the southeast gave

¹ Others place this transition later in time, occurring between the Middle and Late Archaic periods (Snethcamp et al. 1982).

the fullest expression to this perspective, suggesting that individual Archaic bands were tied to specific drainages, irrespective of physiographic province. Early Archaic macrobands were projected by them to consist of eight microbands of 50 to 150 people each and macrobands consisting of between 400 and 1,200 people. Based on this, Anderson and Hanson proposed a model for the Southeastern United States which essentially recognizes the presence of only four macrobands: the South Atlantic, the Eastern gulf Coast-Florida, the Tennessee River-Cumberland Plateau, and the Middle Atlantic.

Archaic Period sites within the Mid-Drainage Zone are limited. One Archaic floodplain site, 7K-C-9, was documented in the St. Jones drainage. Two other Archaic sites, 7K-C-7 and 7K-F-17, represent Archaic sites associated with bay/basin features in the Murderkill drainage. These bay/basin sites represent short-lived hunting and processing occupations (Custer 1989:135).

3.1.3 Woodland I (3000 B.C. to A.D. 1000)

In North American archaeology, the Woodland period is traditionally defined as a “stage” of precontact socio-cultural development marked by the appearance of two horizon markers in the archaeological record: 1) ceramic manufacturing and 2) use of domesticated plants (Willey and Sabloff 1980). These two technological innovations are significant in that they presuppose greater sedentism with the attendant population growth and increased sociopolitical complexity, a true evolution of culture. The Woodland period in the Mid-Atlantic region is, in fact, frequently characterized as a period of increased sedentism and a gradual shift toward the exploitation of domesticated cultigens (maize, beans, and squash) together with wild grasses such as amaranth and chenopodium. The Woodland I period is also marked by a greater use of aquatic resources. During this period, sea level rise slowed, which allowed the stabilization of riverine and estuarine areas. This in turn fostered the development of shellfish and anadromous fish populations. These new resources were heavily exploited during the Woodland I period. The Metate block at the Puncheon Run site reflects the seasonal exploitation of these resources by relatively small family groups (LeeDecker 2005:259). The increased expansion of food resources also led to a higher degree of sedentism. In fact, it is during the Woodland I period that very large, macroband base campsites were occupied on year-round basis (Custer 1989). Storage pits and evidence of house structures are first found at these Woodland I period sites.

Changes in the exploitation of lithic resources also occurred during this period. While cryptocrystallines were heavily favored during the Paleoindian and Archaic periods, groups inhabiting the Middle Atlantic region during the Woodland I period greatly expanded their use of lithic raw materials to include quartz, quartzite, argillite, and rhyolite (Kinsey 1977; Stewart 1984; Custer 1992). Custer (1992:42) suggested that the use of more varied materials reflects a decrease in band territory size. However, wide distribution of non-local lithic materials, such as South Mountain rhyolite from south-central Pennsylvania, also suggests the development of long-distance exchange networks.

The division of cultural complexes within the Delmarva Peninsula served to identify specific cultural traits through social organization, trade practices, and cultural materials. Early Woodland I (Barker's Landing Complex) sites are marked by the use of non-local materials, mainly steatite, ironstone, rhyolite, and argillite. The Barker's Landing Site (7K-D-13), located approximately 8.4 kilometers north of the project area, produced 1,047 argillite artifacts, including debitage and unfinished and finished tools, out of a total of 1,212 artifacts (Custer n.d.:4). Ceramic forms include Marcy Creek, Dames Quarter, and Ware Plain, while projectile points are represented by stemmed and broadspear forms. Microband base camp sites are the predominant site type identified along river floodplains and estuarine marshes. Seven microband base camps with Barker's Landing Complex components (7K-F-12, -45, -46, -49, -52, -53, and -55) and one Barker's Landing Complex macroband site, the Coverdale Site (7K-F-38), were identified along the Murderkill River east to Frederica.

Increased social complexity is evident during the Woodland I period. Some researchers believe that the development of a sedentary lifestyle and the control of surplus food resources may have led to the development of incipient ranked societies (Custer 1989). Evidence for this change comes in the form of exotic grave goods indicating complex mortuary ceremonies, which were being practiced in central Delaware beginning around 500 B.C. and ending around 0 B.C. Known as the Delmarva Adena, this culture group possessed exotic materials and ceremonial goods similar to those of the Ohio Valley Adena cultures (Custer 1984). Several important Delmarva Adena sites excavated in Kent County, Delaware, produced status-related goods, such as Flint Ridge chalcedony cache blades, copper beads, and tubular pipes, inferring some degree

of social stratification. Whether through trade and exchange or through direct cultural influence and migration, the question of how these exotic materials entered into the eastern Mid-Atlantic is still highly debated. Nevertheless, the presence of these non-utilitarian items in the east does bespeak a greater degree of social complexity. Custer (1989:268-9) suggested a *big-man* social organization for this complex. Delmarva Adena Complex sites include microband base camps, major and minor mortuary-exchange sites, cache sites, and isolated finds. Ceramic wares associated with this complex include Wilgus, Coulbourn, and Nassawango.

By 0 B.C., the Delmarva Adena Complex appears to have been abandoned (Custer 1989:275). While there is evidence of selective and possibly ascribed status indicated in local Adena burial contexts, these manifestations are apparently isolated occurrences that disappear at the end of the Late Woodland I with little or no sustained impact on the prevailing social structure (Custer 1996:241-243). Around this time, the Webb Complex (Late Woodland I) replaced these earlier complexes and expanded across the Delmarva Peninsula. The settlement and subsistence patterns of the Webb Complex generally followed those of the previous Woodland I complexes. In general, Webb Complex sites are characterized by the presence of Jack's Reef projectile points and Hell Island ceramics in the artifact assemblage. Tool kits would include non-local materials, such as argillite, rhyolite, and steatite, as well as a wide range of ground stone tools. Collectively, the Woodland I artifact assemblage reflects the intensification of food production concomitant with the development of a more sedentary settlement strategy focused on riverine and estuarine resources (Custer 1984). The Webb Complex is characterized by complex mortuary practices incorporating various special grave goods, such as carved platform pipes, bone and antler tools, and a variety of projectile points, celts, and pestles (Custer 1989:293).

The distribution of Webb Complex sites generally is found from the Chesapeake and Delaware Canal south to the Mispillion and Choptank drainages (Custer 1989:291). Microband base camp sites are the predominant site type identified along river floodplains and estuarine marshes. Macroband base camp sites in the Webb Complex are limited to two sites: the Hell Island Site (7NC-F-7), identified as one true macroband base camp; and one potential macroband base camp (7K-C-94) (*ibid.*). Procurement sites are found short distances from base camps (Kellogg et al. 1994). Microband base camps were identified in many areas. Locus A (7K-F-163A) of the Soulie

Gray Farm (7K-F-163), located northeast of Frederica and on the north bank of the Murderkill River, produced a Webb Complex component with possible subsoil pit features (Liebeknecht et al. 1996). Seven microband base camps with Webb Complex components (7K-F-45, -46, -47, -53, -54, -55, and -56) and one Webb Complex procurement site, 7K-F-48, were identified along the Murderkill River in proximity to Frederica. Significant components of this period were also excavated at the nearby St. Jones Neck and Lums Pond Site (7NC-F-18) (Custer and Hsiao-Silber 1995; Petraglia et al. 1998).

3.1.4 *Woodland II (A.D. 1000 to 1650)*

The Woodland II period is associated with the first appearance of the triad of tropical domesticates of maize, beans, and squash in the Mid-Atlantic region. These cultigens are understood to have entered the region from the Ohio Valley and along the Coastal Plain from the south. The domestication of plant species native to North America in the southeastern U.S. anteceded the appearance of maize in the region and may have been a development independent of the diffusion of the Mesoamerican triad of maize-beans-squash into the region. *Iva annua* (sumpweed), *Helianthus annuus* (sunflower), and *Chenopodium berlandieri* (goosefoot) were domesticated in the Southeast between approximate 2000 and 1000 B.C., although they did not assume great economic importance until after 1000 B.C. (Smith 1992:106-107).² The earliest convincing evidence for maize in the eastern U.S. comes from the Little Tennessee River in Tennessee with a date of A.D. 175, and maize-dominated agriculture did not dominate Native American economies in the East until ca. A.D. 1150 or later (Smith 1992:110-111; King 1999:12-13).

Zea mays (maize) is first dated on the central Delaware River ca. A.D. 900 to 1000 (Stewart 1998a:9). Recent excavations along Mantua Creek at the Edwards Run Site (28-GI-304) yielded charred maize cobs from a pit feature context that probably dates to the same time period (Grossman-Bailey et al. 2003).³ Maize appeared somewhat earlier (A.D. 800) in the central Susquehanna River drainage (Hart and Sidell 1996:1), where agriculture attained great

² This statement holds true for these three principal species together with several other native species that make up the Eastern Agricultural Complex.

³ A nearby pit was radiocarbon dated to 1,090 B.P. (Grossman-Bailey et al. 2003). A similar date is inferred for the charred maize samples.

significance.⁴ Other changes that mark the Late Woodland period in the greater Delaware Valley include:

- a change in lithic technology with the disappearance of a formal biface industry and use of cobbles for tool manufacture;
- changes in ceramic production and decoration;
- changes in settlement pattern; and
- changes in environmental exploitation.

The horizon markers for the Woodland II period are not found uniformly throughout the Delaware Valley, and settled agricultural village life and sociopolitical complexity did not emerge to the extent that it did in the Potomac, Susquehanna, or Monongahela River valleys, or in central New York State (Hatch 1980; Potter 1993; Funk and Rippeteau 1977:33-34). Although the presence of cultigens is documented in the Delaware River drainage by the end of the first millennium of the common era, the impact of these food sources on native lifeways is unclear. Evidence suggests that food production and village life was not universally adopted in all sections of the river and in some areas may not have even been adopted prior to European arrival (Becker 1986). Although there is no consensus among archaeologists, it appears that there was a gradient from south to north of increasing importance of food production among Late Woodland/“village farming” Native American societies in the Delaware River drainage.⁵

In the lower Delaware River drainage, the emergence of sedentary (or semi-sedentary) villages and food production began to appear by A.D. 1000, but cultigens appear to have supplemented rather than supplanted wild plant gathering and hunting, and “few, if any, Woodland II groups ever became fulltime farmers” along the lower Delaware River and Delaware Bay (Custer 1984:147). Some of the largest sites (macroband base camps) of the Slaughter Creek complex (cf., Indian Field, Indian Landing) produced extensive evidence of wild plant gathering rather than domesticates (Custer 1984:163-166). Custer (1984:169-170) believed that food production most likely occurred along tributary rivers to the Delaware Bay south of the Mispillion River. He

⁴ According to Funk and Rippeteau (1977:33-34), the upper-Susquehanna River Late Woodland populations were “fully” supported by horticulture. Such is also believed to be the case along the lower Susquehanna River, at least by late Late Woodland times (Custer 1996:275-278).

⁵ In fact, a recent synthesis of the paleoethnobotany of Pennsylvania (King 1999) completely fails to mention the eastern part of the Commonwealth.

hypothesized that food production began here because of environmental constraints on maintaining a hunter/gatherer economy in the face of a rising population. The Hughes-Willis Site (7K-D-21), located in central Kent County, Delaware, represents the northernmost macroband base camp site of the Slaughter Creek Complex. A variety of tools were recovered from the excavations, and the floral and faunal remains from the site suggest a fall through mid-winter occupation (Thomas et al. 1975). Microband base camps are found more frequently, with site locations corresponding to Woodland I period microband base camp sites. Sites 7K-D-45 and 7K-D-48, identified on St. Jones Neck in Kent County, and the Island Field Site (7K-F-17), contained archaeological deposits associated with temporary hunting sites (Custer 1989:323). Procurement sites are poorly understood, but are found, in general, on small ridges adjacent to poorly drained woodland and adjacent to floodplain area along major drainages.

Minguannan Complex sites are the most common Late Woodland period sites in the lower Delaware Valley of northern Delaware and southeastern Pennsylvania. Thin-bodied Minguannan ceramics were formed using quartz grit and sand temper, had smoothed interiors and smoothed or corded exteriors, and exhibited corded and incised designs. This Late Woodland complex of occupations is best known from the Piedmont Uplands in eastern Pennsylvania and higher portions of the Coastal Plain in Delaware. Base camps are found at the same locations as those from the Late Archaic through Middle Woodland occupations: floodplains of major drainages and areas adjacent to wetlands. Minguannan sites rarely yield evidence of house patterns, storage features, or defined midden areas. The interior sites have a sustained emphasis upon wild hunted or gathered foods with little evidence of cultigens (Custer 1996:269, 286-289). No evidence for village sites or agriculture has been found in association with this complex. In fact, Custer (1989:315) suggests that the Minguannan people may have been less sedentary than previous Woodland I groups.

On the basis of ethnohistoric and archaeological data, Marshall Becker (1976, 1980) also believes that Lenape who occupied the lower Delaware River and its tributaries still practiced a form of restricted transhumance when the Europeans first began leaving written statements about them. According to Becker:

Prior to contact the peoples of southeastern Pennsylvania lived in small patrilineal-patrilocal bands of approximately 25 members. Each band may have occupied a hunting territory of perhaps 25,000 to 75,000 hectares (61,744 to 185,322 acres) over which they foraged in nuclear family units during the winter. During the summer and early fall, the families comprising these bands congregated along the Delaware (or other major waterways), each having access to the river through one or more small tributary valleys. (1980:21)

3.1.5 Contact Period (A.D. 1600 to 1750)

The Contact period in Delaware was marked by the establishment of European settlements, initially along the Delaware River and then later on the Delmarva Peninsula more generally. This precipitated a major disruption in the lives of the people already living on the peninsula. The European demand for furs shifted the economic orientation of Native American cultures, and metal and other European goods displaced stone and other traditional materials. The introduction of European diseases and the internecine conflict over control of the fur trade caused catastrophic social and political disruptions among indigenous peoples. By the end of the period, traditional lifeways were all but abandoned, and very few Native Americans survived on the Delmarva Peninsula.

The first Europeans to encounter the indigenous inhabitants of Delaware and other native tribes of the region encountered a complex social world of cross-cutting and competing interests, alliances, trade relations, and warfare. The Iroquois, confederated as the Five (later Six) Nations under the covenant chain, were arguably the most powerful polity in the Mid-Atlantic region throughout the seventeenth and the beginning of the eighteenth century. (Wallace [1969:42-46], Brandão [1997:36-44], and to a lesser extent Jennings [1968] described the intra-societal dynamics of Iroquois political expansion and the nature of their political relations with neighboring tribes.) The development of the fur trade would eventually draw Iroquoian-speaking tribes seeking trading relations with Europeans and continued access to their trade goods into the territories of the Lenape and other tribes local to the Delmarva Peninsula. Through warfare, the Susquehannock would obtain access to European trading posts in Lenape territory (Jennings 1968, 1984).

The extent to which the Five Nations dominated the Lenape and their near neighbors is a matter of debate. For example, Jennings (1968:17-21, 1984:215) argues that the Susquehannock, one of the Iroquoian-speaking groups, did not hold political suzerainty over the Lenape, at least during the seventeenth century, as was generally suggested by other authors. (See Custer 1984 and 1989, for example). However, whatever the character of political relations among the Native American groups actually was, by the later eighteenth century, colonial powers, particularly in the Pennsylvania colony, appeared to recognize Iroquois pretensions to territorial control and made treaties with them for lands in southeastern Pennsylvania and Ohio (Thompson 1973; Downes 1940).

By this time, the Refugee Complex, a new period in the experience of Native Americans in Delaware, had begun, characterized by the migration west of indigenous people out of areas of European settlement toward areas still in Native American control (Custer 1984;1996: 315; Kent 1989). Sites of this period/complex are virtually non-existent in Delaware; one possible Refugee Complex site, the Parkway Gravel Site (7NC-G-100), was identified in New Castle County as part of the Route 1 Corridor study (Kellogg et al. 1994). By the mid-1700s, native settlement of the Delmarva Peninsula had come to an end.

3.2 Regional Historic Context

The history of the Middle Atlantic region begins with the explorations of numerous European peoples in North America. In general, the history of Delaware is divided into five time periods, beginning with exploration of the area, and concluding with modern urbanization (De Cunzo and Catts 1990). The following discussion has been abstracted from several historical works, specifically De Cunzo and Catts (1990), Hoffecker (1988), Kellogg (1993), Lemon (1972), Munroe (1979), Scharf (1888), and Weslager (1961).

3.2.1 Exploration and Frontier Settlement (1630 to 1730)

Early exploration of the Delaware Bay offered much promise for colonizing the new land. Navigators such as Henry Hudson and Samuel Argall briefly sailed into Delaware Bay, yet neither man could portend the growth and conflict that would arise in the area. The introduction of Dutch settlements at High Island (Burlington, New Jersey) in 1624 and Lewes in 1631 opened

the area to initial colonization, but these outposts did not survive for more than two years (Weslager 1961:11).

In March 1638, the first Swedish colonists in America disembarked at the confluence of the Christina and Brandywine Rivers in what is now Wilmington, Delaware (Munroe 1979:21). Peter Minuit, leader of the expedition, safely brought the party across the stormy Atlantic and helped to establish a foothold in Delaware. With his departure in June 1638, Mans Kling guided the growth of the colony, and within a few years a church, fort, and farming community evolved to form the first European settlement in Delaware (Weslager 1961:181).

The presence of this Swedish colony posed a challenge to the Dutch colonial interests in the Delaware Bay area. Peter Stuyvesant, the Dutch governor of New Netherland, resented the Swedish presence in Dutch territory and the fact that Fort Nassau, a Dutch post constructed in 1626, predated the Swedish settlement. As a result, in 1651 Stuyvesant established Fort Casimir, near present-day New Castle. A series of military conflicts ensued, with the victorious Dutch establishing the town of New Amstel (New Castle) near Fort Casimir in 1656 (Weslager 1961:12).

English influence began in the Delaware Valley region in 1664 with Sir Robert Carr's takeover of the Dutch colonies. Carr, acting under the aegis of James, Duke of York and Albany, confiscated the lands, houses, and personal possessions of the Dutch officials. Despite the hostile nature of the Carr's actions, the transfer of authority went smoothly. The English leadership sought to maintain existing land ownership, political structure, and trading privileges among the remaining colonists. New immigrants, including English and Scots-Irish, joined the remaining mixed populace of Swedish, Finnish, and Dutch colonists.

In 1681, William Penn received proprietary rights over Pennsylvania from King Charles II. While the new colony served him well, this province lacked in one essential detail—access to the ocean. In 1682 settlers residing along the St. Jones Creek obtained the incorporation of St. Jones County, which they soon after renamed as Kent County. Penn appealed to the Duke of York to give him control of the land between Pennsylvania and the ocean, and in 1682, the Duke of York

conveyed to Penn the three Delaware counties: New Castle, Kent, and Sussex. However, disputes between the three Pennsylvania counties and the three Delaware counties soon tested Penn's hold over a newly expanded Pennsylvania. The colonists of the three lower counties, generally members of the Church of England, often found themselves in disagreement with the Quaker-majority Pennsylvania counties over voting power, appropriations, and religious character. Political dissension and mistrust eventually led to a separate government and relative autonomy for Delaware in the fall of 1704. Despite the political rift, the citizenry in the Lower Counties maintained social and economic ties with Philadelphia throughout the seventeenth and eighteenth centuries (Munroe 1984).

By the mid-1680s the population was spreading rapidly, but the Lower Counties—and Kent in particular—received only modest population growth, possessing only 99 tithables in the center county (Scharf 1888:1030). Settlement patterns in Delaware shifted from the closely spaced Dutch and Swedish villages along the Delaware River to scattered farmsteads along internal drainages and along emerging roads. Two major drainages near the project area are the St. Jones and Murderkill creeks. Both the St. Jones and Murderkill were navigable for thirty and twenty miles, respectively, from their mouths at the Delaware Bay (Conrad 1908:661). The word Murderkill first appears on Linstrom's map dating to 1654-5, as *Mordare Kijhlem*, or Murderer Creek. The derivation of the name is uncertain, however the word *kijl* or *kill*, meant creek (Dunlap 1956:41). Murderkill is often written as *Murtherkill* or *Motherkill* in early historic records, and both are a variant of *murder*. Perhaps it is in reference to a slaying of a person or persons long ago. A second possibility to the derivation of the word represents mother, or main stream, below the first fork (ibid.:42). According to Conrad, the first tract of land settled in the area known as South Murderkill Hundred⁶ was “Whitewell's Delight” located between the St. Jones and Murderkill creeks at present day Bowers' Beach (Conrad 1908:661).

Francis Whitwell located and settled the tract under a grant from Governor Edmond Andros in 1676. The land was subsequently patented to William Frampton in 1686, as “Dover Peere.” The tract contained 1,300 acres (ibid.). These large plantations typically comprised a dwelling house

⁶ South Murderkill Hundred was formed from South Murderkill election district which bore that name from 1855 to 1867 when it was made a Hundred (Conrad 1908:660).

and outbuildings, with a surrounding patchwork of farmed fields. Structures present at these plantations included small dwellings built of wood, or, less frequently, brick. The occupant likely maintained large portions of the property in marsh or woodland for livestock forage. Another large tract in the area was that of “Caroone Manor.” This actually consisted of two tracts, “Caroone,” a 1,200-acre parcel and “Caroone Manor” consisting of 800 acres. Joshua Barkstead received a grant for this land between 1683 and 1689. The manor tract contained two villages, Magnolia and Barker’s Landing (often referred to as Florence). These communities remain today, and are located only one to one and one-half miles northwest and northeast of the project area.

Natural waterways often dictated transportation routes in late-seventeenth to early-eighteenth-century Delaware, as existing roads were few and in poor condition. In 1660, “Herrman’s Cart Road,” which ran between Appoquinimink (present-day Odessa) and Bohemia Manor in Maryland, offered one of a select few overland routes connecting the Delaware Bay to the Chesapeake Bay (Scharf 1888:991). However, water transportation provided a cheaper, more efficient method to transport goods from the remote hinterland to urban markets along the Delaware River. As a result, the port cities of Philadelphia and Wilmington, and to a lesser extent New Castle, grew steadily and took over a dominating commercial role in the growth of Delaware.

Landings appeared along the banks of the Murderkill Creek almost immediately following the movement of the first European settlers into the area. One of the earliest established communities in the project area is the town of Frederica. It is laid out on the part of “St. Collom” that was initially warranted to Benoni Bishop, in 1681 as a tract of fourteen hundred acres. It was originally known as “Johnny Cake Landing” and “Indian Point” (Conrad 1908:664-5). Many of the early settlers emigrated from England, although some Dutchmen also settled in and around present-day Frederica (Miller 1970:113). Johnny Cake Landing was but one of many spots along the Murderkill where shipping occurred. The last will and testament of John Curtis, dated 22 April 1698, strongly suggests that “Cedar Landing” was once located at a point along the Murderkill River in or very close to the current project area. The will reads in part:

I give and bequeath to my Grand Child Jehu Curtis two hundred and seventy acres of Land lying and being on the south side of Murderkill Creek next adjoining to the land of Richard Curtis and on the other side that which is called and known by the name of Cedar Landing with all the appurtenances thereunto belonging to him, his heirs and assigns forever. (Kent County Will Book B1:26)

John Curtis also devised a boat to one of his sons and a foster child that John raised. Again, the will states, “I give and bequeath to my Son Caleb Curtis and Samuel Low one Shallop about Twenty two foot by the keel with the Sails and Rigging and all the appurtenances thereunto belonging to dispose of as they shall see meet” (Kent County Will Book B1:26).

A deed from May 1711 for a land transaction between Griffith Hughes and John Sipple documents the presence of a 50-acre “...wood land landing...upon the said Murderkill and upon the North Side thereof and at the fork of the Said Creek...” (Kent County Deed Book E:106). Based on the description, the wood landing was located west of the current project area. The deed provides for a portion of the conveyed land “...sixteen perches in length and one perch in breadth is left for a cart way the whole length” (ibid.). This landing allowed wood harvesters to ship cordwood to urban centers like New Castle, Wilmington, and Philadelphia.

3.2.2 Intensified and Durable Occupation (1730 to 1770)

Delaware witnessed an increase in population and commercial expansion by the middle of the eighteenth century. Small hamlets located along riverine settings and at crossroads underwent rapid growth.

Changing farmstead patterns reflected the development of commercial agriculture. New towns developed to serve the Atlantic Coastal trade. This expansion accommodated an increased settler population and the agricultural commodities that farmers brought in from the surrounding farms for transport to Philadelphia and Wilmington. These commercial towns, such as Smyrna, Odessa, Dover, and Port Penn, served as focal points for the local society and economy (Ames et al. 1989:47). These population centers often featured a concentration of maritime related activities such as ship and boat building, oystermen, and fishermen.

Farming remained the most important economic activity in Delaware during the eighteenth century. This activity accounted for 80 to 90 percent of colonial Delaware's population (Egnal 1975:201). Wheat constituted the primary crop, followed by rye, corn, barley, oats, and garden vegetables. Many farms also contained at least one fruit orchard with apples and peaches predominating. Livestock husbandry supplemented the income produced from field crops (Passmore et al. 1978).

Land use patterns increased relative to the tillage of the farm's total acreage. Farmers now cleared lands once reserved as forest or marsh and incorporated these lands into the crop cycle. Farms used a system of crop rotation, spurring a greater yield per acre. The increased need for larger tracts of land forced new buyers to purchase and cultivate property once reserved as marginal grounds. Farm produce continued to be shipped out to market on the Murderkill. In a survey of salt marsh dated 1766, the document describes Waitman Sipple as a "...Mariner, so called because he is a Shallop-Man..." (Kent County Warrants and Survey Book S7:90).

The small ship landing at present-day Frederica gradually grew into a shipbuilding center and homeport for vessels engaged in both coastal and international trade. John Emerson first surveyed the town and laid it out in lots during 1772. The town has retained the name Frederica since 1796 and the legislature formally incorporated the community in 1826 (Valle 1984:3). In 1736 a shipyard launched the HOPEWELL, a ten-ton sloop, representing the first ship to be built and launched on the Murderkill. The construction of Schooner-style ships at Frederica began in the mid-eighteenth century (Scharf 1888:1160). In 1761, the 15-ton schooner DOLPHIN was launched at Goforth's Landing with Caleb Sipple serving as the ship's master. He co-owned the vessel with Phillip Barrett (Miller 1970:118). These sailing vessels delivered "...pork, beef, corn, bark, and staves..." to Philadelphia (ibid.).

3.2.3 Transformation from Colony to State (1770 to 1830)

The American Revolution brought much disarray to the region at the beginning of this time period. British activities on the Delaware River and Bay disrupted the maritime economy of the area, impacting all manner of trade. British, French, and Continental forces passing through

Delaware made for disruptive travel to farmer and merchant alike. Social and political unrest in the colony further heightened an already tense atmosphere.

Colonists witnessed a variety of military forces pass through Delaware during the Revolutionary War. British and Hessian troops marched from Cecil County, Maryland, and skirmished in the fall of 1777 with American forces at Cooch's Bridge, south of Newark. The English military vanquished the American forces, and the British seized Wilmington. The control of Wilmington shifted frequently throughout the winter of 1777-78. In 1781, Lafayette's French troops disembarked at Christiana, then proceeded to march west towards Tidewater Virginia.

After the Revolutionary War, the population of Delaware grew rapidly, while its agricultural productivity dropped. The population of Kent County is estimated at 18,920 in 1790 (Monroe 1993). A decrease in soil fertility coupled with competition for good farming land and a decline in wheat prices forced many farmers with small operations to sell off their holdings to larger, wealthier farms. It became increasingly difficult to maintain the often elaborate system of drainages along the coast required to convert marshlands to viable arable fields and pastures (Fletcher 1971:155-156). A discernable shift in rural settlement patterns occurred as farms began to move from the older coastal settlements to the upland areas in the middle of the state. Factors such as an improvement in agricultural technology and crop rotation allowed for greater crop yields in these upland fields.

Throughout the eighteenth and early nineteenth centuries, African-Americans were the main ethnic minority in central Delaware. Most of these individuals served as slaves or were under some form of long-term bonded servitude (Williams 1996). The end of the war brought a major movement to free Delaware's slave population. In 1790, more than one half of the state's African-American population were in servitude; by 1810, less than one-quarter remained in bondage. The changing status of African-Americans from slave to free created an underclass of farm labor that neither owned or rented farms. Instead, they earned a livelihood through toiling on farms of others (Zebooker et al. 1996). As agricultural production shifted to industrialization in northern Delaware, the makeup of farm labor also shifted. Free black laborers played an increasing role in farm work. A strong Abolitionist sentiment and legislation prohibiting the importation and

exportation of slaves, especially in New Castle and Kent Counties, encouraged free blacks to settle in Delaware (Kellogg et al. 1994:13).

One of the notable historic landmarks near the SR 1/SR 12 project area is Barratt's Chapel (CRS K-103). Barratt's Chapel was built in 1780 on land that Philip Barratt donated. Barratt, a prominent political figure in Kent County, Delaware, had recently become a Methodist, and wanted to construct a center for the growing Methodist movement in Delaware. Barratt's Chapel is the oldest surviving church building in the United States built by and for Methodists and is known as the "Cradle of Methodism."

Methodism began in England as a movement within the Church of England led by John and Charles Wesley. As members of the Methodist Societies immigrated to the American colonies, Methodism began to increase its following in the Colonies. Between 1768 and 1774 John Wesley sent Francis Asbury and seven other Methodist lay preachers from England to minister to the growing societies. When the Revolutionary War broke out only Asbury and James Dempster chose to remain in America. Dempster withdrew to upstate New York, where he remained for the rest of his life. Thus, Asbury became the *de facto* effective leader of American Methodists (Barratt's Chapel website, accessed 10 November 2003).

Many dispossessed farmers left Delaware during the 1820s and 1830s, or sought occupation in the numerous urban and industrial centers where employment was readily available. Manufacturing and commerce prospered under the influence of an increased labor force. Textile manufacturers in the cotton and woolen mills along Red Clay Creek, White Clay Creek, and Brandywine Creek produced the finished raw fabrics needed to clothe a growing country (Pursell 1958). In 1825, Lewis and Thomas Lockwood manufactured fur and silk hats in Frederica, providing jobs and income for residents in the community (Coverdale 1976:13).

Shipments from the landings along the Murderkill intensified during this period: "Wheat, flour, corn, beef, bacon, staves, cedar shingles, cheese and butter, tar, pitch, boards of walnuts and oak all went North [*sic*] [to Philadelphia]. The lumbering and bark business flourished until about 1857" (Miller 1970:122).

3.2.4 Industrialization and Capitalization (1830 to 1880)

The effects of the Industrial Revolution led to significant advances in transportation, urbanization, and industrialization in northern Delaware. By the early 1830s, a significant number of transportation improvements were underway. The Chesapeake and Delaware Canal, finished in 1829, opened a direct route from the head of the Chesapeake Bay to the Delaware River, eliminating the long water journey around the Delmarva Peninsula. The shortened travel time fostered more business between the major urban centers of Baltimore and Philadelphia. In 1837, 100,000 tons of cargo passed through the C & D Canal, while in 1872, the peak tonnage year, 1,318,772 tons were transported (Snyder and Guss 1974). The towns of St. Georges and Delaware City grew rapidly and became social and economic points for the local community as a result of the commercial traffic with the canal.

Realizing that the potential of the state would not be realized without extending a rail line to the south, in 1836, Senator John M. Clayton urged that a company be formed to build a rail line down the center of the state (Hoffecker 1977:46). The venture was ill-timed, and a depression forestalled any construction attempts into the 1840s. The Philadelphia, Wilmington & Baltimore railroad provided the northern terminus of the southern spur named the Delaware Railroad. In 1850, the Delaware Railroad built a north-south rail link from Wilmington through Middletown and Dover. This produced the impetus for platting several new towns, including Felton, Canterbury and Harrington. In 1856 the railroad arrived at Seaford, Sussex County. The planting of orchards in anticipation of a more market-driven economy served to create an increase in improved acreage within county. Farmers drained swamps and between 1850 and 1870, farmed land increased 25 percent (Hoffecker 1977:46-7). However, those areas of the county not proximate to the railroad remained unnuclated, with the exception of low density, dispersed crossroads communities across the Hundred (e.g. Magnolia, Willow Grove, Petersburg) and those commercial centers along the major water transportation routes of the St. Jones and Murderkill rivers (e.g., Florence at Barker's Landing, Lebanon, Bower's Beach, and Frederica) (Figure 5).

The port of Frederica continued to expand as a ship building center during the mid- to late nineteenth century, utilizing local white oak and pine (Figure 6). The first steamboat to navigate

the Murderkill to Frederica was the EGYPT MILLS in 1857 (Scharf 1888:1160). The construction of the Delaware Railroad created an efficient means of overland transportation through the inland portion of the state, and served to divert shipping away from coastal routes, beginning with lumber and bark. Gradually, the railroad siphoned off an ever "...larger share of grain, produce, and bulk-fertilizer business..." diverting these products "...away from river shipping" (Institute for Public Administration 2004:2-3). Improved highways also began to appear during the mid-nineteenth century, which proved to be more of an advantage to the railroad than to port cities like Frederica. Fiercely protective of its riverine commerce, the Town of Frederica

...fought hard to prevent the Delaware Railroad from passing near the town, with the result that growth was halted and the community became even more isolated from neighboring towns. Once they realized their mistake, the citizens of Frederica launched a major campaign to get a railroad connection [but] ...This never came to pass. (ibid.)

The arrival of railroads in the central part of Delaware complimented the transportation network of waterways and offered quick transportation of peaches to the major urban markets of Philadelphia, Baltimore, and New York. The proximity of the Murderkill River and St. Jones Creek offered the farming community easy access of their produce and other goods to the markets in Philadelphia and Wilmington. The Philadelphia, Wilmington, and Baltimore Railroad, opened in 1839, provided local transportation for farmers who shipped their produce to markets in the eastern urban areas.

From the 1830s to the 1870s, peach production represented a significant percentage of the agricultural economy in Delaware. The industry had its start in the north in 1832 when Isaac Reeves planted one of the first orchards in the vicinity of Delaware City (De Cunzo et al. 1992:45). A combination of rich soil tempered with favorable rainfall and climate provided optimum growing conditions for peach orchards. The lucrative industry helped not only peach growers, but it supported industries such as basket factories, canneries, and peach tree nurseries as well. Railroad and steamboat companies essential to fruit shipment depended on the revenue generated from the annual peach harvests (Delaware Agricultural Museum website, accessed 10 November 2003). One of the earliest growers of peaches in the Kent County was Jehu Reed, an extensive landowner between Magnolia and Frederica. He is said to have been the first to grow

the fruit from seed and advertised the sale of peach trees in 1827. Between 1840 and 1890, huge orchards, ranging from a few hundred to 40,000 trees, spread from Delaware City to Kent County. Frederica was an important canning center for the surrounding area, in addition to being a convenient waterway distribution center for the canned goods as well as for rye, oats, corn, bark, and wood. In 1875, the peak peach production year, growers shipped almost six million baskets of peaches to market. The task of picking the fruit required large groups of workers, who became known as “peach plucks” (Delaware Agricultural Museum website, accessed 10 November 2003).

A virus known as the peach “yellows” finally led to the collapse of the peach industry in Delaware in the 1870s. By the early 1900s, many farmers faced bankruptcy. Some peach growers burned their orchards and turned them back into pastures and wheat fields. Other began raising such fruits as apples, grapes, melons, and strawberries. Kent County became a leading producer of apples while strawberries developed into a \$1 Million crop for farmers.

Through the period of 1830-1880, a majority of the state’s population was in the urban centers of New Castle County. Census figures indicate that at the outbreak of the Civil War, Delaware had a population totaling 112,216 citizens, of which 49 percent resided in New Castle County (De Cunzo et al. 1992:27). The combination of a good labor pool, transportation, ample availability of raw materials, and ideal sources of waterpower along the course of the Brandywine and its tributaries, promoted a trend of industrialization, diversification, and growth through the 1880s. The United States Census Bureau at the start of the Civil War records 380 manufactories in the northern county in stark contrast to only grist and sawmills along with lesser amount of other small manufactories listed in Kent and Sussex. Indeed, the aggregate production of Kent and Sussex County manufactured goods only amounted to one-tenth that of New Castle County (ibid.:26-7).

3.2.5 Suburbanization (1880 to 1940)

Throughout the late nineteenth century and into the twentieth century, an increase of population in Delaware led to urban expansion. Immigrants from Eastern and Central Europe filtered into Delaware, settling into neighborhoods in Wilmington and other urban points of entry. Between

1870 and 1900, the number of people employed in industry and manufacturing in Delaware rose from 23.5 percent to over 31 percent, accounting for 14 percent of the total state population (Reed 1947). Throughout the southern portions of the state, agriculture continued to focus on the production of perishable goods with a decrease in staple crops. In 1920, only 500,000 peach trees were grown in Delaware, as opposed to 5,000,000 in 1890. Although the peach never regained its importance to Delaware agriculture, many of the mansions built with peach growers' money are standing reminders of the significance of the Delaware peach. In the northern reaches of the state, market-oriented farmers shipped dairy, poultry, tomatoes, apples, potatoes, and other truck produce to the region's urban centers: Philadelphia, New York, Baltimore, and other cities. Transportation improvements, encouraged by the significance of truck crops, opened new sections of highways for Delawareans. Many new towns were formed as farmers planted peach orchards and the railroad pushed south.

The canning industry arrived in Frederica during the 1880s when Reynolds and Postles opened the largest tomato canning factory in the country. C.P. Rodgers commenced canning peaches, pears, berries, and tomatoes during the same time period, employing 100 local residents. S.W. Hall opened yet another canning plant, hiring 300 workers from the Frederica area to package corn and other farm produce. During 1887, Reik and Carlisle began canning operations, joining the smaller canning factory of Hydorn and McKnitt. In addition to these canning operations, Grier and Company operated a fruit and vegetable drying plant. Other industrial concerns in the Frederica area included a fertilizer factory; a husk factory, which produced mattresses; and a foundry cast plows. All of these businesses provided waterborne shipments for the vessels sailing the Murderkill (Miller 1970:129).

During May 1893, a group of Frederica residents obtained a legislative incorporation of the Frederica & Philadelphia Navigation Company and had the steel-hulled steamer FREDERICA built in Philadelphia in 1894 (Institute for Public Administration 2004:2-3; United States Treasury Department 1902:239). This three-deck steamer, "...provided transport at a price and speed competitive with the railroad, allowing the town to hold unto its Philadelphia markets well into the twentieth century" (ibid.). The *United States Coast Pilot* for 1904 indicates that the Murderkill River could be navigated for 7.75 miles to the town of Frederica by vessels of 5-foot

draft, but the sand bar at the mouth of the waterway could only be crossed at high tide. The text in the *Coast Pilot* warns, “Local knowledge is necessary for the navigation of the creek” (United States Department of Commerce 1904:60). The 1916 *Coast Pilot* states that a channel had now been dredged over the entrance bar and that “The deepest draft ordinarily going to Frederica is about 7 feet. The river is extensively used by steamers and schooners to Frederica, and by fishing and oystering at the entrance. A passenger steamer runs to Philadelphia” (United States Department of Commerce 1916:79).

By the early twentieth century, the pattern and density of settlement in Delaware had spread from localized urban centers to interlocked suburban communities across the state. Commercial and industrial “strip” development along major roads replaced small communities. The introduction of the automobile gave people a means to travel beyond the confines of a train or boat in a short period of time. Improvements to the state road system expanded manufacture, commerce, and agriculture throughout the state. The Dupont Highway (US 13/113), opened in 1924, connected northern and southern Delaware and shifted the state’s agricultural production permanently toward non-local markets (Figure 7). The DuPont Highway is designated US 13 from Wilmington to Dover and US 113 on southward to the Maryland border. Named for T. Colman Dupont who personally financed the project, the DuPont Highway was the first modern, paved road to run the entire length of Delaware (Dupont Highway website, accessed 12 November 2003).

DuPont was an early advocate of the automobile and a visionary. DuPont’s extravagant plans included a wide concrete roadway with tree-lined walkways and trolley tracks. He formed the Coleman DuPont Road Company and began building the southern road section in 1911. Because of the potential costs, the project was scaled back. In 1917 the state legislature created the Delaware Highway Department to finish the work with DuPont agreeing to personally finance at a cost not to exceed \$44,000 per mile. The state completed the 155.6-kilometer long highway in 1924. The northern section extending from Dover to Wilmington was the longest divided highway in the world at that time (Dupont Highway website, accessed 12 November 2003). Over time, a network of established roadways interlinked the rural farmsteads to the larger cities of Dover and Milford, providing not only economic outposts for goods and services, but social

interaction as well (Figure 7). Residential and commercial construction along the roadway would follow. The development of US 13/113 in the first quarter of the twentieth century and the mass production of the automobile allowed for increased numbers of travelers to pass through Little Heaven.

In the 1920s, trucks were able to utilize pneumatic tires, allowing the vehicles to use the extensive highway network without adversely impacting the paved surface. As a result, goods could be efficiently transported across the state and to distant market, with the Delaware produce industry as the major beneficiary (Rosin et al. 1992:3). Roadway improvements proved to be advantageous for not only truck traffic but for the burgeoning passenger bus service in the state, which began around 1927. Busses proved to be a significant competitor for the passenger rail carriers. The development of improved travel arteries across the state and the development of buss service bolstered the tourist trade to the Delaware beaches. Access to the beaches at Rehoboth, Lewes, Bethany, and Fenwick Island were now available to the local urban centers and major metropolitan centers of the Mid-Atlantic (ibid.:3).

In 1927, the Chief of Engineers from the USACE, writing in his annual report to the United States Congress and reporting on the Murderkill River, stated,

There are six wharves or landings of pile and timber construction, all of which are privately owned. Three are open to the general public when not in use by the owners, and three are open to public use upon payment of a moderate wharfage. There is no direct railroad connection. The facilities are adequate for existing commerce.

...The transportation of freight by water has been greatly facilitated, practically eliminating an 8-mile haul to the nearest railroad station. The rates by water are 25 to 50 per cent lower than by rail. Vessel movements at all stages of the tide have been made possible. (War Department 1927, Part 1:409)

Part 2 of the same 1927 report provides a breakdown of traffic moving in and out of the Murderkill River, as well as the draft of vessels and number of trips, as reproduced in Tables 2 and 3 below.

Table 2. Murderkill River Freight Traffic, 1926.

Classes of commodities	Receipts		Internal Shipments		Total	
	Tons	Value	Tons	Value	Tons	Value
Animals and animal products.....	2,240	\$88,100	630	\$11,904	2,870	\$100,004
Vegetable food products.....	.....	.....	4,752	189,851	4,752	189,851
Other vegetable products.....	.....	.....	401	4,812	401	4,812
Wood and paper.....	.....	.....	60	2,500	60	2,500
Nonmetallic minerals*.....	1,165	12,630	.....	.....	1,165	12,630
Ores, metals, and manufactures of.....	60	9,360	.....	.....	60	9,360
Chemicals.....	942	28,010	.....	.....	942	28,010
Unclassified.....	216	216,100	.....	.....	216	216,100
Total.....	6,568	354,200	5,843	209,067	12,411	563,267

Source: War Department 1927, Part 2:276

*primarily anthracite and/or bituminous coal

Table 3. Murderkill River, Trips and Drafts of Vessels, 1926.

Draft (feet)	Upstream				Downstream			
	Steamers	Motor Vessels	Oyster Boats (motor)	Motor Launches	Steamers	Motor Vessels	Oyster Boats (motor)	Motor Launches
6 to 8	85	27			85	27		
4 to 6			950				950	
Less than 4				3,600				3,600
Total net register tonnage	10,625	2,430	6,650	18,000	10,625	2,430	6,650	18,000

Notes: Passengers carried 20,000.

Numerous pleasure craft used the stream during the summer season.

Source: War Department 1927, Part 2:276

Two years after the stock market crash in 1929 and the beginning of the Great Depression, the Chief of Engineers reported on Murderkill River shipments during 1931, which included: "...oysters, oyster shells, coal, fertilizer, and agricultural products" (War Department 1931, Part 1:428). However, as the national financial malaise deepened, the navigation company found its

...prospects for the future diminished. The improvement of U.S. Route 113 in the mid 1920s had resulted in the construction of a causeway across the Murderkill at Barratt's Chapel, which effectively cut the town off from the bay. The improvement of local roads meant that the citizens of Frederica could get to Harrington, Dover, and Wilmington more easily and were not so dependent on their connection with Philadelphia. Business for the steamer fell off, with the railroads getting the last of the produce items. (Institute for Public Administration 2004:2-3)

The Chief of Engineer reports for the late 1920s and early 1930s provide evidence of the steamer's gradual demise. The FREDERICA operated 85 roundtrips in 1926; 77 trips in 1927; 28

trips in 1929; and no trips in 1930, signaling the end for the Frederica and Philadelphia Navigation Company and its route the Murderkill River (War Department 1928, Part 2:316; 1930, Part 2:307; 1931, Part 2:315).

3.2.6 *Recent History (1940 to Present)*

As indicated above, the freight and passenger steamer operating on the Murderkill River ended its service during the Great Depression years of the early 1930s. Unlike earlier editions, the 1947 edition of the *United States Coast Pilot* reports nothing about the steamer service for freight and passengers, but the text does state that

The river is used by motor vessels carrying coal and fertilizer to Frederica and by fishing and oyster boats at the entrance. The deepest draft ordinarily going to Frederica is about 8 feet. There is 10 feet at the landing. It is reported that rowboats can go 3 miles farther. (United States Department of Commerce 1947:112)

Agriculture continued to play a major role in the Frederica area. Farm mechanization provided a limited means to decrease the need for day labor, but migrant laborers, many coming from the South and Puerto Rico, supplied workers for both farm fields and the canning factories still operating in and around Frederica. These transitory workers resided in housing at the factories and on the farms. Draper and Company took over one of the canneries in 1941 and the plant still remained in operation in 1970. The firm continued canning such vegetables as asparagus, string beans, and lima beans. Local farms raised 90 percent of the asparagus and the entire stock of string beans canned at the Draper factory. However, the rise of the frozen food industry began to make serious inroads into the canning business and many of the factories shut down (Miller 1970:133-134).

Concerning the changes in Frederica during this time period, author Mary Emily Miller, writing in her 1970 article, reports:

For many years now Frederica has been largely a town for retired people. Most of the younger generations of local families have left to make their living in other parts of the country. The two world wars enlarged the scope of residents, and modern society has increased the occupations which need specialized training. The town boasts modern banking facilities. The increased use of car and truck,

largely responsible for the decline in importance of the town, enables residents to get to surrounding areas in a short time. Expanded road facilities speed the traffic by the sleeping town. The population increases of the 1950s and 1960s have raised the town's population, but it still does not reach the proportions cited for periods in the nineteenth century. The expansion of the Dover Air Force Base has tended to make Frederica a suburb of Dover with rented apartments much sought after. Contrary to the situation of the migrant worker who also stays for short periods of time, the air base personnel bring their families with them. This increases the need for housing as well as additional medical and public schooling needs for the town. In this way Frederica has become a town of the very young and the very old, with a transient military population. (Miller 1970:134)

Today, Kent County has experienced the normal shift away from agrarian pursuits. The major employers in the county now include the state and local government and the Dover Air Force Base. The majority (approximately 28.5 percent) of the employed civilian population of Kent County are engaged in management, professional, and related occupations. Approximately 26.9 percent are engaged in sales and office occupations; 17 percent are engaged in educational, health, and social services; 15.3 percent are engaged in production, transportation and material moving occupations; 11.6 percent are engaged in construction, extraction and maintenance occupations. Presently, only 0.7 percent is engaged in agriculture, forestry and fishing occupations (U.S. Census Bureau: Census 2000).

3.3 Title Chain for the Soulie Gray Property

The earliest record of land ownership in the project area begins with a warrant issued out of “the Court of S^t. Jonesses” to Thomas Williams during January 1680 for a 600-acre tract of land (Kent County Deed Book A:6). Known as “Williams Chance,” Richard Noble, the surveyor, acting under an order from Ephraim Herrman, Surveyor of New Castle County, located this property “...on the north side of Murder Creek” (Murderkill River) (Kent County Deed Book A:6; Kent County Warrants and Surveys W⁵:27). Unfortunately, the tract name on the actual survey is overwritten, making it somewhat indistinct. This lack of clarity on the survey may have led William Penn to erroneously identify the property as “Williams Choice” in the patent he issued “...the twenty-sixth day of the first month, one thousand six hundred eighty and four” (Kent County Deed Book B:37). Despite the difference in tract names between the warrant/survey and the patent, the legal survey description of the tract and its content are identical.

In November 1685, Williams and his wife, Alice, sold 200 acres of the 600-acre parcel to William Darvall “...for and in consideration of foure thousand pounds of good sound merchantable tobacco in cask” (Kent County Deed Book A:104). Darvall, “...a prominent New York and Lower Counties merchant and politician, ...served five years on the [Pennsylvania] Provincial Council...” (Foster 1991:312). He migrated from New York to the Lower Counties in November 1681 and initially settled in Lewes, Delaware. He began to acquire land in Sussex and St. Jones, later Kent, counties, amassing over 12,400 acres in his real estate portfolio, including the 200 acres of Williams’ Chance. His extensive land holdings warranted an assessment of £300 during 1693, the highest tax bill in the area (ibid.).

Darvall had a rather checkered public career and suffered financial embarrassment in 1689. During November of that year, he refinanced a debt exceeding £179 because he could not pay the amount due. He arranged with Richard Draftgate, “...Girdler and Citizen of London...” to extend the loan for two years and by mortgaging an aggregate of 4,700 acres, including the 200 acres he purchased from Thomas Williams (Kent County Deed Book L:4). Darvall assigned the rights to these lands to Draftgate for a period of 1,000 years. Beginning in the early 1690s, multiple parties brought legal action against Darvall for defaulting on his debts (Foster 1991:312-314). In 1694, William Penn won a case against Darvall, resulting in the court seizing

...several thousand acres of land and a personal estate worth £101, including a servant girl and slave. ...Creditors continued to press their claims against Darvall in 1697, 1698, and 1701. Nor did Darvall ever pay the debt he refinanced in 1689. After years of negotiations, the mortgaged lands were finally secured by the creditors in 1723. (Foster 1991:314)

Thomas Williams sold the remaining 400 acres of his land along the north side of the Murderkill to John Walker and Robert Edmondson during December 1684 “...for the sume of eight thousand pounds of good sound merchantable tobacco in caske...” (Kent County Deed Book B:56). Evidently the parcel already contained a dwelling, for the legal description contained within the deed includes the phrase “...where the house standeth...” (ibid.). Edmondson and Walker both had active public lives and served their fellow Kent County citizens as representatives in the Pennsylvania Assembly. Walker also held county-level offices, ranging from Justice of the Peace to County Clerk (Foster 1991:330-331; Beiler 1991:724-726).

Edmondson retained his share of the 400-acre parcel for one year before he sold his moiety in “Williams Choice” to John Walker for “...six thousand pounds of good sound merchantable tobacco or the value thereof...” (Kent County Deed Book B:110). The deed specifically describes this 400-acre tract as “...beinge the lower Part of a dividend of land of six hundred ackers called as aforesaid...where the house and plantation is scituated...” (ibid.). Walker remained tenured in the land for the ensuing eight years before selling the entire 400-acre parcel to Peter Bisailon for “18 pounds silver money” in February 1695 (Kent County Deed Book C:104).

Peter Bisailon was one of five Huguenot brothers who migrated to New France, initially landing in Montréal, Canada. He signed on to search for La Salle and later entered into an unsuccessful partnership for fur trading. Bisailon arrived in Pennsylvania during 1688 or 1689 in a “poor and miserable” condition (Dictionary of Canadian Biography website, 24 June 2006). However, he possessed extraordinary knowledge about the fur-trading business and soon joined with other Huguenot refugees in Jacques Le Tort’s trading organization, based on the Schuylkill River in present-day Spring City. Dr. Daniel Coxe employed Le Tort’s group in an effort to create a trading empire on the south shore of Lake Erie. Coxe finally aborted his work in 1692, but Bisailon and his fellow *coureurs de bois* continued their trading network in the Pennsylvania hinterlands, bringing them into contact with many New France officials. William Penn, wary of French incursions into “his colony,” sought to confine Bisailon’s movements and contacts, but the courts of England eventually established the Frenchman’s loyalty to Great Britain’s throne. However, the Pennsylvania proprietors continued to distrust Bisailon and extracted bonds from him on several occasion and even jailed him at least once. In 1712, he finally secured the protection of James Logan, working for the Pennsylvania secretary as a trader. Over time, Logan replaced Bisailon and his French comrades with Englishmen. While some of Frenchmen deeply resented being replaced, Bisailon retired to his extensive landholdings along the Susquehanna River in Pennsylvania, which he devised to his wife upon his death (ibid.).

Apparently, either Peter Bisailon failed to take up, occupy, and/or lease out the 400 acres of land he acquired from John Walker in February 1695, or, perhaps, he made an informal agreement with his employer, James Logan, to relinquish his ownership of the property. Whatever the

circumstance, William Penn's commissioners of property—Richard Hill, James Logan and Isaac Norris—re-patented the land that once belonged to Bisailon, now containing 440 acres, to James Steel during March 1717, forever extinguishing Bisailon's title claims to the parcel (Patent Book A5:216 as cited in Kent County Deed Book F:102). Steel remained vested in the land until May 1720, when he conveyed the entire 440-acre parcel to Jehu Curtis, grandson of the prominent Delawarean, John Curtis, for a mere 10 shillings (Kent County Deed Book F:102; Kent County Register of Wills probate records). The token price that Curtis paid for the land may be indicative of the parcel's dubious title history. A deed from February 1721, made between George Brown, son of John Brown, and "...Richard Hudson & his wife, Elion^r Hudson, & Elizabeth Pennenton of the other p^t the sd Elonoir Hudson & Elizabeth Penenton being full Sisters..." confirms the Curtis title in the 400 (440) acres, which deed states, "...there is a certain tract of land called Williams Choice containing in all Six hundred acres of land of which Jehu Curtis has four hundred..." (Kent County Deed Book G:8).

Jehu Curtis held the property he purchased from James Steel for five years. During July 1725, Curtis sold the entire parcel to John Brinckle Senior (Brinkle, Brinckloe) for £220, "...together with all messuages, houses, buildings, orchards, gardens, fields, pastures, improvements, woods, underwoods, timber, trees, ways, waters, watercourses, meadows, marshes, savanas, swamps, cripples, liberties, privileges, advantages, hereditaments & appurtenances..." (Kent County Deed Book I:9).

John Brinckle Senior died sometime during February or March 1748. In his will, he devised his Murderkill farm as follows:

Item: I give and bequeath to my son John Brinckle his heirs and assigns forever my Brick house in Murderkill Neck with seventy acres of land thereto belonging including the plantation.

Item: I give and bequeath to my grandson Joseph Brinckle his heirs and assigns forever one-hundred and fifty acres of land in the Murderkill Neck above said to be laid off on the uppermost part of the said tract including the part called Loftises Point with all the appurtenances thereto belonging.

Item: I give and bequeath to my son Daniel Brinckle his heirs and assigns forever all the remainder of my said tract of land and plantation in Murderkill Neck with all houses, privileges and appurtenances thereto belonging or appertaining. (Kent County Register of Wills, probate records)

In essence, John Brinckle Senior devised 220 acres to his son, John Brinckle Junior, in conjunction with grandson, Joseph, and another 220 acres to his son, Daniel Brinckle. During August 1754, Daniel Brinckle issued a quitclaim deed to John Brinckle Junior and Joseph Brinckle, relinquishing any residual claim he might possess in the 220 acres devised by his father to his brother and nephew (Kent County Deed Book P:210). This deed states in part, "...Two hundred and twenty acres thereof...to be laid off on the westernmost side of the said land so as to include Loftis's Point and the Dwelling House and Plantation on the west side of the county road namely the house and Plantation where Thomas Brinckle deceased formerly dwelt..." (ibid.). Five years later, in February 1759, Daniel conveyed his share of the Murderkill land that had belonged to his father, amounting to 225.50 acres, to Bowers Furbee for £267 10/-. Bowers Furbee married Anna Sipple, sister to Caleb and Waitman III, in ca. 1748 (Kent County Deed Book P:106; Sipple Family genealogy website). Madison Stathers prepared an unpublished manuscript in ca. 1935 that provides information about Bowers Furbee's farmstead on Williams's Chance:

Here he [Bowers Furbee] was to erect a mansion and develop the family fortune to their highest point. This was a wonderful property and well-suited for the great plantation which it became. The land extends east for almost a mile along the Murderkill and varies in width from a quarter to half a mile. Along the south extends a marsh which was and still is covered by a great forest. The tillable land back of the mansion was divided into four great sections and was surrounded entirely by a private road running the full length of the property along the Murderkill and marsh. The land is almost as level as a floor and very fertile. A short distance back of the location of the mansion, one still sees traces of the private landing for vessels plying the Murderkill, and the point where the slaves seined the enormous quantity of fish which supplied, in part, the tables of the Plantation.

The mansion, which was destroyed by fire about half a century ago, was built of brick in the style of the English country estates of the period. The story that the bricks were from England, often reported in regard to other old houses along the eastern seaboard, is of doubtful authenticity, although it is a fact that bricks from English brickyards were often used for ballast on the western voyage. The house stood at least a hundred feet back from the highway and at a later date was surrounded by great trees.

The mansion had two stories and an attic with a high steep roof as well as many dormer windows. An ell of the same was built on the rear and was probably added in extent as time went on. Both Bowers and his wife, Anna, speak of it in their wills-not without a touch of pride-as the 'mansion'. To judge from other houses of

the period, which are still standing in the region, one would say that they were quit justified in the use of the word. Perhaps, Delaware had few finer at that date.

The wealth of Bowers Furbee came to him by ancestral inheritance in his own family, by the succession of his wife, Anna Sipple, to her share in the wealth of her family; and especially by his own efforts.

During the period of the Revolutionary War, his properties included over a thousand acres. With these vast holdings and with slaves enough to exploit them, he rose to a high position of wealth in this community. The easily-accessible and excellent markets of Philadelphia assured him ready sale for all his products. Especially was this true during the period 1760-1780, which included the most important parts of the French and Indian, and the Revolutionary Wars. (Rash's Surname Index website, accessed 24 June 2006)

During July 1759, the Pennsylvania Proprietors issued a warrant for 101.4 acres in the name of Waitman Sipple, mariner, to the Pennsylvania Surveyor General. Samuel McCall surveyed the "salt marsh" in November 1766 (Kent County Patent Book S⁷:90). The resultant survey map of "Land & Marsh Called Cedar Neck" shows that Waitman Sipple received all of the marshland along the north side of the Murderkill Creek extending from Cranberry Gut on the east to a northward turn in the creek just past the draw bridge on the county road. The map includes a representation of the "long causeway thro the marsh on the lower Kings Road" (ibid.). Essentially, this survey represents all of the meadowland along the south end of Williams's Chance or Choice. The text accompanying the survey map attempts to clarify the proper identity of this specific Waitman Sipple, since the named appeared in three successive generations of the Sipple family. The text reads in part:

...Surveyed for Waitman Sipple, Mariner...*N.B.* Waitman Sipple Sen^r at this Date yet living, had a son named Waitman, now Dec'd who was father to the above named Waitman Sipple, Mariner, so called because he is a Shallop-man, for Distinction. (Kent County Patent Book S⁷:90)

Presumably with the approbation of his father, John Junior, Joseph Brinckle agreed to sell the land and farm buildings that he and his father had received through his grandfather's will, located on the west side of the county road, to Caleb Sipple during March 1761. Caleb Sipple, born before 1725 in Duck Creek, Kent County to Waitman Sipple Junior, married Sarah _____ ca. 1748. During his lifetime, Caleb worked as a "mariner" like his brother, Waitman (Kent County Deed Book V:189). His children included: John, born ca. 1749; Caleb (Junior), born July 1750; Garrett, born ca. 1752; Mary, born ca. 1756; Elizabeth, born ca. 1758; Thomas, born ca.

1760; and Nancy, born ca. 1761 (Sipple Family genealogy website, accessed 24 June 2006). Caleb the mariner died intestate prior to February 1762, and his real estate became the property of his heirs.

Joseph Brinckle and Caleb Sipple memorialized the agreement in Kent County records (Kent County Deed Book Q:76). The relatively short memorandum states, in part,

Memorandum of Agreement between Joseph Brinckle of Kent County in Delaware and Caleb Sipple of the same County and place, Witnesseth that the said Joseph Brinckle hath sold all that Plantation and the land thereunto belonging which was left to him the said Joseph Brinckle and his Father John Brinckle by his Grandfather John Brinckle deceased, lying and being in Murderkill Hundred and near the Draw Bridge, unto the said Caleb Sipple for the sum of Four Hundred and Fifty Pounds. (ibid.)

Caleb Sipple's death occurred before Joseph Brinckle could draft a deed for this transaction, but Joseph did eventually issue an indenture to the heirs of Caleb Sipple during February 1765 for the 220-acre parcel of land after the heirs paid the stated purchase price (Sipple Family genealogy website, accessed 24 June 2006; Kent County Deed Book R:19). The transaction between Brinckle and the Caleb Sipple heirs is confirmed on the November 1766 patent map, described above and drafted to Waitman Sipple III, brother of Caleb Sipple, based on a warrant issued in July 1759 (Figure 8). This survey map features the text, "land belonging to the heirs of Caleb Sipple, formerly of Joseph Brinckle" and "land of Bowers Furbee" (Kent County Patent Book S7:90).

Bowers Furbee died sometime before 12 February 1781 and in his will, drafted during 1775, he devised his part of "...Williams's Chance or Choice..." to his minor son, John Furbee (Kent County Register of Wills probate records; Rash's Surname Index website, accessed 24 June 2006). Subsequently, John also died so "...seized, in his minority, Intestate, and without issue..." so his brothers and sisters and spouses applied to the Kent County Orphans Court for the division of their deceased brother's real estate. As a result of the Orphan's Court proceedings, the court issued an order appointing five men "...to go upon, view, and (with the assistance of a skillful Surveyor) divide the Real Estate, the said John Furbee died seized..." (Kent County Register of Wills probate records). The survey map, dated 5 September 1788,

features all of the Williams's Chance land east of the county road and, viewing the map from north to south, identifies a "small house," "Mansion House," "Peach Orchard," and "Negro House" located near "...the middle of the Old Main County lower Road leading from Dover to Lewistown over the Draw Bridge" (ibid.) (Figure 9).

The property also contained another "small house" and a second "negro house" located along "a sprout of branch from y^e marsh" near the northeast corner of the property (ibid.). At the south end of the property, along the Murderkill Creek, the surveyor identifies "a former landing place" (ibid.). The map labels most of the land west of the county road as "Land of the Heirs of Caleb Sipple, part of the tract Williams's Choice or Chance" (ibid.). However, above the bend in the road, near the northwest corner of the survey map, the surveyor denoted the land west of the road as "Land now of Elizabeth Dougherty, devised to her by her Father, Bowers Furbee, in his Last Will; part of the Tract Williams Choice or Chance" (ibid.). The text accompanying the survey map provides a useful description of the property:

...it appears that the said Premises is situate in Murtherkill Hundred, in the County and State Aforesaid, adjoining and on the North West side of the Murther Creek, being part of a larger Tract of Land called Williams's Chance, or Choice, and on the South West side of the Cranberry Gut and Branch, Containing in the Whole of Clear Lands, Wood Lands, Marsh and Cripples the Quantity of Two hundred and Ninety Eight & three Quarters Acres, being the late mansion place of the said Bowers Furbee in his Life Time, and is the same which was by the said Bowers Furbee in and by his last Will and Testament devised to his said Son John Furbee, upon whose decease in Manner aforesaid. (ibid.)

Two heirs of Caleb Sipple, namely Caleb Sipple Jr. and his sister, Elizabeth, married to John Edmonds, sold 90 acres of the 220-acre tract that their father agreed to purchase from Joseph Brinckle as described above to John Sipple (Kent County Deed Book W:232). The transaction occurred during February 1780 and John paid £450 for the land, thereby returning the full purchase price that Caleb's heirs paid to Brinckle. A deed from May 1785 between Thomas Sipple, and Jamima, his wife, and John Sipple provides some information on what occurred after Caleb Sipple died intestate prior to February 1762, Thomas and John being sons and heirs of Caleb (Kent County Deed Book X:272). The deed confirms that Caleb's heirs, consisting of his wife and seven children, purchased the land from Joseph Brinckle that Caleb had agreed to buy. Through this deed Thomas conveyed his one-eighth ownership of the said 220 acres, located

west of the Lower County Road to the Drawbridge, to John for £150, even though "...no division of said Tract of land has ever been made among the several heirs and Representatives of said deceased..." (ibid.).

During May 1786, Waitman Sipple sold a portion of the salt marsh warranted to him in 1759 and surveyed in 1766, as described above, to Caleb Furbee. Of the 100-plus acres of meadowland that Waitman received, he conveyed 58.8375 acres for £100. This deed also indicates that the marshland adjoined "...the land now in possession of the aforesaid Caleb Furbee that he has now purchased of the several heirs of his Father Bowers Furbee, dec'd..." (Kent County Deed Book Y:223). However, no deed of record was found for the transaction between Caleb Furbee and his siblings. Subsequently, in October 1788, Waitman Furbee, Caleb Furbee, and the other heirs of John Furbee, deceased, sold to Peter Lowber Junior

...A certain tract or parcel of Land...on the North West side of the Murther Creek being part of a larger Tract of Land called Williams Choice (alias Chance) originally surveyed for Thomas Williams...and is bounded on the South West by lands of the heirs of Caleb Sipple and by and with the old County Road and on the South East by Murther Creek aforesaid, to the Mouth of Cranberry Gut on the North East of the said Cranberry Gut and on the North and North West by lands of Vincent Daugherty and Containing within the bounds & limits aforesaid about two hundred and forty two acres of Land Marsh and Cripple.... (Kent County Deed Book E2:16)

Lowber retained the property for over five years before selling the entire parcel, located east of the old County Road to the Drawbridge, to Perry Boon during May 1794 for £550 (ibid.).

At some point preceding November 20, 1797, John Sipple, owner of that portion of Williams's Chance west of the old County Road to the Drawbridge, died intestate (Kent County Register of Wills probate records). As John's estate worked its way through the Kent County Orphans Court, the judge hearing the case appointed five freeholders to view and divide the deceased's real estate. These men performed their assigned duties during May 1800 and filed their report with the court a year later for the division of 382 acres of land belonging to John Sipple among his wife, Priscilla, and his six children, Sarah, Mary, Garrett, Rachel, Hetty, and John. According to the metes and courses given in the Orphan's Court record, the Sipple property encompassed tracts of land bordered by the lands of Phillip Barratt, Vince Daugherty, and Parry Boone to the

north, west and east, and the Murderkill River and its tributary, Spring Creek, to the south. Each child received a plot of cleared land, wood land, and marsh land from the larger tract. Priscilla obtained the larger share of the tracts, with 43 acres of cleared land, 23 acres 84 square perches of wood land, and 55 acres of marsh (Kent County Orphan's Court Book F 45-49).

Sarah Bowers, a daughter and heir of John Sipple, along with her husband, John Bowers, retained their one-sixth title to her father's real estate for only a short time before selling their share to Perry Boon during January 1801, five months before the freeholders filed their report of division of John Sipple's land with the Orphans Court. Boon paid £177 10/- for the one-sixth share of 265 acres (Kent County Deed Book G2:24). Perry Boon died sometime before December 2, 1812 (Kent County Register of Wills probate records). In his will, Boon devised one-third of his real estate holdings to his wife for the remainder of her natural life; the legacy he devised to his son, Jacob Boon, included

...Also all that tract or parcel of land and marsh near Frederica aforesaid being part of the real estate of John Sipple dec'd and was conveyed to me by John Bowers Jr. and Sara his wife one of the daughters of said John Sipple together with their right in the dower of the widow of said John Sipple after the death of said widow together with the rights, members, and appurtenances to the said several tracts, pieces, or parcels of land marsh or lots of ground belonging or in any wise appertaining to him my said son Jacob Boon and his heirs and assigns forever subject to my said wife's third therein for and during her natural life.... (Kent County Register of Wills probate records)

To his eldest daughter, Sally Ann Boon, Perry states in his will that he devised, in part,

...all that tract or parcel of land and marsh lying and being in Murderkill Neck in the County aforesaid thereon Jacob Bryan now lives being part of a tract of land called Williams's Choice adjoining lands of the heirs of John Sipple and others and was conveyed to me by Peter Lowber.... (ibid.)

The remainder of John Sipple's real estate remained in the family until August 1824, when widow Priscilla Sipple and her two surviving single daughters, Rachel and Hetty, conveyed to Jehu and Thomas Clark, as tenants in common, "...all their right interest and estate in and to all the lands tenements and premises which were of the said John Sipple deceased" for \$2,100 (Kent County Deed Book X2:201). Less than three years later, the two Clark brothers also gained the outstanding one-sixth interest in the John Sipple lands that John Bowers Jr. and his wife, Sarah

Sipple Bowers, had conveyed to Perry Boon during January 1801. Jacob Boon sold this one-sixth interest he received through his father's will to Jehu and Thomas Clark as tenants in common during March 1827 (Kent County Deed Book A3:31).

Evidently, Thomas Clark died sometime between 1827 and 1849, for Jehu Clark and his wife sold the former Sipple property, totaling 400 acres of upland and marsh by July 1849, to John West on July 11, 1849, for \$5,000 (Kent County Deed Book Y3:98). The 1859 Byles map and the 1868 Beers map note the presence of two structures associated with "J. West" in the project APE, Structure A, depicted on the west side of the road in the project area, and Structure B, on the east side of the road (Figures 5 and 6). A third structure labeled as "J. West" appears on the map north, and outside, of the project APE and east of Barratt's Chapel. Each dot indicated on the Byles and Beers maps represents a dwelling or place of business, and not an outbuilding. In this case, Structure B is likely the mid-nineteenth-century residence identified as the Soulie Gray House, given its location in regards to the roadway and the small drainage. The third structure, designated Structure C, may be a mid- to late-eighteenth-century small house depicted adjacent to a branch of Cranberry Gut on the 1788 Bowers Furbee survey map (Figure 9). The function of Structure A is uncertain, but it may have served as the residence for the late-eighteenth- to early nineteenth-century Sipple family. The Inventory of the Goods and Chattels of John Sipple lists an extensive collection of livestock, farm equipment, household furniture, and crops as part of the deceased's estate, valued at over £620, the cumulative effects of a prospering farmstead (Kent County Register of Wills, 1797:147-148). The size of the Sipple tract (382 acres) and the number of children reflect a large farming family, one which occupied the land, unlike absentee landlords, and required a durable house to shelter the family.

It appears that the census enumerator for the 1850 agricultural census failed to record farm production at the Clark/West farmstead as no farm listing could be readily identified as the Clark-West farm while reviewing the schedules for Murderkill Hundred. However, the 1860 agricultural census does include the John West farm. Table 4 below provides information on the farm's agrarian production:

Table 4. 1860 Agricultural Census Statistics.

	John West Farm	Selected Kent County Totals	County averages
Total Number of Farms		1,948	
Number of Farms between 100 and 499 Acres		996	
Acres of Land, Improved	300	204,925	105.20
Acres of Land, Unimproved	100	104,657	53.72
Cash Value of Farm	\$20,000	\$8,778,258	\$4506.29
Value of Farming Implements and Machinery	\$500	\$223,222	\$114.59
Horses	5		
Milch Cows	10		
Working Oxen	4		
Other Cattle	10		
Swine	10		
Value of Live Stock	\$1,200	\$911,936	\$468.14
Wheat, bushels of	900		
Indian Corn, bushels of	1,600		
Oats, bushels of	400		
Irish Potatoes, bushels of	150		
Sweet Potatoes, bushels of	140		
Value of Orchard Products, in dollars	50	35,694	18.32
Butter, lbs. of	600		
Hay, tons of	6		
Value of Animals slaughtered	\$350	\$173,470	\$89.05

Sources: Agricultural Census, Murderkill Hundred, Kent County 1860:31-32; U.S. Census Bureau website 2006

During May 1866, John West purchased a fire insurance policy from the Kent County Mutual Insurance Company for his farmstead in Murderkill Hundred. As shown in Table 5, a variety of goods and structures were covered under this policy.

Table 5. Contents of Fire Insurance Policy for John West, 1866.

The Kent County Mutual Insurance Company Policy #2118 dated May 1, 1866	Estimated Value	Insured Value
On a two story and attick Frame dwelling 20x40 with back Building 16x18 (two story) with 1 story Frame Kitchen 16x18 with Piazza 10x18 warmed by stoves & Fire Places ashes kept away	\$5,000	\$3,333
On Pianno	\$450	\$300
On Furniture of Said Dwelling	\$1,200	\$800
On Meat House 12x16	\$100	\$67
On Contents of Meat House	\$200	\$133
On Carriage House 16x18	\$200	\$133
On Contents of Carriage House	\$200	\$134
On Frame Stable 16x24	\$300	\$200
On Frame Carriage House 12x50	\$300	\$200
On Corn Crib 8x16	\$75	\$50
On Contents of Crib	\$200	\$133
On Old Barn 18x22	\$300	\$200
On Contents	\$100	\$67
On New Barn 31x42	\$1,500	\$1,000
On 1500 Bushels of Corn	\$1,050	\$700
On 800 Bushels of Wheat	\$1,200	\$800

Sub-Totals	\$12,375	\$8,250
On a two story frame dwelling 16x18 with one story 16x18 occupied by D. Coverdale;	\$900	\$600
Totals	\$13,275	\$8,850
the above described property about one mile from Frederica owned and occupied by himself and partly insured in the Farmers Mutual of Wilmington for \$4240		

Source: Kent County Mutual Insurance Company records, Delaware Public Archives, Dover, Delaware

The fire insurance policy describes two frame dwellings as part of the West estate. The first structure consists of a 20-foot by 40-foot two-story frame dwelling with a two-story back building, one story frame kitchen, and piazza. This description closely resembles the characteristics of the Soulie Gray House as recorded by the Delaware State Historic Preservation Office in 1980. A 16-foot by 18-foot two-story frame dwelling occupied by D. Coverdale on one floor constitutes the second dwelling on the West property. There is no third structure defined as part of the West policy, suggesting that perhaps one of the dwellings depicted on the mid-nineteenth-century maps was in poor condition and not worthy of being insured. By 1936, Structure A is no longer present, while Structures B and C remain (Figure 7). Based on this information, it is suggested that Structure C represents the 16-foot by 18-foot two-story frame dwelling.

As John West aged, he evidently found his property to large too continue farming it. During April 1868, he sold 270 acres of his spread, "...being part of the mansion farm lately occupied by the said John West..." for \$24,000 to Isaac W. Barnes, who likely tenanted the farm at the time of sale (Kent County Deed Book F5:548). Lacking the capital to purchase the farm outright, Barnes signed a mortgage with West for \$17,000 (Kent County Mortgage Book G:94). Table 6 illustrates the reduced acreage of John West's farm in 1870.

Table 6. 1870 Agricultural Census Statistics of John West Farm.

	John West Farm	Selected Kent County Totals	County averages
Total Number of Farms		2,309	
Number of Farms between 100 and 499 Acres		987	
Acres of Land, Improved	90	216,958	93.96
Wood-land	20	65,138	28.21
Acres of Land, Unimproved	87	27,477	11.90
Cash Value of Farm	\$10,000	\$13,167,760	\$5,702.80
Value of Farming Implements and Machinery	\$50	\$348,184	\$150.79
Wages paid or board value	\$100	\$512,303	\$221.87

Horses	2		
Milch Cows	2		
Swine	2		
Value of Live Stock	\$230	\$1,184,690	\$513.07
Winter Wheat, bushels of	162		
Indian Corn, bushels of	400		
Oats, bushels of	400		
Irish Potatoes, bushels of	40		
Sweet Potatoes, bushels of	20		
Value of Orchard Products, in dollars	\$100	\$489,283	\$211.90
Butter, lbs. of	120		
Value of Animals slaughtered	\$202	\$254,880	\$110.38
Estimated Value of all farm produce	\$919	\$1,844,752	\$798.94

Sources: Agricultural Census, Murderkill Hundred, Kent County 1870:3-4; U.S. Census Bureau website 2006

The Barnes farm could not be found enumerated in the 1870 agricultural census for South Murderkill Hundred, Kent County. By the early 1870s, Barnes had defaulted on his mortgage and West sought relief through the Superior Court of the State of Delaware for Kent County. In May 1873, the Kent County Sheriff sold the farm back to West, the highest bidder, for \$12,000 (Kent County Deed Book V5:221). John West died during February 1877, so no identifiable listing in the 1880 agricultural census could be found for the West farm (Kent County Deed Book H6:306). With the demise of John West, his real estate holdings passed on to his wife, Rachel West. John Harrington, executor of John West's estate, serving as a representative for Rachel West, sold the property to William Wix, who served as the Kent County Sheriff, on December 7, 1881 for \$3,375 (Kent County Deed Book H6:306). According to the deed, the West estate consisted of two parcels; Parcel 1, 160 acres arable and 100 acres cripple land situated east of SR 1 and north of the Murderkill River, and Parcel 2, 70 acres arable land and 20 acres of cripple land found west of SR 1 and north of Spring Creek. The deed did not specify what became of the remaining 50 acres of land from the original 400 acre tract.

Parcel 1 received an additional 15-acre tract of land when William Wix made a second land purchase. This 15-acre parcel was part of a 40-acre tract situated on the north side of the Murderkill River and the east side of SR 12, likely encompassing the parcel of land between SR 12 and SR 1 and grounds within the town of Frederica. The Kent County Orphan's Court record for the term of March 1833 describes the parcel as Lot Number 5, Letter E, one of six properties that Jacob Boone Jr. devised to his wife, Rachel (Kent County Orphan's Court, March 1833:215).

Between 1833 and 1841, James Henry Boone, son of Rachel and Jacob Boone Jr., purchased Lot Number 5, Letter E, as well as four other lots, totaling 244 acres of land. Rachel retained the sixth lot, Lot Number 4, Letter H, as her residence. On January 2, 1841, Boone and his wife sold the five lots to Samuel Warren for \$2,000 (Kent County Deed Book P3: 92). Sarah Lister, John Hall, and Samuel Hall, grandchildren of Samuel Warren, received ownership of the property after the demise of Samuel Warren, his wife Sarah, and their father John W. Hall. John Hall and Charles Lister, husband of Sarah, sold their interests in the approximately 1,100 acres of property to Samuel Hall on July 7, 1892, for \$31,360.00 (Kent County Deed Book L7:23). The 1892 deed listed the 40-acre lot as Parcel 8, known as Bridge Lot and Marsh Back of Reynold's Canning Factory, and described the location of the lot on the east side of, and adjacent to, SR 12 and the north side of the Murderkill River. Two years later, Samuel Hall and his wife sold 15 acres of the 40-acre tract to William Wix for \$1,000 (Kent County Deed Book P7:33). The 1894 deed does not include information as to the disposition of the other 25 acres in the original 40-acre tract; however, the deed does refer to the 15-acre parcel as the Bridge Lot, suggesting that it is part of the current parcel situated between SR 1 and SR 12. From this point, the 15-acre tract becomes part of the larger land holdings of William Wix, referred to as Parcel 1.

With the 1894 purchase of 15 acres from Samuel Hall, William Wix owned 175 arable acres and 100 cripple acres land along the north side of the Murderkill River and east of SR 12 and U.S. 113/SR 1 (Parcel 1), and 70 acres arable and 20 acres cripple land along the north side of the Murderkill River and Spring Creek and west of SR 12 and U.S. 113/SR 1 (Parcel 2). Wix and his wife sold Parcel 2 to Luther Robbins Sr. on November 27, 1903 for \$3,300 (Kent County Deed Book V8:125). This tract of land remained consistent at 70 acres arable land and 20 acres cripple land within the Robbins family until the present time. Today, Parcel 2 consists of the Robbins Farm established on the west side of SR 12 and U.S. 113/SR 1, outside of the project APE.

William Wix and his wife sold Parcel 1 to Howard Wix on December 15, 1913, for \$13,000 (Kent County Deed Book O10:81). Howard Wix and his wife conveyed Parcel 1 to Jester Gray for \$1.00 on July 27, 1932 (Kent County Deed Book G14:86). The tract of land remained with Jester Gray and his wife, Soulie, until June 26, 1962, when the Grays sold the property to James Messick for \$10 in a strawman transaction (Kent County Deed Book X22:155). Two days later,

Messick sold the property back to Jester and Soulie Gray for the same \$10 (Kent County Deed Book X22:156). Jester Gray passed away on July 12, 1962, leaving all of his property to his wife, Soulie (Will Book Q3:333). Soulie held the property for another 11 years, passing away December 31, 1973.

At the time of Soulie's death, the Gray estate consisted of three properties: Tract 1, 175 arable acres, 100 cripple acres; Tract 2, 20 acres of land; and Tract 3, 171 acres of land. Tract 1 consisted of arable land and marsh land situated east of SR 1 and SR 12 and north of Spring Creek and the Murderkill River. Tract 3 consisted of arable land and marsh land east of Tract 1, once the property of Bowers Furbee, and later, the Honorable James R. Lofland. Tract 2 is located in the town of Frederica and outside of the current project area. According to the will of Soulie Gray, her three daughters, Jane Gray Hazzard, Sarah Burt Wilson, and Mary Katherine Wilson, were to retain an equal share in the properties (Will Book K4:257). The State of Delaware bought the property from the children of Jane Gray Hazzard, Sarah Gray Wilson, and Mary Katherine Gray Wilson on September 22, 1994 for \$1,557,000.00, ending the private ownership of the Gray Farm (Kent County Deed Book D100:232).

3.4 Documented Archaeological Sites and Previous Cultural Resources Surveys

A previously prepared Phase IA Planning Study assessed the sensitivity for historic and prehistoric archaeological resources within the project study area (Emory 2003). This work demonstrated that the majority of the study area has a high potential for undocumented historic and prehistoric archaeological resources. The assessment of high archaeological potential for historic sites is based on the presence of the *circa*-1860s Soulie Gray House (CRS K-835), located in the project study area on the east side of SR 1. The house and outbuildings were photodocumented by the Delaware Bureau of Archaeology and Historic Preservation in August 1980, recording the architectural characteristics of the farm complex. Although the Soulie Gray House was destroyed by a fire in 1993, the remains of the house foundation, as well as the remains of outbuildings, privies, wells, middens, and other farm features, may still be present in the ground. The presence of prehistoric/historic artifact scatters found in Site 7K-F-163B, located on the southeast side of a farm pond in the study area, and CRS K-835, the Soulie Gray House property, offers some evidence for intact historic archaeological remains.

The assessment of high archaeological potential for undocumented prehistoric archaeological sites is based on several factors. The project study area exhibits minimal land disturbance, which permits good preservation of prehistoric deposits and cultural features. SR 1 and SR 12 present the major land disturbances within the project study area, while the remainder of the land consists of plowed agricultural fields. Second, multiple prehistoric archaeological sites have been documented along both sides of the Murderkill River. One documented prehistoric site, 7K-F-11, is situated within the project study area in a plowed agricultural field on the north side of the Murderkill River between SR 1 and SR 12, while a prehistoric/historic resource, 7K-F-163B, is recorded adjacent to a farm pond in the study area north of the Soulie Gray House (Figure 10).

Additional prehistoric sites were recorded on the north bank of the Murderkill River east and west of the project area (Figure 10). In 1972, Griffith and Artusy (1975) recorded the Robbins Farm #1 Site (7K-F-12) on the west side of SR 1, approximately 7.6 meters west of the current APE, as part of an archaeological survey of the project corridor for the proposed Dover Bypass project. In 1975, limited salvage archaeology at 7K-F-12 for the dualization of U.S. 113 identified a Native American storage refuse pit (Feature 1) that contained Keyser Cord Marked and Potomac Creek Wares, ceramic types traditionally found in western Maryland and northern Virginia (Stocum 1977). The presence of numerous documented prehistoric archaeological sites within and surrounding the project study area suggests the project area contains high potential for undocumented prehistoric resources.

Beyond the project study area, the Murderkill River drainage contains a diverse collection of prehistoric and historic archaeological sites, most notably the Island Field Site (7K-F-17), a Woodland I-II mortuary complex located approximately 8.0 kilometers downriver from the project area. Research by Custer et al (1990) of the skeletal remains, grave goods, and burial features at the Island Field Site identified similarities between grave good assemblages, ceramic types, and mortuary patterns noted in northern Pennsylvania and central New York sites, as well as with related site in New Jersey, Ohio and Virginia, suggesting the transfer of cultural traits through regional interaction (Custer et al. 1990:58-62).