HUNTER-GATHERER BEHAVIORAL AND SETTLEMENT ECOLOGY OF THE INTERIOR COASTAL PLAIN, GEORGIA

by

KATHERINE CAMPBELL JONES

(Under the Direction of Victor D. Thompson)

ABSTRACT

This research explores the application of an ideal free distribution (IFD) model of settlement and subsistence to the Late Pleistocene and Holocene hunter-gatherer occupations (ca. 14,000 to 3000BP) of the interior Coastal Plain in Georgia. This study focuses on situating the culture history of the Ogeechee River valley, particularly its Coastal Plain extents, within its broader macroregional context, drawing on comparative archaeological and environmental data from surrounding watersheds and physiographic provinces. I address historical and contemporary critique of the interior Coastal Plain as a resource-poor region for Late Pleistocene and Holocene hunter-gatherer occupations. To do this, I constructed paleoenvironmental models using the Bryson macrophysical climate model (MCM) and hindcasted archaeological site and biface distributions to generate settlement models that test IFD predictions. My approach combines synoptic climatological methods, net primary productivity estimates, isometric fossil pollen data for target arboreal taxa, biodiversity indices, and site data to generate a continuous settlement landscape of variable habitat suitabilities through time. I argue that, while IFD explains much of the settlement variation seen in Late Pleistocene settlement patterns, it does not account for the hunter-gatherer settlement patterns seen during the Early and Middle Holocene. Instead, I suggest that IFD variants like IFD with Allee effect (IFDA)

and Ideal Despotic Distribution (IDD) more appropriately explain the settlement processes that implicate the creation and maintenance of common pool resource bases and restricted access to products like hickory nuts and high quality tool stone. I propose that incipient management of and access to common pool resources like lithic outcrops and “predictable prey” like mast products may have set up collective action problems that necessitated the creation of incipient social institutions to manage these regularized interactions and activities. I suggest that these loosely integrated institutions manifested in settlement patterns and processes by at least the Late Pleistocene-Early Holocene transition.

INDEX WORDS: Archaeology, Hunter-Gatherers, Paleoindian, Archaic, Settlement Modeling, Southeastern United States, Behavioral Ecology, Ideal Free Distribution, Climate Modeling, Paleoenvironmental Modeling, Southeastern Archaeology

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by

KATHERINE CAMPBELL JONES

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DEDICATION

For Trav, Mama, and Daddy

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CHAPTER 1

INTRODUCTION

Human migration into North America was the catalyst for more than 12,000 years of hunter-gatherer lifeways that would define the “story of humanity’s past” (Meltzer 2009:67) for half the globe. The rapidity of migration into and settlement of these environmentally diverse landscapes is virtually unmatched in the lifetime of our species, and will likely never be repeated (Anderson 1990, 1996a; Miller et al. 2022a; Tankersley 2004). The settlement and subsequent human adaptations to climate change in North America continue to be major research foci for archaeologists, but much of this continental narrative is drawn from the perspective of famous Late Pleistocene (ca. 13,400–11,500 cal BP) sites in the American Southwest like Blackwater Draw, Folsom, and Clovis (Tankersley 2004). By comparison, the Late Pleistocene and Holocene hunter-gatherer archaeological record of the American Southeast remains undertheorized, despite an unbroken record of more than 12,000 years of habitation (Anderson and Sassaman 2012; Halligan et al. 2016).

Traditionally encompassed by the Paleoindian and Archaic periods (ca. 13,400–3200 cal BP), the hunter-gatherer Southeast is an epicenter of human cultural development, from rapid population growth and band/macroband development to eventual decreased mobility, regionalization, and population increase (Anderson 1990, 1995a, 2002, 2004; Anderson and Sassaman 1996a, 1996b, 2012:66; Anderson et al. 2015; Hollenbach 2009; Miller et al. 2022a; Sassaman and Anderson 1996; Smallwood et al. 2015) (Figure 1.1). While compelling at the regional scale of historical narrative, southeastern hunter-gatherer research is poorly understood in the context of global hunter-gatherer and settlement/subsistence studies (with some exceptions – see

Halligan et al. 2016 and Thompson et al. 2020 for southeastern hunter-gatherer studies with extraregional impact). Even within the Southeast, hunter-gatherer studies tend to focus on the Paleoindian (ca. 13,400-11,500 cal BP) and Late Archaic (ca. 5800-3200 cal BP) periods, to the exclusion of both the Early and Middle Archaic period narratives (ca. 11,500-8900 and 8900-5800 cal BP, respectively) (Anderson et al. 2015; Anderson and Sassaman 2012; Miller et al. 2022a; Sassaman 2010). The bodies of literature that do exist focus on specific mobility strategies (Anderson and Gillam 2000; Anderson and Hanson 1988; Daniel 1998; Martin 1973; Meltzer 2009; Kelly and Todd 1988; Parry and Kelly 1987), landscape features (Daniel 2001; Goodyear 1989; Miller 2016; Miller and Carmody 2016, 2020), or are tailored to fit the culture histories of particular subregions or watersheds (Anderson 1990, 1991a; Chapman 1985; Gardner 1977; Morse and Morse 1983; O'Steen et al. 1986; see also Bettinger et al. 1997:897 for a counterargument on environmentally tailored-fit models).

While this collective body of literature has undoubtedly contributed to richer understandings of human settlement in the Southeast, there is space for growth and development of models that more fully explain the totality of human occupation and decision-making from the Paleoindian through Archaic periods. In particular, research that addresses the *process* of settlement rather than specific drivers or deterministic catalysts for mobility and social reorganization is needed. My research addresses the dearth of temporal and landscape coverage in hunter-gatherer southeastern studies spanning the Paleoindian through Archaic periods, but particularly the 5,700-year gap in coverage from the Early-to-Middle Archaic periods, which covers nearly half the hunter-gatherer timeline in this region and is frequently buried under the proverbial back dirt of narratives that are of greater interest to scholars and the general public (Sassaman 2010:6-7).

The lack of theorization is explained, in part, by how exactly the Archaic period and subperiods are defined. The Archaic is *not* defined by the fluted-point-making, megafauna-hunting continent-jumpers of the Paleoindian period; nor is it associated with the widespread mound building and sedentary nascent agriculturalists of the Woodland and Mississippian periods that follow it (ca. 3200 cal BP to European contact) (Anderson and Sassaman 2012). It is thus "the victim of being sandwiched between two pillars of origin" (Sassaman 2010:7). Bracketed on one end of the timeline by the origins of humans in North America, and on the other end by the origins of societies with more recognizable material culture and landscape modifications, the Archaic period occupies a liminal space in southeastern archaeological discourse. It draws less attention from researchers than earlier and later periods because it does not explicitly answer an "origin" question.

This study takes up the challenge of creating a more comprehensive hunter-gatherer settlement narrative for the Southeast, using the Ogeechee River valley in the interior Coastal Plain of Georgia and surrounding watersheds as a test case (Figure 1.2). While acknowledging there are many factors influencing settlement variation across the Southeast during the Paleoindian and Archaic periods (Miller et al. 2022a; Sassaman and Anderson 1996), the model of settlement used here relates local ecological variation to both macroregional and watershed-extensive shifts in settlement patterns through different climatic shifts. The theoretical framework for the model places climate change and human settlement and subsistence optimality predictions of behavioral ecology in balance without giving undue emphasis to either phenomenon.

This is an inherently multi-scalar analysis, in both geographic and temporal domains. Regional archaeological and environmental data from the Ogeechee River valley are contextualized by comparative and macroregional data from archaeological settlement patterns in neighboring regions throughout the interior Coastal Plain and

nearby physiographic provinces. All archaeological interpretations are contextualized with ecological data at various temporal scales.

In this chapter I present the behavioral ecology theories guiding this research and introduce the study area and research design. Following these discussions and overviews, chapter summaries detail the supporting arguments and methodologies for the dissertation's conclusions.

Theoretical Research Context

In this section, I will provide a brief theoretical discussion of the behavioral ecological approaches utilized in this study. A broader discussion of behavioral ecology and optimality studies in archaeological discourse are covered in Chapter 2. While not exhaustive, this review will track my interpretation of their utility in answering questions of hunter-gatherer decision-making and landscape use in the Late Pleistocene and Early-to-Mid-Holocene Southeast. The goal of this research is to gain a more complete understanding of precontact settlement systems in relation to changing environmental conditions, and questions are guided by a theoretical framework that offers interpretive value in both environmentally deterministic and non-deterministic ways.

Human Behavioral Ecology

Human behavioral ecology (HBE) has its roots in broader evolutionary ecology narratives that consider "evolution and adaptive design in ecological contexts" (Winterhalder and Smith 1992:3). Evolutionary ecology as conceived of in the social sciences is grounded in the scholarship of the 1960s and 1970s with the works of ecologists like Charnov and Orians (1973), Hutchinson (1965), and MacArthur and Pianka (1966), among others studying the social, reproductive, and foraging behaviors of animals. It looks specifically at adaptive design in animal behaviors, life histories, and morphological characteristics. In evolutionary ecological frameworks, behavior is "adaptive" when it "tracks environmental variability in ways that enhance an individual's

inclusive fitness, defined most generally as its propensity to survive and reproduce" (Bird and O'Connell 2006:143-144).

Behavioral ecology is a subset of evolutionary ecological theory that looks specifically at fitness-related behavioral decisions that organisms make in different environmental contexts. Research questions implementing behavioral ecological frameworks – and *human* behaviors specifically – look at patterns of different decisions around landscape utilization through mathematical modeling, and consider both the social and ecological contexts for those decisions (Smith and Winterhalder 1992). Ethnographers saw potential in behavioral ecological approaches to answer similar questions of human decision-making on changing landscapes (Chagnon and Irons 1979; Winterhalder and Smith 1981). Archaeologists soon adopted behavioral ecological frameworks, and expanded their interpretive utility to questions of subsistence changes, resource transport, technofunctional adaptations, agricultural origins, and material correlates for social differentiation (Bettinger 1991; Bird and O'Connell 2006; Kennett and Winterhalder 2006a; Winterhalder and Smith 2000).

Behavioral ecological modeling of human populations strives for simplicity. It looks for the most "essential" features of adaptive success, and "neglects to some degree the myriad ancillary variables of concern in the more particularist tradition of anthropology" (Winterhalder and Smith 2000:52). It assumes that complex social phenomena are best studied (and compared) in a reductionist fashion through the use of objective optimality models. Archaeological investigations using behavioral ecological frameworks offer dynamic, top-down approaches to investigating mobility, settlement, and subsistence strategies over time, and address interrelated questions of environmental conditions and human decision-making like:

(1) What is the natural resource structure of a particular location?

(2) How does this natural resource structure change over time?

(3) What are the specific advantages of individual locations for different subsistence options?

(4) How do advantageous hunting and foraging landscapes change over time?

(5) How do humans organize and reorganize their settlement strategies across changing landscapes?

I attempt to answer these questions using ideal free distribution modeling (IFD), summarized in the following sections.

Ideal Free Distribution

Ideal free distribution (*sensu* Fretwell and Lucas 1969) is a spatial population ecology model derived from behavioral ecology (e.g., Smith 1999; Winterhalder and Smith 2000). It assumes that, given the choice to settle in one of two or more habitats differing in their resource base, exposure to hazards, or ability to provision (collectively, their 'habitat suitability'), an organism will make the best, most optimal choice. In this sense, IFD and its variants have been described as "risk-sensitive techniques," implying that optimal habitat choices will inherently include considerations of risk management (Winterhalder 2002:217). IFD also assumes that suitability of a given habitat declines over time with increasing density of "conspecifics," or members of the same species (Winterhalder et al. 2010:471). In this case, suitability is *negative density dependent*, in that each additional individual added to a habitat decreases the overall suitability of that habitat. Population pressures on diminishing resources degrade the quality of the highest suitability habitat until it equals the suitability of the second ranked habitat. At this point, IFD predicts that populations will move into this lower ranked habitat because resource returns are equally optimal to the now-degraded highest suitability habitat. As such, the IFD model contextualizes the relationship between habitat selection, habitat suitability, and population growth through negative density dependence in a given set of habitats.

Seven assumptions of IFD must be met for the model to be applicable (after Winterhalder et al. 2010:471): (1) suitability is measured according to characteristics that are basic to survival and reproductive success of organisms, and that are common to all habitats under consideration; (2) habitats generate resources (their suitability measures) at a constant rate; (3) suitability measures establish a unique ordering of differential suitabilities across all habitats being considered; (4) the relationship between suitability and resource density is positively correlated, and monotonically increases or decreases (Figure 1.3); (5) all individuals in the population have similar resource needs and resource acquisition abilities; (6) individuals will make the best, most optimized choice (the 'ideal' element of IFD), meaning they possess the landscape information necessary to appraise and compare the relative suitabilities of different habitats; and (7) there are no limitations to an individual making a decision to enter and utilize a habitat. Movement is unimpeded and individuals take up residence in a habitat with equal access to resources as existing residents (the 'free' element of IFD).

These studies do not assume that humans had perfect knowledge of all suitable habitats, or that they always made the 'best' choices in habitat suitability. Instead, archaeological applications of IFD demonstrate that it is a useful null model – the pattern that satisfies all predictions and constraints of optimality – to use comparatively against time-averaged archaeological data (Robinson et al. 2019:68). Similarly, these studies do not directly test the validity of IFD; rather, they attempt to make sense of multi-scalar archaeological data in terms of the model parameters. They rely on the fact that each of the model parameters is internally consistent and independently verifiable (quality inputs = quality outputs; see Winterhalder 2002:220 for a more thorough explanation of model quality). Two additional variants of IFD are addressed in this project, and described below.

IFD with Allee Effect

In some settlement situations, the addition of individuals to a suitable environment is actually beneficial, rather than negative density dependent (Figure 1.3). In instances where cooperative behaviors enhance the suitability of a habitat, the ideal distribution of organisms is known as IFD with Allee effect (IFDA) (Allee 1931; Stephens et al. 1999), after observations made by ecologist Warder C. Allee who identified the positive correlation between population density and individual fitness. IFDA studies in humans address population density issues among "socially obligate" societies (Winterhalder et al. 2010:473), including effectiveness of finding a mate, socially organized subsistence activities, and defense. As Winterhalder and colleagues (2010) suggest, opportunities for Allee effect are numerous in human populations "because of our ability to implement socially organized and linguistically shared technologies that produce economies of scale in the capture, defense, and use of resources" (473). Territorial expansion, time-intensive resource acquisition, and random episodes of population decline provide social contexts in which positive density dependence Allee effects may be important. At a macroregional level of analysis, Robinson and colleagues (2019) suggest that archaeological signatures of IFDA predictions will reflect gradually clustered settlements, whereas IFD with negative density dependence predictions will result in sites being more dispersed across the landscape.

Ideal Despotic Distribution

The second variant of IFD addressed by this research is ideal despotic distribution (IDD) (Bell and Winterhalder 2014; Sutherland 1996). In this variant of IFD, individuals defend the highest suitability habitats, impeding entry into the habitat or outright displacing other individuals (Figure 1.3). As a result of displacement, individuals must move into less suitable habitats. Robinson and colleagues (2019) suggest that the archaeological signature for IDD settlement distribution is negative density dependent,

such that population increase within a given habitat will lower the overall quality of that habitat. Settlements should look more dispersed across the landscape across a wider range of suitability types as a result. There is some interpretive difficulty in distinguishing between the dispersed settlement signatures of IFD and IDD, particularly when using archaeological settlement data that are not full-coverage (Bell and Winterhalder 2014; Miller and Carmody 2016, 2020). Robinson and colleagues suggest that the introduction of 'despots' guarding resources causes shifts in settlement orientation around high suitability resource areas, and will be more apparent in abrupt archaeological settlement pattern reorganizations than gradual IFD predictions that suggest the process of population increase and marginal habitat suitability take much longer to manifest macroregionally (2019:69).

Settlement Ecology

While behavioral ecological theory offers a specific predictive component to this research through IFD optimality modeling, the models are interpreted through the lens of settlement ecology. Settlement ecological narratives dissect archaeological settlement patterns to identify how past peoples responded to a wide range of physical (environmental) and non-physical (sociocultural) pressures (Kellett and Jones 2017; Stone 1996). Behavioral ecological modeling that is considered through the lens of landscape-based settlement ecology offers simple, testable hypotheses for human decision-making and settlement strategies. The questions derived from these models are transferable to any region and temporal range, making results and interpretations interregionally comparative. With the incorporation of archaeological site data, they offer settlement and subsistence interpretations that are more consistent with both localized archaeological narratives and environmental histories. In the following section, I will introduce the study region for this project and why it is a good test case in optimality modeling.

Study Area and History of Investigations

In chronicling the backwater communities of Georgia, photographer Jack Leigh commented "…the Ogeechee River is and always has been a sacred place, rooted in the hearts of its people" (Leigh 1986:2). Situated between the Oconee, Altamaha, and Savannah Rivers, the blackwater Ogeechee River valley contains a rich settlement history, with evidence of continuous occupation from the Late Pleistocene (ca. 13,400 BP) through present-day (Anderson and Sassaman 1996a:17; Braley 1995; Elliott and Sassaman 1995; Smallwood et al. 2022; Steinen 1995). The Ogeechee flows for over 250 miles from Union Point in the Georgia Piedmont into the Atlantic Ocean near Ossabaw Island. The entire watershed drains over 5,300 square miles of land in portions of 21 Georgia counties.

Archaeological research on lands within the Ogeechee watershed is limited, and previous investigations have concentrated on the narrow coastal strand, barrier islands, and Fort Stewart Military Reservation (Botwick et al. 2016; Butler et al. 2010; Fish 1976; Thomas 2008; Thompson and Thomas 2013; Turck and Thompson 2016). In fact, many of the tributary basins within the watershed have never been professionally investigated (Elliott 1992; Fish 1976). There are few early references to the archaeology of the Ogeechee River valley, in part because no large mound centers are located along its mainland course, unlike the better-studied Savannah and Oconee Rivers to the east and west, respectively. Even Clarence B. Moore, a name commonly associated with early southeastern archaeological discourse, apparently made no intensive investigations into the Ogeechee watershed, aside from his work on Ossabaw and Skidaway Islands (Elliott 1992; Larson 1998). A brief summary of professional investigations in the Ogeechee River valley is provided in the following section.

Previous Investigations

The West Effingham Survey, conducted by Daniel T. Elliott and the LAMAR Institute in 1992, identified 30 site across 690 acres in western Effingham County, with diagnostic components ranging from the Early Archaic (ca. 11,500-8900 cal BP) to Mississippian periods (ca. 1000-400 cal BP) and into the historic period (Elliott 1992). The Di-Lane Plantation Survey, led by Chad Braley of Southeastern Archeological Services, Inc., in 1993, identified 238 sites over 8,000 acres in southern Burke County, with components from the Paleoindian (ca. 13,400–11,500 cal BP) through historic periods cataloged in a subregion of the watershed known for its Late Pleistocene occupational history (Braley and Malone 1996; Brockington 1971; Jones et al. 2016; Smallwood et al. 2022). The Environmental Services, Inc., survey of the Genesis Point development tract covered 2,300 acres and identified 83 archaeological sites with diagnostic components ranging from the Paleoindian through historic periods (Hendryx 2006). Fort Stewart Military Reservation surveys (e.g., Botwick et al. 2016; Butler et al. 2010, among others) cover more than 140,000 surveyed acres of land over more than four decades of intensive research as part of their Section 110 historic preservation program (National Historic Preservation Act 1966:§110). Academic research in the Ogeechee watershed is more limited, and focuses primarily on the Late Archaic Stallings communities (ca. 5150-3200 cal BP) of the adjacent Upper/Middle Savannah River valley (Gilmore et al. 2018; Sassaman 1993, 2004; Sassaman et al. 1995). A thorough review of the academic research implicating Ogeechee hunter-gatherer settlement is provided in Chapter 2.

The Ogeechee watershed's ecological and precontact settings make it an ideal place to investigate variation. Compared to adjacent areas of the interior Coastal Plain that have been used to develop models of hunter-gatherer settlement and subsistence (Anderson 1995a, 1996a; Anderson and Hanson 1988; Anderson and Joseph 1988;

O'Steen 1996), the Ogeechee watershed is characterized as a forested blackwater river valley surrounded by large riparian buffers (Lowrance et al. 1984). Blackwater rivers are aquatic ecosystems that experience periods of low dissolved oxygen concentration, high temperatures, and low discharge (Meyer 1992; Mulholland 1981). They typically contain high dissolved organic matter concentrations (contributing to their tea-like color), low topographic gradients that contribute to broad floodplain extents that are seasonally inundated, and meandering channels (Meyer 1990; Neville et al. 2021). Blackwater rivers drain regions with sandy soils that cannot retain organics, which then leach into the rivers, imparting their signature 'blackwater' color (Meyer 1990:643). The hydrologic structure of the Ogeechee watershed and its characterization as a less suitable habitation area for Late Pleistocene and Holocene hunter-gatherers compared to adjacent regions (Larson 1980; Schnell and Wright 1993) provide testable hypotheses on habitat suitability within the IFD framework.

Research Design

As Bettinger (1991) explains, optimality studies like IFD provide "… a yardstick of objective economic rationality as basis for the comparative study of human behavior," without which "…it would be impossible to know whether human behavior was governed by cultural norms and ideas or by rational, self-interested incentives" (106). I chose iterative paleoenvironmental model construction and georeferenced archaeological site and biface distributions to generate settlement models that test IFD predictions. In this research, IFD is held as the null model – the 'ideal' settlement pattern that represents a baseline for optimal distribution of archaeological sites, and the "yardstick" against which archaeological settlement pattern data are compared. A 'habitat suitability' metric (*sensu* Miller and Carmody 2020) derived from the North American Pollen Database (NAPD) and a continental fossil pollen study (Williams et al. 2004) was generated to create an interpolated landscape surface with ranked features of perceived high, medium, and low

suitability to human occupants. I used the environmental model, archaeological site data, and habitat suitability metric to translate IFD predictions into a practical explanatory predictive model. From the model, I deconstructed the landscape of the interior Coastal Plain into units of "spatial currencies" (Verhagen and Whitley 2012:74) of high, medium, and low resource returns for human occupants.

My approach to this research design is a top-down, landscape-based regional perspective that addresses questions of human settlement by studying the environmental factors that underlie how and why southeastern hunter-gatherers settle on specific landscapes (Billman 1999; Blanton et al. 2005; Willey 1953). The demographic trends and associations with changing environmental conditions afforded by IFD, as well as the culture historical implications of deviations from IFD, lend themselves to a robust research question in this region: **Can an ideal free distribution model of human population establishment and expansion explain the settlement dynamics seen in the interior Coastal Plain of Georgia from the Late Pleistocene through Mid-Holocene (ca. 13,400 to 3200 cal BP)?**

To answer this question, a tiered approach is used, beginning with iterative model construction and incorporating both environmental and archaeological inputs to generate a robust data set of independent archaeological and environmental variables.

Tier 1: Construction of the Macrophysical Climate Model (MCM)

The Bryson and DeWall (2007) macrophysical climate model (MCM) estimates temperature and precipitation averages in 100-year increments through averaging monthly temperature and precipitation rates drawn from NOAA climate normal data from the years 1961-1990. Then, climate normal data is hindcasted to specific "centers of action," described as follows (Bryson 2019:xi):

> "…called 'centers of action' or large-scale semi-permanent features of the planetary atmospheric circulation, such as the oceanic sub-tropical anticyclones. These are semi-permanent centers of high or low pressure located over the oceans…Since there is only one climatic history, these calculations of the past locations need to be done only once, unless a better method of calculating this history is devised."

The model framework applies concepts of synoptic climatology (Yarnal 1993) – or the relationship between atmospheric circulation patterns and surface environments – to reconstruct the climate histories of particular regions, identifying and modeling the local climatic long-term responses to the locations of the "centers of action" in the appropriate atmospheric regime. The MCM template back-calculates past temperatures and precipitation rates for individual weather stations in the study region based on climate normal averages for these sites from 1961-1990 and their relationships to climatic "centers of action" like the North American jet stream and the Inter-Tropical Convergence Zone. These temperature and precipitation rates are mapped in 1000-year time slices beginning in the Late Pleistocene at the onset of the Bolling-Allerød interstadial (ca. 14,690 cal BP) just prior to the Early Paleoindian period (ca. 13,400-13,250 cal BP) and ending with the Late Archaic period (ca. 5800-3200 cal BP) (Anderson et al. 2015; Anderson and Sassaman 2012). From MCM outputs, net primary productivity (NPP) estimates are calculated using the Miami model (Lieth 1972) to generate predictions about biomass change through time. A thorough discussion of model parameters, inputs, and regressions is provided in Chapter 3.

Tier 2: Generating Isometric Fossil Pollen Maps

After construction of the MCM for the interior Coastal Plain of Georgia, fossil pollen data are integrated into the model extents to contextualize the distributions of forest species and major succession patterns in the region (Delcourt and Delcourt 1985; Williams 2000; Williams et al. 2004). Humans entered the southeastern United States at a time when the structure of the forests was rapidly changing, with mixed deciduous

genera expanding to cover broad swaths of the Southeast at the onset of the Holocene (ca. 11,500 cal BP) and replacing the boreal forests of the Late Pleistocene, then retreating slightly to make way for the expansion of the southern pine forests after the Holocene Climatic Optimum (ca. 8900 cal BP) (Delcourt and Delcourt 1983, 1985). In this timeframe of shifting climatic conditions, hunter-gatherers managed to colonize (in the biological sense) every ecological zone of the Southeast (Anderson et al. 2015).

The isopollen maps for each 1000-year time slice are then mapped onto the MCM temperature and precipitation estimates for the entire temporal range of the study. Biodiversity indices for major genera (*Quercus, Carya,* and *Pinus,* among others) constrain MCM extents that exist outside interpolated isopollen estimates, particularly for temperature and precipitation minima and maxima for each target genera downloaded from databases like the Global Biodiversity Information Facility (GBIF). Where deviations from the isopollen extents occur, the model parameters are constrained rather than the isopollen extents, because the fossil isopollen data are chronostratigraphically controlled interpolations (Williams 2000; Williams et al. 2004), whereas the MCM outputs represent a hypothesis of the climatic history for a given region that can be independently verified against environmental data (Agenbroad and Thayer 2019).

Tier 3: Generating High-to-Low Habitat Suitabilities for Landscape

After constraining the MCM to biodiversity indices for major plant taxa derived from the isopollen maps, the individual interpolated data points were pulled from the 2004 continental fossil pollen study (Williams et al. 2004) and individually ranked into categories of high, medium, and low suitability (*sensu* Miller and Carmody 2020) based on relative frequencies of oak-hickory (*Quercus-Carya*), pine (*Pinus*), and mixed deciduous pollen from genera that take up residence in areas once dominated by boreal forests (Delcourt and Delcourt 1985). ‘High suitability’ habitats contain higher frequencies of oak and hickory pollen compared to pine pollen, as well as higher

frequencies of mixed deciduous genera compared to pine. Both hickory and oak are indicator taxa for mesic environmental conditions, and both masting genera provided subsistence products for hunter-gatherers as far back as the Mid-to-Late Paleoindian period across the Southeast (Carmody 2014; Hollenback and Carmody 2022; LaMoreaux et al. 2009). 'Medium suitability' habitats contain higher frequencies of oak and hickory pollen compared to pine, but pine dominates over other mixed deciduous genera. 'Low suitability' habitats contain higher frequencies of pine than both oak-hickory and mixed deciduous taxa. The spread of pine through the Coastal Plain and coinciding population reorganizations during the Middle Holocene contribute to the proliferation of settlement narratives suggesting the monodominance of pine was indirectly responsible for the dearth of settlements in the Coastal Plain during the later Early and Middle Holocene (Delcourt and Delcourt 1985; Larson 1980; Schnell and Wright 1993). More complete explanations of the habitat suitability metric and regional arboreal relationships are contained in Chapter 3. These relative suitabilities were then plotted and interpolated at 1000-year intervals to create suitability hotspot maps for the temporal range of this project.

Tier 4: Hindcasting Archaeological Site Data in 1000-Year Time Slices

In order to evaluate where hunter-gatherer populations chose to settle or abandon specific watershed areas, site data for all watersheds were acquired from Georgia's Natural, Archaeological, and Historic Resources GIS (GNAHRGIS), maintained by the Georgia Archaeological Site File and Laboratory of Archaeology and the Paleoindian Database of the Americas (PIDBA) (Anderson et al. 2010). The spatial and temporal biases and limitations of these data sets are explained and reconciled in Chapters 3 and 4, respectively. Determinations of site clustering in specific habitat suitability zones (consistent with predictions based on IFD and IDD settlement patterns) are considered in Chapter 5. Patterns in habitat clustering are considered at several

spatial scales. Regional data from the Ogeechee watershed are contextualized by macroregional data from sites in neighboring watersheds and targeted results of site-level investigations within the Ogeechee watershed.

Predictions Based on IFD Studies in the Southeast

My research uses IFD to interpret variability in the spatial distribution of recorded archaeological sites in the study area from the first occupations in the Early Paleoindian period through the Late Archaic period (ca. 13,400-3200 cal BP). Overall, this study recognizes that settlement patterns and environmental variables that appear similar at one scale may be different at another – and that finer resolutions may not elucidate the underlying cause for differences. Together, multi-scalar analysis and a balanced perspective on environmentally-influenced human decision-making provide dynamic insights into the origins of watershed-extensive variation among hunter-gatherer societies in the Eastern Woodlands. Specifically, data from this study should demonstrate the following:

1) The ecological landscape of the Ogeechee River valley was arguably as heterogeneous and diverse as surrounding watersheds (perhaps more so), complicating existing archaeological narratives of settlement aggregation and subregional abandonment in the Holocene (Braley and Malone 1996; Elliott 1992; Larson 1980).
2) As a whole, the landscape structure of the watersheds within the interior Coastal Plain study area offer similar incentives for increased hunter-gatherer sedentism and regionalized material cultures throughout the Holocene. Perceived settlement ‘gaps’ in subregions like the Ogeechee watershed can be better explained by archaeological phenomena other than habitat preference (Braley and Malone 1996; Miller and Carmody 2016, 2020).

3) Macroregional trends in the location and frequency of hunter-gatherer sites in the 10,000-year temporal range of this study reflect considerable variation both intra- and inter-watershed in terms of habitat type.
4) Macroregional settlement pattern continuities and discontinuities suggest a potential shift to ideal free distribution with Allee effect at the onset of the Early Archaic period (Allee 1931; Robinson et al. 2019; Stephens et al. 1999; Winterhalder et al. 2015), and perhaps a shift to ideal despotic distribution by the Late Archaic period (Bell and Winterhalder 2014; Miller and Carmody 2020; Sutherland 1996).

Layout of Dissertation

In the chapters that follow, I present the theoretical and methodological building blocks for testing IFD assumptions in the interior Coastal Plain of Georgia that go into answering my research objectives. This chapter introduced my research design and rationale for working in the Ogeechee River valley. Chapter 2 contains the environmental and theoretical context for this study, as well as a brief overview of how environmental models have been used in the Southeast. Chapter 3 provides the framework for using the macrophysical climate model and associated data sets, including incorporating all available settlement pattern data from GNAHRGIS and PIDBA, MCM model parameters, biodiversity and isopollen data, and the iterative structure of the model. Chapter 4 outlines the results of climate modeling, net primary productivity calculations, fossil pollen interpolations, archaeological site and biface distributions, and statistical validation of significant relationships between site and environmental variables. Chapter 5 discusses the results of the MCM and degree of concordance with IFD predictions. Chapter 6 summarizes this research program and offers several directions for future analyses with these data sets. Five appendices include all supplemental materials and data sets from this research: Appendix A includes the outputs of the macrophysical

climate model (MCM) for temperature and precipitation data; Appendix B contains the net primary productivity (NPP) millennial estimates and time-averaged archaeological period calculations; Appendix C lists all GNAHRGIS site data; Appendix D lists all PIDBA diagnostic biface county-level data; and Appendix E includes the master data table with spatial statistical results of archaeological site, diagnostic biface, and millennial habitat suitability z-scores that were regressed using the JMP statistical software package.

Project Significance

This research builds on recent behavioral ecological studies in the region (Cook Hale and Sanger 2020; Miller and Carmody 2020) to develop a robust, geographically-driven narrative of hunter-gatherer landscape use through time. Existing settlement models for the Southeast are derived from models developed for the Plains, Southwest, and Great Basin – regions that are characteristically distinct from the southeastern landscapes of the interior Coastal Plain. Compared to western biomes, the Southeast contained abundant fresh water sources that were reliably located (Leigh 2006, 2008; Leigh and Feeney 1995; Leigh et al. 2004; Miller 1991); biomass that was dense and widespread (LaMoreaux et al. 2009); and hunter-gatherer communities that were targeting fundamentally different prey species (Carlson and Bement 2018; Kornfeld and Huckell 2016; Wendt et al. 2022). The landscapes of the Coastal Plain are not characterized by discrete patches or “islands” of resources (*sensu* Kornfeld and Osborn 2003), but rather a mixed resource landscape with zones of higher resource densities (but not outright absence) (Elliott and Sassaman 1995; LaMoreaux 1999; Sassaman 1996).

Models tailored to the environments and settlement histories of the Southeast are sparse, even though this region is one of the best documented and longest hunter-gatherer archaeological sequences in the country. The models forming the foundation of hunter-gatherer theorizing in the Southeast lack empirical grounding, because they neither align with the regional settlement data available nor do they seem to borrow from

the ethnographic data for other temperate forest societies, which suggest that sedentism and resource proprietorship are common states among temperate forest hunter-gatherers (Politis 2016).

Beyond its utility to southeastern hunter-gatherer research, this project reimagines the processes of human settlement and subsistence using climate change as a backdrop (rather than a driver) for human decision-making. This multivariate approach uses the simplifying assumptions of ideal free distribution to craft a coherent narrative of hunter-gatherer settlement and subsistence change over time. It categorizes the landscape of the interior Coastal Plain into units of social and subsistence activities, rather than perceives the landscape as an inert container in which activities occurred (Tilley 1994). The approach applied herein moves optimality modeling toward more dynamic conceptions of human decision-making around environmental considerations that are consistent with southeastern landscapes, and prioritizes human decision-making during periods of high-amplitude climatic shift.

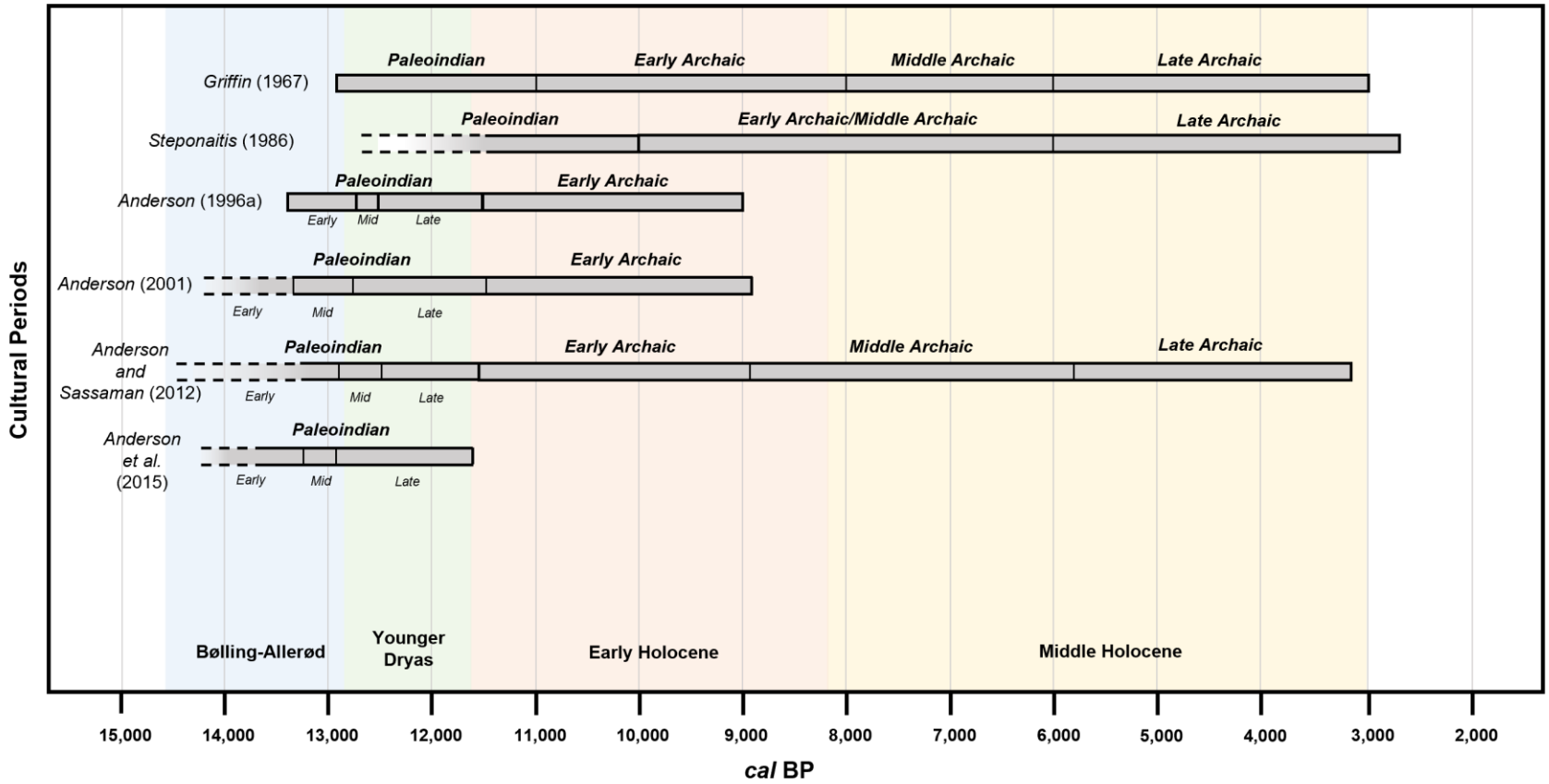

Figure 1.1: Timeline of archaeological periods and major climatic shifts in the southeastern United States (adapted from Miller et al. 2022b, Figure 1.5.

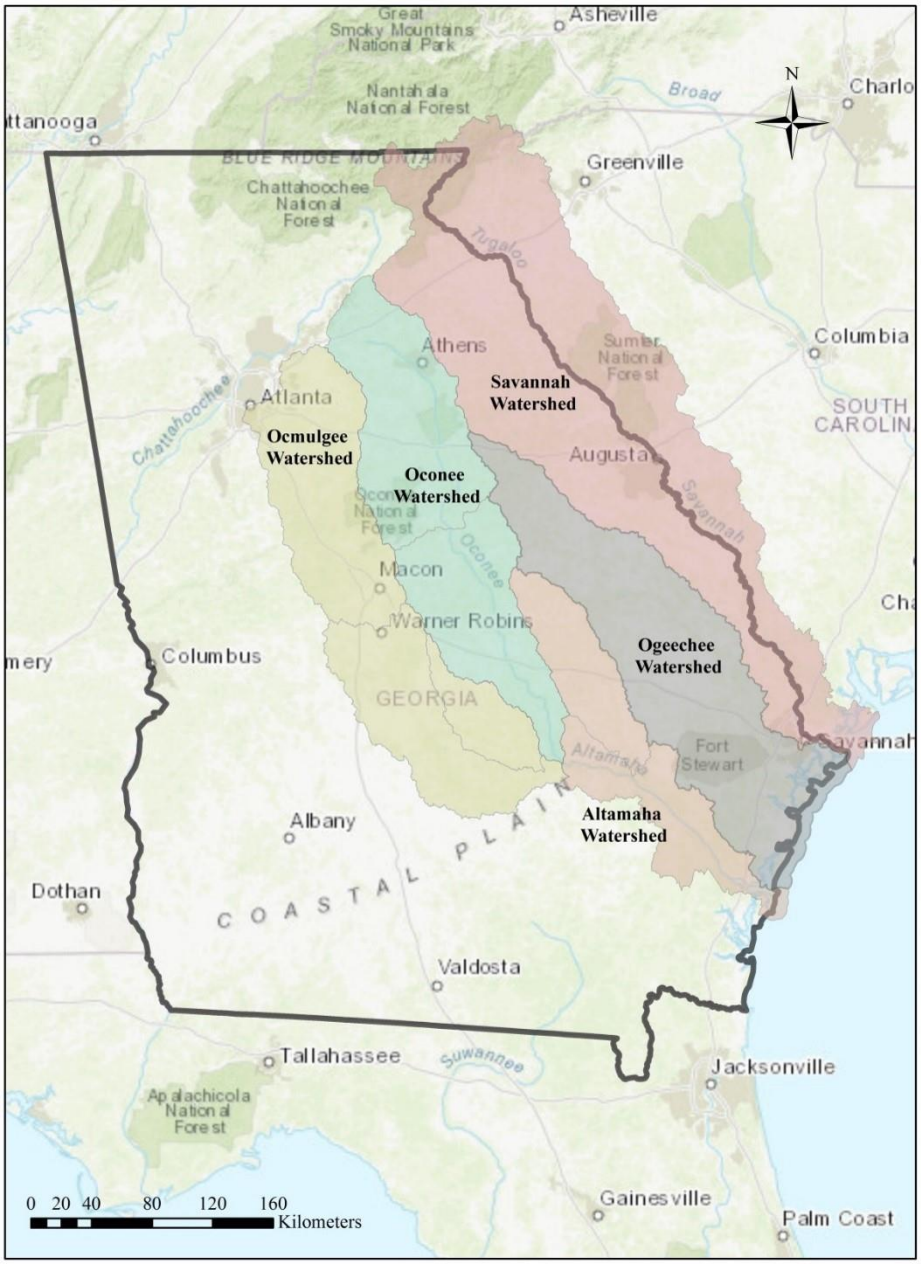

Figure 1.2. Location of Ogeechee River watershed and adjacent watersheds of the interior Coastal Plain used in this study (Savannah, Ocmulgee, Altamaha, and Oconee).

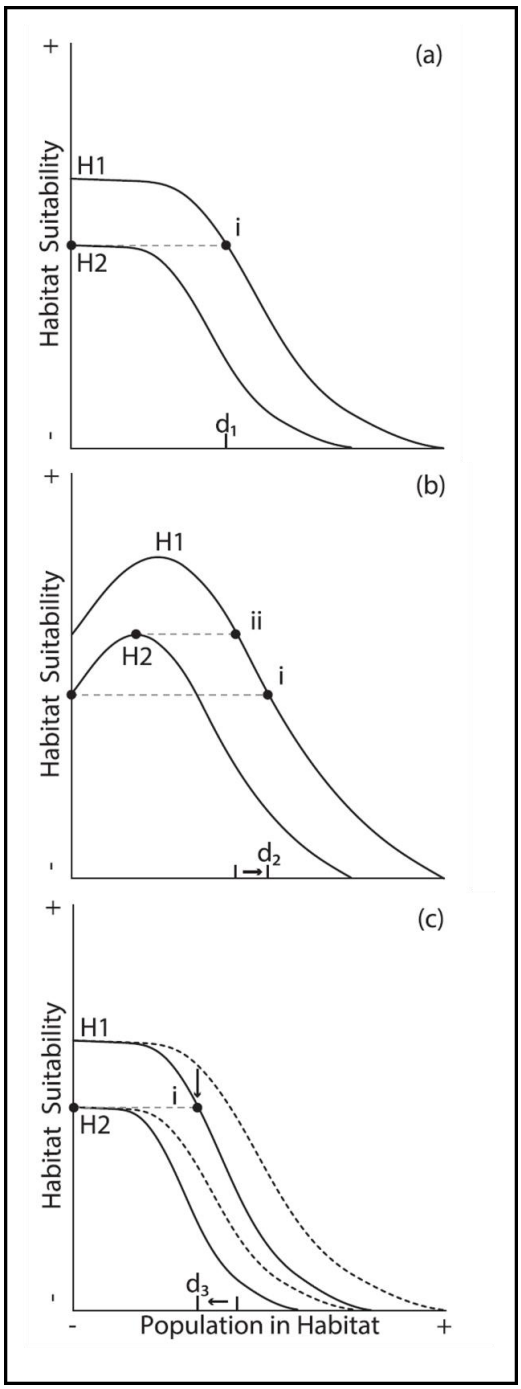

Figure 1.3. Graphical representations of ideal distribution models: (a) ideal free distribution (IFD); (b) IFD with Allee effect (IFDA); (c) ideal despotic distribution (IDD). H1 and H2: Habitat 1 and Habitat 2. i and ii: suitability standard at which populations move to a more suitable habitat. d_1, d_2, and d_3: optimal population densities at which individuals should leave for a more suitable habitat. IFD (a) is a monotonic function – it is always increasing/remaining constant or decreasing/remaining constant (from Codding and Bird (2015), Figure 3).

CHAPTER 2

RESEARCH CONTEXT

This chapter presents the broader theoretical and environmental backdrop for the dissertation, and situates the narratives of hunter-gatherer settlement models in both the Southeast and the continental discourse on Pleistocene and Holocene settlement patterns. I begin with an overview of the environmental and ecological data, using general southeastern trends where appropriate and watershed-specific data where available. I go into greater detail on the history of archaeological research in the Ogeechee watershed and its articulation with broader settlement and subsistence studies in the interior Coastal Plain. After reviewing the archaeological studies in the region, I provide a brief historical discussion of hunter-gatherer settlement and subsistence models, and critically evaluate the utility of models derived from settlement studies in the Plains, Great Basin, and Southwest in southeastern contexts. I conclude with an overview of behavioral ecology and ideal free distribution (IFD) studies in archaeology as a justification for using the Ogeechee River valley as a test case in IFD settlement modeling.

Environmental Setting and Landscape Histories of the Interior Coastal Plain

The Ogeechee and adjacent watersheds' environmental settings center on the Southern Coastal Plain physiographic province, as well as the Piedmont and Blue Ridge to lesser extents (Figure 2.1). The headwaters of the Ogeechee, Ocmulgee, and Oconee Rivers originate in the Georgia Piedmont, while the Savannah River headwaters begin in the Blue Ridge mountains of North Carolina. The Altamaha headwaters begin at the intersection of the Oconee and Ocmulgee Rivers south of the Fall Line. All rivers in the study area flow southeast, and drain toward the Atlantic Ocean.

The Southern Coastal Plain is bounded to the north by the Piedmont. The ecotonal zone separating the two physiographic provinces is known as the Fall Line or the Coastal Plain Unconformity, a 900-mile long and approximately 20-mile wide escarpment where the Piedmont and broader Atlantic Coastal Plain provinces meet along the Eastern Seaboard (Figure 2.2). The Fall Line gets its name from the rapid 'fall' of Piedmont rivers that have cut downward through igneous and metamorphic bedrocks to meet the lower gradient, loose sands of the Coastal Plain (Edwards et al. 2013:348). The steep elevation change at the Fall Line creates an ecotone characterized by waterfalls, shoals, and rapids that open onto expansive floodplains in the Coastal Plain.

The Southern Coastal Plain is sometimes separated into the Atlantic Coastal Plain and the Gulf Coastal Plain. The Atlantic Coastal Plain transitions to the Gulf Coastal Plain, though their geologic compositions and topography are similar. Some formal classifications separate the Atlantic and Gulf Coastal Plains by their drainage areas – the Atlantic Coastal Plain drains into the Atlantic Ocean, and the Gulf Coastal Plain drains into the Gulf of Mexico (The Nature Conservancy 2019). Other sources divide the region into essentially an upper and lower Coastal Plain (Environmental Protection Agency 2006; Griffith et al. 2001). In this case, the lower Coastal Plain, or "Southern Coastal Plain" (*sensu* Griffith et al. 2001:75) refers to the lowest elevations and sandy terraces of the southeastern Georgia salt marshes and tidal creeks upstream from the Georgia Bight. In contrast, the upper Coastal Plain or "Southeastern Plain" (*sensu* Griffith et al. 2001:65) is more highly dissected because of river systems flowing downhill from the Piedmont past the Fall Line. The topography of the Southeastern Plain is also distinct from the Southern Coastal Plain, with gently rolling hills and higher elevations (Edwards et al. 2013). Because the plant and animal communities of the Southeastern Plain and Southern Coastal Plain overlap significantly, I reference the entirety of the region that lies south of the Fall Line as the "Coastal Plain." The

ecoregions, geology, and hydrological makeup of the study area are discussed below to situate the environmental context of the Coastal Plain within the broader archaeological discourse on Late Pleistocene-Holocene paleoclimatic reconstructions.

Ecoregion

The Ogeechee watershed crosscuts multiple ecoregions in Georgia. Its headwaters reach into the Southern Outer Piedmont (after Griffith et al. 2001), characterized by low elevation, topographic relief, and precipitation rates, which collectively contribute to the meandering nature of the river below the Fall Line. Loblolly and shortleaf pines (*Pinus taeda* and *Pinus echinata,* respectively) dominate the arboreal vegetation cover, with oak-hickory (*Quercus spp., Carya spp.*) and mixed coniferous-deciduous (*Pinus spp., Quercus spp.*) represented in lower frequencies than other ecoregions within the Piedmont. The majority of soil types above the Fall Line are characterized as well-drained, moderately permeable soils common to the Piedmont uplands. These soils are the weathered products of felsic, igneous, and high-grade metamorphic rocks which comprise the bedrock directly above the Fall Line (National Cooperative Soil Survey 2007). The southern boundary of this ecoregion is the Fall Line, the ecotone between unconsolidated sedimentary Coastal Plain soils and the metamorphic- and igneous-derived soils of the Piedmont.

The majority of the watershed extent falls within the Southeastern Plains and Southern Coastal Plain ecoregions (referred to herein as the Coastal Plain), characterized as the landscape below the Fall Line with low topographic relief, fine-textured soils that are poorly drained, mixed forest coverage of mesic-to-xeric oak-hickory-pine, and narrow river valley bottoms (Griffith et al. 2001; Wilken et al. 2011). This ecoregion extends from South Carolina and Georgia down into central Florida and along the Gulf lowlands of the Florida panhandle and into Alabama, Mississippi, and Louisiana (Wilken et al. 2011:75). Parallel to the main river channel and tributaries are

“excessively-drained, dunal sand ridges with xeric vegetation” (Griffith et al. 2001:65l). The poor drainage of these flatland sandy soils has been suggested as the reason the Ogeechee watershed was not settled as intensively as adjacent watersheds with headwaters that reach high into the Piedmont. From Schnell and Wright (1993):

> The Flat Pine Lands are perhaps the least hospitable of the major areas on the Coastal Plain of Georgia. This was the first area encountered during the inland penetration of the Coastal Plain from the Atlantic coast. It is perhaps for this reason that the Coastal Plain quickly acquired a reputation for poor resources among early settlers – a reputation which it tends to retain today (8).

The lowest reaches of the expanding Ogeechee floodplain are the Sea Island Flatwoods, an ecologically diverse region characterized by marsh ecosystems and poorly-drained soils that support wetland vegetation like water and willow oaks (*Quercus nigra* and *Quercus phellos*, respectively), sweetgum (*Liquidambar styraciflua*), blackgum (*Nyssa sylvatica*), and cypress stands (*Taxodium*).

Adjacent watersheds in the study area similarly crosscut multiple ecoregions. The Oconee and Ocmulgee watersheds have headwaters that originate in the Southern Inner Piedmont (Griffith et al. 2001), which is characterized by higher elevations and topographic relief than the Coastal Plain, but less steep than the Blue Ridge ecoregion to the north. The topography of this region contributes to stream flows that have resulted in a well-dissected landscape (Wilken et al. 2011). Arboreal vegetation in the Inner Piedmont is dominated by oak-pine and oak-hickory mixed forests, with generally less coniferous coverage than both the Outer Piedmont and Southern Coastal Plain (Griffith et al. 2001:45a). Their floodplains expand downstream toward the Southern Outer Piedmont and down into the Coastal Plain (Figure 2.1). The Altamaha River, which is formed by the confluence of the Ocmulgee and Oconee Rivers in the Coastal Plain, is hydrologically similar to the Ogeechee River because its largest tributary (the Ohoopee River) is also a blackwater river (MESL 2015). The Savannah River valley is the largest floodplain in this study, with headwaters that originate in the Blue Ridge mountains of

North Carolina and a watershed that drains 10,577 square miles across North Carolina, South Carolina, and Georgia, crosscutting the Southern Outer and Inner Piedmonts and the Coastal Plain ecoregions (Denham 1999; Savannah Riverkeeper 2022).

Geology

The Coastal Plain is the youngest of the geologic provinces in this study, and is composed of sedimentary rock layers with ages ranging from the Late Cretaceous (ca. 100-66 million years ago) to the Late Pleistocene-Holocene sediments of the coastline and intertidal zone (ca. 40,000-4000 BP) (Frazier 2019; Marine Extension 2022). The Coastal Plain extent of the Ogeechee watershed is dominated by Irwinton Sands and Twiggs Clays, which are unconsolidated, coarse-to-fine-grained sediments and the products of the breakdown of Coastal Plain sedimentary rocks (USGS 2017). Most soils in the Coastal Plain are attributed to the breakdown of sedimentary sandstones and claystones of the Neogene undifferentiated series (Dall and Harris 1892; Matson and Berry 1916). The lower extents of the Coastal Plain and intercoastal zone are characterized by the Talbot shoreline complex of marsh and lagoonal facies (observable characteristics of rock), composed of fine, unconsolidated sands that are prone to erosional forces (USGS 2017). These formations collectively are the primary parent materials for the sediments, soils, and matrices of the clay and lithic resources that would be used by Late Pleistocene and Holocene populations in the region.

Locally, clays were used for the construction of the oldest pottery tradition in North America, innovated by the hunter-gatherer communities of the Late Archaic period in Georgia and South Carolina (Sassaman 1993, 2004; Saunders and Hays 2004). Clay compositional analyses from these ceramics, known as ‘Stallings fiber-tempered’ because of their distinctive plant fiber inclusions (Spanish moss, *Tillandsia usneoides*) indicate patterns of ceramic distributions between the Savannah and Ogeechee watersheds (Gilmore et al. 2018). Importantly, this clay compositional study

demonstrated two things: (1) the upriver-downriver gradient of clay grain size along the Ogeechee River conforms to the expected pattern of gradual sorting of riverine sediments as grain size decreases and heavier minerals fall out as flow rate decreases (Gilmore et al. 2018:39); and (2) clay samples from the Ogeechee River are compositionally similar to those from the Savannah River, with the exception of certain elemental depletions attributed to the fact that the headwaters of the Ogeechee are located close to the Fall Line and receive less sedimentary input from Piedmont and Blue Ridge lithologies (Gilmore et al. 2018:40). This study demonstrates that in terms of clay quality and availability, the Ogeechee River and Upper/Middle Savannah River valleys had dispersed clay resources of similar quality available for the construction and spread of early ceramics.

The Ogeechee watershed and adjacent regions are also home to extensive outcrops of high-quality tool stone like Coastal Plain chert that was a major resource for hunter-gatherer populations as far back as the Late Pleistocene (Goodyear 2018; Jones et al. 2016; Miller 2016) (Figure 2.3). In fact, the primary occurrences of Coastal Plain chert are in southwestern Georgia, along the Fall Line, and in southeastern Georgia along Brier Creek, which separates the Ogeechee and Savannah watersheds (Goad 1979:19; Holmes 1913; Veatch and Stephenson 1911). Chert outcrops occur as residual nodules and boulders or appear scattered along streams and ridges, and it is well-documented that Late Pleistocene and Holocene hunter-gatherer populations knew of and preferentially utilized high-quality tool stone when available (Daniel 2001; Goodyear 2018; Jones et al. 2016; Miller 2016; Smallwood et al. 2022).

The geology of the Piedmont within the watershed extents of the study area is dominated by gneisses, granites, and schists covered with deep saprolitic deposits and red, clayey subsoils (Hanley 2018; Lawton et al. 1976). These metamorphic and igneous parent materials form the rolling hills of the Appalachian Mountains as a result of long-

inactive fault zones that run in a northeastern direction. Quartz is a defining constituent of granite and other felsic igneous rocks in this province, and it also associated with schists, gneisses, and other metamorphic rocks (USGS 2017). Because of its ubiquity across a range of lithologies in the Piedmont, it is a common tool stone in the region and was widely used by hunter-gatherers in what came to be known as the “Old Quartz Industry” (Caldwell 1953a, 1953b, 1954, 1958) among the “forest nomads” (i.e., hunter-gatherers) of the Piedmont (Caldwell 1958:8; see also Benson 1995; Johnson 1981; Shah and Whitley 2009).

Hydrology

The Ogeechee watershed and surrounding drainage basins exist entirely within the Piedmont and Southeastern Coastal Plain aquifer systems (Miller 1991), which are recharged annually through rainfall (Figure 2.4). The Savannah River originates in the Blue Ridge province of North Carolina, while the Oconee, Ocmulgee, and Ogeechee Rivers originate in the Piedmont. All four watershed have headwaters in the Piedmont aquifer system. The Altamaha River, which is formed at the juncture of the Ocmulgee and Oconee Rivers in the Coastal Plain, originates in the Cretaceous aquifer system and its primary recharge aquifer is the Coastal Plain aquifer system (Miller 1991). The geomorphology of the Coastal Plain creates different groundwater conditions than adjacent ecoregions because the unconsolidated and porous sands of the Coastal Plain are saturated with water. Additionally, the low relief and elevation of the Coastal Plain has resulted in a shallow surficial aquifer system (the water table) that discharges into streams throughout the year (Cressler 1998). The thickness of the surficial aquifer increases near the coast, leading to the creation of expansive wetlands and bogs in the lowlands close to the mouths of rivers that drain toward the Atlantic Ocean (Edwards et al. 2013).

The river drainage patterns in the study area are conspicuously altered as they cross the Fall Line from the Piedmont into the Coastal Plain. The Piedmont headwater extents are characterized by moderate-to-dense networks of perennial streams of generally moderate-to-low gradient. Stream drainage in the Piedmont tends to be perpendicular to the structural trend of the rocks across which they flow, while Coastal Plain streams are less restricted. Coastal Plain streams, in general, are low-gradient and perennial with low stream velocity (Wilken et al. 2011). Because of this lack of elevation change, there are few hydroelectric impoundments south of the Fall Line, and those that exist were constructed on river systems with headwaters that originate in the Piedmont (e.g., Walter F. George Lake, Lake Blackshear, and Lake Seminole) (Figure 2.5).

The origins of headwaters for watersheds are used to differentiate each individual river system. Headwaters play a significant role in water chemistry metrics, stream velocity, and densities of suspended and dissolved organics that are transported and deposited downstream (Edwards et al. 2013; Meyer 1990, 1992). Headwater origination is also demonstrably important to ceramic provenance studies in the Southeast (Ashley et al. 2015; Gilmore 2016; Gilmore et al. 2018; Wallis et al. 2010; Wallis et al. 2016). By the 18th and 19th centuries, the rivers with headwaters in the Piedmont were called “brownwater” rivers (not to be confused with the blackwater designation of Coastal Plain rivers like the Ogeechee) because they are laden with sediments derived from severe agriculture-induced erosion in the Piedmont (Brown 2002; Edwards et al. 2013; Meade et al. 1990; Trimble 1985).

The Ogeechee River originates in the lower Piedmont only 30 miles from the Fall Line, and its stream flow is considered low-gradient. Its slow-moving nature and lack of elevation change has resulted in it being completely free-flowing in the Coastal Plain. Because it is not impounded, it exhibits seasonal flow rates – low-gradient flow in the summer, and overflowing banks in the winter (Smock et al. 2005). Approximately 30

miles from its mouth, the Ogeechee River becomes tidally influenced, with broad floodplain extents and expansive wetlands (Edwards et al. 2013:354; Wilken et al. 2011:75).

Unlike the other rivers in this study, the Ogeechee is characterized as a blackwater river (Lowrance et al. 1984; Wharton and Brinson 1979). “Blackwater” specifically references the water chemistry of the river, which is contingent on both the physiography of the watershed and its headwaters. Blackwater rivers get this moniker from the tea-colored water that seeps out of the unconsolidated sandy soils of the Coastal Plain, which do not retain the dissolved organic matter (DOM) that leaches out of terrestrial vegetation (specifically the fulvic and humic acid byproducts of the breakdown of humus) (Meyer 1990). The DOM transfers into the water system and stains it dark brown-to-black (Edwards et al. 2013:468). The introduction of these organic acid byproducts results in a river system with a disproportionately low pH level (Meyer 1990; Wharton and Brinson 1979).

The Ogeechee shares qualities with both alluvial rivers (those originating in the Piedmont that redeposit sands, silts, and clays) and blackwater rivers. Its headwaters originate in the Piedmont clay-based hills, so it carries large amounts of inorganics that create a “nutrient subsidy” for Coastal Plain vegetation (Wharton and Brinson 1979:33). It also has a higher pH than blackwater rivers that originate in the Coastal Plain (Austin and Gates 2001; Barrett and Fleming 2011; Meyer and Loeffler 2019). Its Piedmont headwaters carry neutralizing bases weathered from igneous and metamorphic parent materials, and large inputs of carbonate-rich water are introduced from natural spring tributaries like Magnolia Springs (GARLMER 2002; Meyer and Loeffler 2019; Wharton and Brinson 1979:34). Its categorization as a traditional blackwater river has relegated the Ogeechee watershed’s archaeological narrative to one of limited productivity

compared to the alluvial basins adjacent to it, when in reality it is an amalgamation of both blackwater and alluvial hydrologies (Larson 1980; Schnell and Wright 1993).

Climate Proxies

The modern climate of the interior Coastal Plain is classified as humid subtropical-temperate (Cfa) by the Köppen-Geiger climate classification system (Peel et al. 2007) (Figure 2.6). Group C climates are defined by temperatures above 26.6°F in their coldest months but below 64.4°F. The "f" designation refers to a precipitation pattern of significant rain in all seasons, with no dry winters or summers (Beck et al. 2018; Peel et al. 2007). The "a" is an indicator for summer temperature extremes, with the warmest months averaging above 71.6°F (Peel et al. 2007:1636). In general, summers are hot and humid, while winters are mild and relatively wet. The climate history for Statesboro, Georgia, which is centrally located in the Ogeechee River valley, is characteristic of this climate regime. In Statesboro, winter (December, January, February) temperatures vary from 38.1°F to 63.9°F, and summer (June, July, August) temperatures vary from 70.2°F to 92°F (Georgia AEMN 2020) (Table 2.1). Precipitation varies seasonally, with the majority falling during the summer months, averaging 5.31 inches. Winters are drier on average, but still characterized by an average of eight rain days per month and 3.49 inches of rain.

Over the last ~30,000 years, North America has experienced significant ecological changes, including shifts in arboreal species ranges indicative of climate-induced compositional turnover (Blois et al. 2013; Williams et al. 2004), the extinction of megafauna (Eren 2012; Koch and Barnosky 2006), and large-scale changes in fire regimes (Marlon et al. 2009). In the Eastern Woodlands, specific attention is given to the late-glacial expansion of temperate deciduous species, the development of modern plant communities, local connections to continental climate events, megafaunal extinctions, and human-induced changes to fire regimes (Eren 2012; Gill et al. 2009; Gonzalez and

Grimm 2009; Jackson and Williams 2004). The Southeast in particular is an area of paleoecological interest because of its biodiversity and its role as a likely refugium for temperate taxa during periods of glaciation (Soltis et al. 2006). The following sections describe the multi-proxy evidence for major climatic shifts in the Southeast immediately preceding and coinciding with the temporal range of this study to create the environmental backdrop for discussions of human settlement and population reorganization through time (see Figure 1.1). Despite well-documented evidence of varied local responses to climatic shifts (Anderson et al. 2011; Eren 2012; Meeks and Anderson 2012; Thomas 2008; Thomas and Sanger 2010; Turck and Thompson 2016), no comprehensive reconstruction of the Late Pleistocene and Holocene paleoenvironment has been generated in the Southeast, nor has consensus been reached on how climate and vegetation varied across the landscape (Delcourt and Delcourt 1977, 1983, 1985; Fearn and Cohen 1984; Grimm et al. 2001; Jackson and Whitehead 1993; Kneller and Peteet 1993; LaMoreaux et al. 2009; Otvos 2005; Watts and Stuiver 1980; Watts et al. 1992). Regional fossil pollen studies (e.g., LaMoreaux et al. 2009; Watts 1980) in the vicinity of the study area are discussed in detail to help contextualize the climate and vegetation community reconstructions in the rest of the study.

Last Glacial Maximum and Oldest Dryas (ca. 26,000-18,500 and 18,500-14,690 cal BP)

The Last Glacial Maximum (LGM) is the time period during which the continental ice sheets reached their greatest extents and total mass during the last ice age from approximately 26,000-18,500 cal BP (Clark et al. 2009; Rahmstorf and Feulner 2013). The American Southeast at the height of the LGM was covered with boreal pine forests, with mixed hardwoods restricted to the Gulf and Atlantic Coastal Plains, particularly at the mouths of major river drainages (Delcourt and Delcourt 1981; Williams et al. 2004).

Tree, shrub, and herb pollen from the Coastal Plain during this time is dominated by pine (*Pinus*), likely northern pine (*P. strobus*), with significant amounts of grasses (Poaceae) and herbaceous annuals like Asteraceae. Oak (*Quercus*) pollen is more underrepresented in this time period than any other, and when considered in tandem with the abundance of grasses and herbs, likely indicates that the Coastal Plain was only partially forested at this time (LaMoreaux et al. 2009:305-306). Pollen assemblages bracketing the Georgia Coastal Plain from northwestern Georgia, northern Florida, and White Pond in the South Carolina Coastal Plain have similar assemblages characterized by mosaic pine and spruce (*Picea*) stands intermixed with xeric prairie plants like ragweed (*Ambrosia*), sagebrush (*Artemisia*), and a variety of grasses (Krause et al. 2018; Watts 1975a, 1975b; Watts and Stuiver 1980; Watts et al. 1992). Leigh (2008) argues that during the LGM, the major rivers of the Southeast were braided systems characterized by high bedload sediments, the products of dry climates with wind patterns of sufficient force to transport sands onto floodplains and uplands (Leigh et al. 2004; Leigh 2008:96). The braided stream system and dry climate described by Leigh (2008) is consistent with climatic conditions that support the xeric prairie plant and mosaic boreal floral assemblages described in fossil pollen records for this period.

The Oldest Dryas stadial (ca. 18,500-14,690 cal BP) is an abrupt period of climatic cooling immediately following the LGM, after the onset of continental deglaciation (Rasmussen et al. 2006). Increasing levels of oak and hickory (*Carya*) pollen are found in sediments dating to this period (Krause et al. 2018:12), with a slight decrease in pine, suggesting the Coastal Plain was a likely refugium for deciduous taxa during this stadial period (Soltis et al. 2006). Pollen from herbaceous taxa like Asteraceae are more abundant, as well as pollen from other deciduous taxa like hornbeam/hophornbeam (*Carpinus*/*Ostrya*) (Liu et al. 2013; Watts 1970). Braided

stream systems still dominate the hydrologic landscape at this time, indicating dry and windy conditions persist (Leigh 2008).

Bølling-Allerød Interstadial (ca. 14,690-12,890 cal BP)

This interstadial period marks a time of high amplitude climatic shift, beginning with the dry and cold conditions characteristic of the Oldest Dryas stadial and ending with rapidly warming temperatures immediately preceding the Younger Dryas stadial (Rasmussen et al. 2006). A distinct transition from braided to meandering stream conditions marks the climate-induced hydrologic shift for this period (Leigh 2006, 2008), characterized by scroll bars and meanders with deeply incised channels indicative of paleodischarge rates up to four times that of modern channels (Leigh 2006). The eolian dunes of the previous stadial are still common during the Bølling-Allerød, blown from the sandy scroll bars of large meanders. This hydrologic transition persists through the succeeding Younger Dryas stadial.

The pollen record across the Southeast during this interstadial period reflects a cool-mixed forest assemblage of mesic boreal and cool-temperate deciduous taxa, and is the closest approximation of “no-analog” conditions for the Southeast (Leigh 2008:97), wherein plant communities that existed during this period are compositionally different from any found in the Southeast today (Williams and Jackson 2007). The varied taxa and succession communities suggest the landscape was rapidly changing, resulting in unusual vegetation conditions. In the Coastal Plain, pine abundance decreases, to be replaced by increasing concentrations of hardwood taxa like *Quercus*, *Carya*, *Ostrya*/*Carpinus*, *Fagus* (beech), *Ulmus* (elm), *Fraxinus* (ash), *Juglans* (walnut), and *Platanus* (sycamore) (Delcourt and Delcourt 1985:18; Krause et al. 2018:9). The proliferation of boreal genera like *Picea* (spruce) and *Abies* (fir) alongside deciduous taxa at this time suggests that cool climatic conditions persisted across the Coastal Plain while precipitation during summer months increased (Delcourt and Delcourt 1985).

This rapidly-warming, mixed landscape was the environmental context in which human populations navigated nearly every biome of North America. The Cordilleran glacier began shrinking along its western margin by ca. 16,000 cal BP, while the Laurentide ice sheet ablated, causing a global meltwater pulse by ca. 14,600 cal BP and opening the ice-free corridor (Fiedel 2022; Sowers and Bender 1995). The most widely-accepted motivation for Late Pleistocene human infilling of the continent is Paleoindian commitment to hunting migrating herds of big game (Kelly and Todd 1988), in part because a colonizing population descended from Upper Paleolithic hunters of Eurasia could rely on pre-existing knowledge of megafaunal behaviors. The rapidly shifting climate and environments of the Bølling-Allerød interstadial would have made it exceedingly difficult for newly-arrived human populations to learn and rely on the distributions of territorially-restricted plant communities.

Younger Dryas (ca. 12,890-11,700 cal BP)

The Younger Dryas stadial marks an abrupt and dramatic decrease in global temperatures, observable in the Greenland ice cores and European pollen records (Alley 2000; Eren 2012; Meltzer and Holliday 2010). In North America, the onset of the Younger Dryas cooling coincides with the extinction of megafauna (Miller et al. 2022a) and regionalization of diagnostic lithics (Anderson 2001).

The environmental effects of the Younger Dryas were regionally variable and non-uniform, suggesting that multiple environmental factors like amplified seasonality, oceanic circulation patterns, and temperature/moisture gradients were influencing local vegetation responses to climate change (Meeks and Anderson 2012; Miller et al. 2022a). LaMoreaux and colleagues (2009) recorded cool, moist conditions at Sandy Run Creek in the Ocmulgee watershed associated with the Younger Dryas evidenced by an increased occurrence of mesic tree taxa and an increase in riparian populations of alder (*Alnus*). The Younger Dryas at White Pond in the South Carolina Coastal Plain (Krause

et al. 2018; Watts 1980) and Clear Pond in northeastern South Carolina (Hussey 1993) is marked by increases in beech (*Fagus*), which is tolerant of cool, wet conditions. An increase in moss spores, hickory, hackberry (*Celtis*), tupelo (*Nyssa*), and willow (*Salix*) at White Pond during this period also indicates increased moisture (LaMoreaux et al. 2009:306). In northern Georgia, Pigeon Marsh (Watts 1975b) recorded a spike in beech pollen, indicating cool conditions in the uplands and foothills as well.

Pollen records for the broader Eastern Woodlands also demonstrate that regional variations in climate conditions existed. Younger Dryas climate proxy indicators in the pollen record include the decrease in pine abundance and subsequent increase in oak and mesic tree species like alder. Herbaceous annuals and grasses are more abundant during this period, and the majority of pollen sites in the lower Southeast exhibit cooler, moist conditions (Meeks and Anderson 2012). Charcoal concentrations in pollen cores are also low during this period, suggesting cool and mesic conditions across the Coastal Plain inhibited the spread of fire (Delcourt 1980; LaMoreaux et al. 2009:307). Other locations in the Southeast indicate that climate during the Younger Dryas was warmer and wetter. For example, the central Appalachians of Virginia showed marked increases in hemlock (*Tsuga*) and decreases in *Abies* species during this period, indicating warmer and wetter conditions leading to the retraction of fir (Kneller and Peteet 1999).

Younger Dryas climate disruptions coincide with a human population reorganization in the Coastal Plain, and changes in landscape use correspond to what Smallwood and colleagues (2015) suggest was a destabilization of the coastal zone from sea level fluctuations. They argue that when faced with widespread climatic instability and coastal margin transgression, Late Pleistocene human populations opted to tether themselves to high-quality lithic resources in the Fall Line zone and Piedmont. Late Pleistocene research in the Carolinas (Daniel and Goodyear 2018; Smallwood et al.

2018) and Florida (Thulman 2009) also argue that Younger Dryas-induced climatic shifts impacted human landscape use and settlement organization.

Early Holocene (ca. 11,700-8200 cal BP)

After ca. 1,200 years of climatic cooling, the Younger Dryas terminated abruptly, followed by 7° C rise in temperatures between 11,600 and 11,700 cal BP (Alley 2000; Alley et al. 1993). The transition from the Late Pleistocene to the Early Holocene epoch at the end of the Younger Dryas is also the traditional separation between the Late Paleoindian and Early Archaic periods, although the exact start date has shifted as high-resolution climatic data and radiocarbon dating techniques have improved (Anderson 1996a; Anderson and Sassaman 1996b, 2012; Anderson et al. 2015; Miller et al. 2022a) (Figure 1.1).The pollen record across the Coastal Plain broadly reflects diminished pine occurrence and increases in oak, hickory, and various mixed deciduous taxa (Krause et al. 2018:9; LaMoreaux et al. 2009; Leigh 2008:99).

Pollen-based temperature analogs indicate that the Early Holocene is characterized by progressive warming, reaching near-modern temperatures by the Middle Holocene (Leigh 2008:99; Webb et al. 1998). Oak pollen continues to occur in higher frequencies than pine, suggesting the climatic warming of the Early Holocene was a slow and gradual process (Leigh 2008). Moisture availability during this period is the subject of debate among palynologists and paleoclimate specialists “because no indisputable proxies exist for precipitation in the study area” (Leigh 2008:100). While some palynological studies indicate the first half of the Holocene was cool and moist in the Coastal Plain (Delcourt and Delcourt 1985; Goman and Leigh 2004; Seielstad 1994), some hydrological studies argue that the presence of eolian dunes along paleochannels are more indicative of xeric soil conditions (Ivester et al. 2001; Otvos 2005). Paleodischarge levels of Coastal Plain rivers are estimated to be higher than modern

levels, and paleomeanders lack pronounced scroll bars, similarly suggesting that Early Holocene climatic warming was a slow and gradual process (Leigh and Feeney 1995).

Middle Holocene (ca. 8200-3000 BP)

The Middle Holocene temporal range for this study is archaeologically defined rather than strictly climatologically, as it transcends the boundaries of the formally defined Middle Holocene, or Northgrippian stage from ca. 8200-4200 BP (Walker et al. 2018). I have chosen a deliberately broad range to include both the environmental/chronostratigraphic justifications as well as capture the archaeological continuity during this period. The chronostratigraphic boundaries for the Middle Holocene are generally limited to the Holocene Climatic Optimum (also known as the Hypsithermal or Altithermal), a climatic period of extended warm temperatures from ca. 9000-5000 BP (Sassaman and Anderson 1996; Schuldenrein 1996). The Middle Archaic archaeological period also roughly coincides with this climatic phenomenon (ca. 8900-5800 cal BP) (Anderson and Sassaman 2012:66).

The close of the Middle Holocene is well-documented environmentally, but is less well understood archaeologically. Many of the features associated with Late Archaic adaptations to near-modern environmental conditions after ca. 5000 BP had analogs in the Middle Archaic period (Sassaman and Anderson 1996), and the traits that have traditionally divided the Late Archaic from the Woodland period at ca. 3200 cal BP are ambiguous. Ceramics (Sassaman 1993; Saunders and Hays 2004), mound construction (Anderson 2004; Hamilton 1999; Russo 1996), social differentiation (Sassaman et al. 2006), ceremonialism surrounding mortuary practices (Anderson 2002; Crothers 2004), and incipient plant domestication (Asch and Asch 1985; Brown and Vierra 1983; Fritz 2019; Gremillion 1996) existed long before the onset of the Woodland period (ca. 3200-1000 cal BP) (Anderson and Sassaman 2012:112).

From the LGM to the Middle Holocene, there was a shift in vegetation resulting from increased moisture and temperatures. The geographic ranges for mixed deciduous taxa contracted to higher latitudes and elevations, and this transition in arboreal vegetation also impacted the major river systems of the region, especially those less affected by glacial outwash (Miller et al. 2022b:10). Along the Ogeechee River, "…wetter than modern climatic conditions existed during the first part of the Holocene (~8.5-4.5 ka [*~9300-5000 cal BP*])" (Leigh and Feeney 1995:689), roughly coinciding with the Holocene Climatic Optimum. Hydrologic data from the Coastal Plain reflect these wetter conditions with paleodischarge estimates up to four times higher than modern averages during the Middle Holocene. Large, deeply-incised paleomeanders and overbank accretion (sediment buildup from flooding events) characterize the Coastal Plain river systems at this time, suggesting climatic conditions "consistent with larger floods and more energetic river channels during the first half of the Holocene" (Leigh 2008:101).

The pollen record of the Coastal Plain reflects the dominance of pine by at least 4500 cal BP (likely as early as 5500 BP), with significant percentages of oak and mixed deciduous taxa present (LaMoreaux et al. 2009). The presence of *Vitis* (grape, likely muscadine) in cores dating to the Middle Holocene indicates that the forest canopy thinned out enough for diffuse sunlight to reach understory plants (LaMoreau 1999). Pollen concentrations from Coastal Plain cores during the Middle Holocene are lower than those dating to the Early Holocene, suggesting that warm and moist conditions persist, but are less optimum for dense arboreal vegetation. Charcoal concentrations in pollen cores increase sharply by 4500 cal BP, indicating the presence of both drier conditions than the previous period and the impact of human population increases and infilling of the landscape (Christensen 1981; LaMoreaux et al. 2009:307; Patterson and Sassaman 1988; Veblen et al. 1999). Delcourt and Delcourt (1985) postulate that the

transition from oak to pine dominance after 5000 BP may also be a function of increased fire frequency.

Cultural Context

Most modern research in the Ogeechee River valley and surrounding watersheds is the result of cultural resource management (CRM) surveys related to road widening projects, Sections 106 and 110 compliance, wetland mitigation, reservoir construction, and other private sector compliance projects. For the Ogeechee watershed specifically, these CRM projects and projects in the adjacent Savannah River valley provided the preliminary data that helped establish the culture history for this region (Benson 1994; Braley and Price 1991; Campbell et al. 1981; King and Braley 1992; Sassaman et al. 1990). Unsurprisingly, the sites with Paleoindian lithics, Late Archaic ceramics, and late precontact assemblages garnered the most attention from avocational and professional archaeologists. No mound or village sites of the same magnitude as those within the Oconee, Ocmulgee, or Savannah drainages have been identified along the Ogeechee River in the interior Coastal Plain, and regional trends specific to non-mound sites are unknown apart from locational data and artifact inventories, excepting the results of this research.

Previous Archaeological Research in the Ogeechee Watershed

Targeted research unassociated with contract archaeology in the Ogeechee watershed is thematically concerned with: (1) Paleoindian and Early Archaic settlement patterns and sites, and (2) Late Archaic extents of early ceramic distributions, almost to the complete exclusion of other research programs. Even these categories come with a caveat – most research in the Ogeechee River valley is contextualized within broader hunter-gatherer narratives developed for the adjacent Savannah River valley (Anderson and Hanson 1988; Gilmore et al. 2018; Sassaman et al. 1988, 1995; Saunders and Hays 2004).

Paleoindian and Early Archaic Settlement Patterns

Settlement pattern research in the Ogeechee watershed was explored as part of Smallwood and colleagues' (2015) study on regional human responses to climate change during the Younger Dryas stadial. They identified changes in landscape use during the Paleoindian period through tracking diagnostic tool forms indicative of Early, Middle, and Late Paleoindian occupations in the Paleoindian Database of the Americas (PIDBA) (Anderson et al. 2010). This study approached human response to environmental change through a long-range examination of the archaeological record in the Piedmont and Coastal Plain of Georgia before, during, and immediately after a period of extended and dramatic climatic fluctuation. They suggested that destabilization of the coastal zone during the Younger Dryas initiated a rapid dispersal of human populations away from the coast and Coastal Plain toward the Piedmont. Subsequent population reorganization around high-quality tool stone resources in the Piedmont occurred, consistent with predictions made by Gardner (1974, 1977), Goodyear (1979) and Daniel (1998, 2001) about Late Pleistocene settlement tethering around reliable lithic resources.

In the summer of 2016, I traveled to the Smithsonian Museum Support Center to quantify, characterize, and photograph the Davis Plantation (9BK537) collection of Dr. Roland Steiner, a prolific 19th and early 20th century avocational archaeologist who owned thousands of acres of land in Burke County within the Ogeechee watershed (Figure 2.7). Steiner sent diagnostic artifacts from Davis Plantation, and tens of thousands more from across Georgia and South Carolina, to the Smithsonian Institution, where they have remained largely unstudied until recently (Elliott 2010; Jones et al. 2016; Smallwood et al. 2022). Of note to this research was the existence of 120 diagnostic Paleoindian bifaces and nearly 800 diagnostic Early Archaic tools recovered from a seven-acre stretch of this property along Buckhead Creek, a tributary of the

Ogeechee River (Figure 2.8). Our examination of diagnostic use and change over time (Jones et al. 2016) demonstrated that the range of tool forms at this site indicate both quarrying and utilization of lithics were occurring at this location, especially in early occupation periods, contrary to the narratives of Kelly and Todd (1988) and other "high-technology forager" models of hunter-gatherer mobility. The abundance of formal, finished, and exhausted tool forms in addition to rarely-encountered bifaces and other tool types (banner stones, axes, and drills) suggests this was an intensively occupied habitation area rather than an ephemerally utilized activity area (*sensu* Binford 1980; see also Anderson 1990, 1995a, 1996a; Smallwood 2012; Smallwood et al. 2015 for settlement narratives consistent with low residential mobility and tethering onto lithic resources).

Late Archaic Ceramic Origins, Distributions, and Compositions

The creation and geographic distribution of ceramics during the Late Archaic period is a popular research topic (comparatively) in the Ogeechee watershed because of its association with the Savannah River valley and Georgia coast, long considered the heartland of early ceramic production and distribution in North America (Sassaman 1993, 2006a; Sassaman et al. 1995; Saunders and Hays 2004). The composition and contemporaneity of these pottery-making communities in what is known as the Stallings phase or culture area has dominated much of the archaeological narrative for the Ogeechee River valley (Ledbetter and O'Steen 2013; Sassaman et al. 1995). The Stallings phase of the Late Archaic (ca. 5150-3200 cal BP) corresponds with the widespread creation and use of fiber-tempered ceramics at semisedentary sites like Stallings Island and Lake Spring (Elliott and Sassaman 1995), as well as the regional trend of dispersed communities with stylistically and technofunctionally distinct pottery styles (Gilmore 2015; Waggoner 2009). Targeted ceramic research within and outside the Ogeechee watershed has concentrated on technofunctional and stylistic

differentiation as proxies for discussing community sedentism and circumscription by the Late Archaic period (Elliott and Sassaman 1995:54; Ledbetter and O'Steen 2013; Sassaman 1993; Sassaman and Rudolphi 2001; Sassaman et al. 1995; Waggoner 2009). The Ogeechee watershed occupies a liminal position in Stallings research:

> The role of Ogeechee River sites in the creation and demise of Stallings culture is unknown. We know that shellfish and fiber-tempered pottery were a part of Ogeechee River life, but there is little extant information that would help us to put the Ogeechee in its place in the dynamic history of Stallings culture. Were Ogeechee sites occupied during the early centuries when coastal plain groups were widely distributed and only loosely integrated? Were Ogeechee sites coeval with major occupations in the middle Savannah River valley, and if so did they represent seasonal aspects of Stallings settlement, or perhaps a social fringe to a multifaceted population? Might Ogeechee sites embody elements of the dissolution of Stallings society, perhaps the relocated segments of groups striving to maintain a riverine economy (Sassaman et al. 1995:23)?

Bounded on one side by the proliferation of Stallings ceramics on the coast and up the Savannah River (Sassaman 1993; Sassaman et al. 1995; Saunders and Hays 2004), and on the other side by identifiable Stallings ceramics and maintained/remnant soapstone vessel technology in the Ocmulgee Big Bend region (Waggoner 2006, 2009), the Ogeechee Stallings narrative is stunted by associations with culture histories in adjacent watersheds. The diversity of Stallings expression – manifested in the regional coexistence of groups using versus eschewing pottery, or those using direct versus indirect-heat cooking – is still poorly understood in the Ogeechee watershed (Sassaman 2004; Sassaman et al. 1995). Only recently has research shifted to direct radiocarbon dating of the ceramics themselves to understand the social and technological boundaries of Stallings ceramic styles and the relational phenomena that naturalized these cultural preferences.

Recent research on Ogeechee Stallings assemblages is untangling some of these conflated Late Archaic narratives via ceramic compositional analysis (Gilmore et al. 2018) and radiocarbon dating (Gilmore 2015; Jones et al. 2019, 2022) to create a backdrop of absolute chronologies for the spread of early pottery in the Georgia interior.

Gilmore and colleagues (2018) conducted a clay compositional study to identify patterns of pottery movement between the Savannah and Ogeechee watersheds. Their work demonstrated that compositionally, clays from the Ogeechee were qualitatively almost identical to clays in the middle Savannah River valley, and reinforced Late Archaic narratives that suggest Stallings communities began as relatively small and mobile residential sites that eventually became "entangled in larger social networks predicated on the exchange of extralocal materials" (Gilmore et al. 2018:44).

I have led two separate pilot studies (Jones et al. 2019, 2022) in ceramic dating to test a tentative model for the origin and regional spread of fiber-tempered pottery postulated by Sassaman (2004) and based on currently-available radiometric data from the coast and Savannah River valley sites (Figure 2.9). The model posits a common origin for plain, flat-bottomed vessel technology on the southern coast of Georgia by 4600-4500 BP (ca. 5300-5000 cal BP), followed by rapid spread into the lower Savannah River region toward the mouth of the St. Johns River by 4500-4200 BP (ca. 5000-4500 cal BP). A final expansion in the into the middle Savannah River region and south toward the middle St. Johns marks the tail-end of Stallings dispersal, from 4200-3800 BP (ca. 4500-4000 cal BP). It assumes that all other occurrences of fiber-tempered pottery in the greater Southeast, as far west as the Ocmulgee Big Bend and as far north as the Georgia Piedmont, postdate 3800 BP (approximately 4200-4000 cal BP).

I extracted and directly dated the fiber tempering from ceramics in the Ogeechee watershed based on methods developed by Gilmore (2015) for isolating charred *Tillandsia usneoides* (Spanish moss) from vessel interiors, providing a proxy indicator for the moment of manufacture of the vessel. Samples originated from both site-specific contexts and looter-derived unprovenienced surface finds. I chose interior Coastal Plain sites to clarify the timing of Sassaman's (2004) projected dispersal of early Stallings ceramics into the Georgia interior. The results of both studies align with the model's

stipulation that interior Coastal Plain sites along the Ogeechee River postdate ca. 4200-4000 cal BP, with the exception of one unprovenienced sherd from western Burke County that returned calibrated dates of 4383-4375, 4353-4328, and 4299-3983 cal BP in the 2-sigma (95.4%) range (Tables 2.2 and 2.3).

Both pilot studies provide fodder for future Stallings dating programs, and offer points of departure from existing assumptions that Ogeechee sites "were the seasonal, dispersed aspects of populations that routinely aggregated at sites like Stallings Island" (Sassaman et al. 1995:37). Rather, the limited data from Ogeechee assemblages in these studies seem to suggest that this area of the interior Coastal Plain might have been occupied after the abandonment of Stallings Island by 3500 BP (ca. 3970-3620 cal BP) (Sassaman et al. 2006:549). The Ogeechee sites could reflect a dispersed model of Stallings settlement along with sites in the Ocmulgee Big Bend (Sassaman 1997; Snow and Stephenson 2006; Waggoner 2009). While stylistically similar to Stallings forms from the Middle Savannah River valley, Ogeechee Stallings vessels are technologically distinct, and "anchored in a long-standing tradition of indirect-heat cooking with soapstone slabs." (Ledbetter and O'Steen 2013:20). The late ceramic dates paired with the intentional and continued use of soapstone by interior Ogeechee watershed Stallings communities may instead suggest their positionality in interrupting or undermining soapstone trading networks with Piedmont groups during and after the decline of Stallings communities in the lower Savannah River valley at the end of the Late Archaic period (Sassaman 1999; Waggoner 2009).

Legacies of Environmental Models in the Southeast

The southeastern hunter-gatherer archaeological record is rich and varied, and settlement systems differed significantly across the region. Controlling for material culture changes, regional climatic variation, and physiographic variables across time and space complicates the iterative potential of settlement models, and necessitates

explanations of different adaptive strategies. In general, the creation of settlement models in the Southeast relies on site-scale investigations generated from CRM work, from which broader models of settlement, technological organization, and hunter-gatherer social structures derive (Smallwood et al. 2022:87).

Prior to a discussion of current models of hunter-gatherer settlement in the lower Southeast, a brief review of previous settlement and subsistence models for the region is warranted. The rationale for providing this overview is to demonstrate the research lineage for the creation and implementation of these models in the Georgia interior and proffer a methodology for settlement modeling that is more in-line with southeastern landscapes, resources, and culture histories.

Midcentury Hunter-Gatherer Research

The first attempts to develop cultural sequences for hunter-gatherer settlements in the Southeast came from professional excavations of deeply-buried rock shelter cultural deposits (DeJarnette et al. 1962; Fowler 1959; Griffin 1974; Logan 1952; Miller 1956) and the concomitant emergence of radiocarbon dating for cultural sequencing based on biface morphology and stratigraphic location. Griffin's (1952) assessment of hunter-gatherer settlement systems dominated archaeological discourse, even though hunter-gatherer settlement was largely unknown outside of site-level investigations at preserved rock shelter sites. Populations were assumed to be highly mobile, a product of full-time big game hunting. This perspective was drawn from excavations at southwestern and Plains archaeological sites with direct human associations with megafaunal remains (Cook 1927; Cotter 1937; Howard 1935; Tankersley 2004). From this limited data set, and his probable ethnographically-derived "knowledge of the general cultural stage of these Early Archaic people" (Griffin 1952:354), Griffin suggested the following of hunter-gatherer lifeways:

> These movements would be adjusted to the seasonal variation of the available food supplies through the natural yearly cycle…Cultural exchange of ideas would be fostered by marriages outside of the local group…In addition, these groups almost certainly would have had certain times during the year to which some ceremonial importance was attached connected with the marked periodicity of different types of food supply. Probably a number of bands would congregate at food-rich locations and thus provide some degree of cultural interchange which would have enabled larger and larger aggregates of people to become familiar with larger territories (Griffin 1952:354-355, in Anderson and Sassaman 1996a:18-19).

Griffin's foreshadowing of information exchange on local environments and resources via marriage became the forerunner for Caldwell's (1958) primary forest efficiency (Dye 2011).

Caldwell suggested that the Eastern Woodlands throughout the Late Pleistocene and Early Holocene were so rich in foodstuffs and natural resources that there was little need for plant cultivation. This "primary forest efficiency" model of hunter-gatherer settlement and subsistence (1958:vii) suggested that the landscapes of the Eastern Woodlands were excellent "living country" (8), such that food production was only ever supplementary to foraged and hunted subsistence products. Once again, hunter-gatherer settlement and success in the region was extrapolated from western examples (Jennings 1955; Steward 1947, 1955), specifically the idea that big-game hunting by highly-mobile hunter-gatherers was the primary adaptation east of the Mississippi River, reminiscent of a "plains efficiency" model of nomadic hunting and gathering (Caldwell 1958:72; Kornfeld and Osborn 2003). Additionally, the primary forest efficiency argument suggests that it took Late Pleistocene and Early Holocene populations thousands of years to learn how to exploit the subsistence base of the Eastern Woodlands effectively.

Caldwell's model correctly predicted the deep antiquity of Indigenous traditional ecological knowledge, even if the acquisition of this incipient horticultural knowledge was less *deus ex machina* (i.e., "the Mesoamericans did it") and more "the internal dynamics of social systems and of socioeconomic processes indigenous to the East" (Watson

1990:50). Primary forest efficiency required detailed knowledge of local plant communities, their ecology, their subsistence and practical uses, and propagation techniques (Dye 2011; Watson 1990). Contrary to Caldwell's notion that this "discovery of new sources of natural foods…was progressive in the sense of being an increasingly successful adjustment to the eastern forest environment" (1958:vii) prior to the adoption of maize, there is substantial evidence in the archaeological record that by the Early Archaic period, foraged foodstuffs (especially nut mast like hickory) were already an integral part of southeastern diets (Asch and Asch 1985; Cowan 1985; Hollenbach 2009; Hollenbach and Carmody 2022).

Emergence of Integrated Settlement Models

Joffre Coe's *Formative Cultures of the Carolina Piedmont* (1964) was the first attempt at synthesizing the available information on Late Pleistocene and Early Holocene populations from open-air sites, prompting a methodological reconfiguration for hunter-gatherer research in the Southeast (Anderson and Sassaman 1996a:21). The subsequent development of testable settlement models was slow, with research focusing instead on "typological and chronological sequence(s) of point and tool forms" (Anderson and Sassaman 1996a:22) rather than settlement and subsistence strategies of hunter-gatherers. By the 1970s and 1980s, on the heels of the introduction of epistemological shifts brought forth by New Archaeology research paradigms (*sensu* Binford 1965) and regional research driven by the River Basin Survey program (Glenn 1994), several models were developed in the Southeast that attempted to explain elements of hunter-gatherer settlement and land use practices. Broadly, these models tend to thematically focus on seasonally-motivated logistical base camp/extraction camp locations (after Binford and Binford 1966).

The earliest attempts to incorporate regional settlement data into southeastern archaeological interpretations focused on applications of the base camp/extraction camp

model, or the “local group” and task-oriented “work forces” model of settlement (Binford and Binford 1966:267; see also Service 1962; Steward 1955). Luchterhand (1970) developed a model of hunter-gatherer settlement in the Little Illinois River valley based on the distribution of diagnostic bifaces, suggesting that semi-permanent settlement concentrated in the uplands seasonally for deer hunting. This seasonally-driven settlement model is not dissimilar to the Shoshonean seasonal round proposed by Steward, which described a semi-permanent winter encampment in the piñon-juniper uplands where cooperative hunting took place (1938). The Luchterhand model, under careful scrutiny within the context of a southeastern biome, did not stand the test of time. Extensive Archaic assemblages have been identified in floodplain environments in the same region (Stafford 1985), contrary to Luchterhand’s interpretations, illustrating the complications that arise from inductive analysis using ethnographic analogs from different regions. Other seasonal base camp models developed during this period include the Little Tennessee River “central-based transhumance system” (Chapman 1975:272), which describes a model of seasonal base camp locations in floodplain areas of maximum resource diversity; the riverine/interriverine seasonal extractive system described by Goodyear and colleagues (1979; see also House and Ballenger 1976), which suggests that hunter-gatherer base camps were located in floodplains, with extractive procurement camps located in upland interriverine zones; and the Dalton hypothesis (Goodyear 1974; Morse 1969), which posited that by the Early Archaic period, hunter-gatherers in the Mississippi River valley were organized in semi-permanent base camps in watershed extensive territories, from which logistical groups of hunting and butchering camps radiated out, creating ephemeral camps for specialized activities.

These early models are still useful heuristics, and generate testable hypotheses; however, their long-term utility has been challenged in the Southeast. In general, they

rely on incomplete data sets, low/no habitat differentiation or integrated environmental data, and settlement systems derived from models generated for regions that are environmentally distinct from the Southeast. Other models developed near the end of this rapid model building period within and outside the Southeast deviated from the base camp/logistical camp mold, and provided testable hypotheses that would shape the future of hunter-gatherer settlement modeling in the Southeast.

Modern Hunter-Gatherer Settlement Modeling

The methodological forerunner of contemporary precontact hunter-gatherer model building in the continental United States is the “high-technology forager” (HTF) model (Kelly and Todd 1988). This model argues that Late Pleistocene populations were technology-oriented rather than tethered to places on the landscape because of rapid environmental shifts at the end of the Pleistocene. As a result, populations moved quickly across North America, leaving behind a “redundant archaeological record” (Anderson and Sassaman 1996a:32) reflecting “continental consistency in behavior” (Kelly and Todd 1988:235). They suggest the ‘curated’ and portable technology of long-lasting and multi-purpose tools – like scrapers, burins, and bifaces – were behavioral adaptations that allowed hunter-gatherers to abandon their dependency on local environments and known lithic outcrops in favor of remaining logistically and residentially mobile.

From this high-technology, hunting-induced mobility model, in addition to Binford’s (1980) forager-collector model and Kelly’s (1983) hunter-gatherer seasonal mobility strategies study, archaeologists working in the Southeast developed counterarguments in favor of a more generalized foraging strategy (Anderson 1995b; Daniel 2001; Meltzer 1988). The HTF model was also the catalyst for the development of settlement models that take a diachronic approach to hunter-gatherer assemblage composition (Blanton and Sassaman 1989; Cable 1996; Sassaman 1991), range

reduction (Sassaman 1996; Sassaman et al. 1988), settlement expansion (O'Steen 1996; Sassaman 1995), and population change over time in specific localities (Anderson 1990, 1991b, 1996a:37; Anderson and Hanson 1988; Anderson and Joseph 1988; Galloway 1994; Sassaman 1991; Turner 1989).

Modern hunter-gatherer regional research in the Georgia interior is driven largely by the testing and updating of three models directed at Late Pleistocene and Early Holocene human population dynamics: Anderson's (1996a) "staging area" model of human settlement in resource-rich watersheds like the Savannah River valley; Gardner's (1974, 1977) Flint Run lithic tethering model; and Anderson and Hanson's (1988) "band-macroband" model of seasonal mobility within watersheds and periodic macroband aggregations (Smallwood et al. 2022:87). Anderson (1990, 1996a) argued that the Savannah River watershed was an Early Paleoindian "staging area,"

> …where at least some of these initial populations slowed their movement, settling in for greater or lesser periods of time, on the order of years or possibly even generations. Decreased group mobility may have prompted massive population growth…Residing in staging areas for extended periods would have also given these early poulations the opportunity to familiarize themselves with the resources available in their new homeland (Anderson 1996a:36).

Smallwood (2010, 2012), in her characterization of Clovis biface technology, supports the staging area model, suggesting that Early Paleoindian settlements concentrated in the resource-rich Savannah River valley and became "increasingly disparate from other populations throughout the Southeast" (Smallwood et al. 2022:87). Goodyear (2018) similarly argues that the Brier Creek drainage within the Savannah watershed is a core staging area. Like Gardner (1974, 1977), Goodyear posits that the Coastal Plain chert outcrops of the Brier Creek drainage would have 'tethered' band-level populations to the Savannah River valley. Smallwood and colleagues (2015) reinforce the idea of lithic tethering, concluding that Early Paleoindian populations in Georgia targeted and

mapped onto high-quality tool stone resources in the Coastal Plain and Piedmont, which persisted through the Late Pleistocene.

By the Early Holocene, Elliott (2006) suggests that Early Archaic sites like Taylor Hill in the Savannah River drainage were base camps consistent with the settlement patterns indicated in the Anderson and Hanson (1988) band-macroband model. The Early Archaic in the Georgia Coastal Plain is characterized by broad distributions of seasonally or ephemerally occupied campsites, and site file data were utilized to model site densities across physiographic regions, demonstrating that Paleoindian and Early Archaic sites are evenly distributed across physiographic provinces (Turck et al. 2011; Williams et al. 2010). While the dispersed nature of these Late Pleistocene and Early Holocene sites does not conflict with the band-macroband model (Anderson and Hanson 1988), the settlement patterns are more consistent with O'Steen's (1996) suggestion that Early Archaic campsites were widely distributed across Georgia landscapes.

Middle Archaic settlement and mobility strategies are less intensively examined in the archaeological literature for the Georgia interior, and are typically explained as ecological adaptations to changing environmental conditions during the Holocene Climatic Optimum in Georgia (Shah and Whitley 2009:48). The majority of recorded Middle Archaic sites are located in the Piedmont along the upper reaches of the Chattahoochee, Oconee, and Savannah Rivers (Anderson 1996b:169). Settlement strategies have been described as highly mobile foraging groups utilizing an expedient lithic technology (*sensu* Kelly and Todd 1988) characterized by the manufacture and discard of the perceived low-quality Morrow Mountain bifacial form (Anderson 1996b; Blanton and Sassaman 1989; Claggett and Cable 1982; Sassaman 1991; Shah and Whitley 2009). Sites are ephemeral, and subsurface contexts are infrequently investigated because they are difficult to delineate. The ubiquity of diagnostic bifaces is "thus unlikely to represent the presence of dense populations but instead reflect(s) the

remains of small, organizationally uncomplicated groups ranging widely over the landscape" (Anderson 1996b:164). Use of the interior Coastal Plain appears limited to lithic resource areas (*sensu* Gardner 1974) and major waterways (Anderson 1996a; Anderson and Sassaman 2012). This population reorganization away from the Coastal Plain is typically explained as a response to the spread of pine and local xeric environmental conditions at the onset of Holocene Climatic Optimum.

Another model used to explain the Coastal Plain Middle Archaic is Sassaman's model of adaptive flexibility (1991), which specifically applies to the Morrow Mountain tradition (ca. 8100-6000 cal BP) (Moore et al. 2012), thought to represent the peak of human occupation during the Holocene Climatic Optimum. The adaptive flexibility model was created as a counterargument to explanations of decreased Middle Archaic group ranges and preferences for local, low-quality tool stone. The prevailing settlement theories for the Middle Archaic at the time concluded that the territories utilized by these groups decreased, so much so that communities no longer had access to high quality lithic materials (Blanton and Sassaman 1989; Goodyear et al. 1979). This circumscription of hunter-gatherer territories could be attributed to incipient warfare, increasing population pressure, or an abrupt halt to the macroband aggregations characteristic of the Early Archaic (Anderson and Hanson 1988; Anderson and Sassaman 2012; Bridgman Sweeney 2013). Sassaman posits instead that Middle Archaic populations exhibited high residential mobility as a result of the reliable resource base created by stabilizing Hypsithermal temperatures (1991:35), allowing hunter-gatherer populations to practice high residential mobility. While this model will be reexamined in greater detail in Chapter 5, it is currently at-odds with both Binford (1980) and the broader ethnographic data available on forager-collector strategies, which suggest that mobile forager strategies are expected in areas with scarce, spread out, or unreliable resources (Binford 2001; Kelly 1983; Schiffer 2014; Stein Mandryk 1993).

The Late Archaic period is characterized by a veritable population explosion across the Georgia interior and the greater Southeast, with marked increases in sedentism, especially along the coast (Quitmyer et al. 1997; Russo 1998; Thompson and Turck 2009), reoccupation of interriverine site locations from previous periods (Goodyear et al. 1979; House and Ballenger 1976), infilling of the southeastern landscape (Amick and Carr 1996; Anderson and Joseph 1988), and the creation and spread of early ceramics (Sassaman 1993, 2004; Saunders and Hays 2004). Settlement models for the Late Archaic, contrary to earlier hunter-gatherer periods in this region, are decidedly less environmentally deterministic, focusing instead on the expansion of trade and exchange networks in both ceramics and soapstone (Elliott 2017; Sassaman 1997, 2004, 2006b; Waggoner 2006, 2009) as well as the shift toward considerations of localized societal histories and the fluorescence of regional traditions in the context of these macroregional interaction networks (Anderson 2010:276). In fact, much of Late Archaic theorizing and settlement modeling is concerned with defining qualities of "Woodlandness" (Sassaman 2002:398) nearly 3000 years before the onset of the Woodland period. Cultural phenomena frequently associated with Woodland period sedentary village life originate in the Middle and Late Archaic periods. Mound construction in the Southeast began millennia prior to the erection of Adena and Hopewell earthworks (Russo 1996; Saunders and Allen 1994; Saunders et al. 1997); semipermanent habitation was already common along the coasts (Elliott and Sassaman 1995; Quitmyer et al. 1997; Russo 1998; Thompson and Andrus 2011); and incipient horticultural practices focused on the manipulation of starchy seed-bearing plants began long before their intentional use as cultigens (Crites 1993; Doran et al. 1990; Gremillion 1996, 2004; Smith 1987, 1992; Watson 1990).

Outside of the Georgia interior, dynamic models of hunter-gatherer settlement change incorporate behavioral ecology frameworks to generate novel settlement

histories predicated on local landscape reconstructions. After a brief contextualization of behavioral ecological applications in southeastern archaeology, I will review how IFD studies have specifically been used in the region, and offer some commentary on how this study builds on the existing body of work in hunter-gatherer southeastern settlement modeling.

Behavioral Ecology and Southeastern Hunter-Gatherer Studies

Human behavioral ecology has a long history in archaeological theorizing, spanning studies in ancient hunter-gatherer, pastoral, and agricultural societies (Bird and O'Connell 2006; Kennett and Winterhalder 2006b; Winterhalder and Smith 2000). While it is often mistakenly considered synonymous with optimal foraging theory in archaeological practice (Bird and O'Connell 2006:144; Schiffer 1999), its perspective is broader and its utility more substantial than limited discussions of foraging behaviors (Bamforth 2013).

Optimality models have been applied to ethnographic contexts since at least the late 1970s (Bettinger 1991; Cronk et al. 2000; Kelly 1995; O'Connell and Hawkes 1981; Smith 1981; Winterhalder 1981; Winterhalder and Smith 2000). Early optimality studies tended to focus on decision-making in geographically marginal locations, building off the general trend in early hunter-gatherer research to study adaptive decision-making through the lens of environmental determinism (Bender and Morris 1988; Kent 1996; Lee and DeVore 1968; Woodburn 1980). The early goal of these optimality studies was to situate the cultural ecological paradigms of Steward (1938, 1955) and foundational hunter-gatherer studies (Lee 1979; Lee and DeVore 1968) within established neo-Darwinian scientific theory (Winterhalder and Smith 2000).

Among the best-known examples of optimality modeling in ethnographic populations are the studies of prey choice among the Paraguayan Aché (Bird and O'Connell 2006:148; Hawkes et al. 1982; Hill and Hawkes 1983; Hill et al. 1987), whose

ancestral territories include landscapes of the modern departments of Caazapa, Guairá, Alto Paraná, Caaguazu, and Canindeyu in eastern Paraguay (Binford 2001; Hill et al. 1987). The Aché are a particularly useful contemporary case study in ethnographic optimality modeling because, contrary to the general anthropological trend of studying hunter-gatherers in marginal environments, southern Paraguay occupies the same climate zone (Zone Cfa) as the modern southeastern United States study area (Peel et al. 2007:1640) (Figure 2.10), which exhibited near-modern climatic conditions by approximately 4500 cal BP (LaMoreaux et al. 2009).

Optimality studies of hunter-gatherers in analogous low-to-mid latitude humid subtropical forests like eastern Paraguay highlight deviations from expected 'optimal' decision-making that have implications for hunter-gatherer studies in the Southeast. Importantly, Aché meat consumption and preferential hunting is inconsistent with generalized hunter-gatherer optimality predictions (e.g., Binford 2001; Lee and DeVore 1968) that indicate plant resources would be prioritized in hunter-gatherer diets at low-to-mid latitudes because they are "the most predictable prey" (Hollenbach and Carmody 2022:230; see also Tushingham and Bettinger 2013 for a counterargument when food storage is considered in diet breadth calculations). When factored into southeastern hunter-gatherer settlement narratives, preferential hunting in humid subtropical environments with abundant plant resources manifests as settlement patterns reminiscent of those expected by the "high-technology forager" model (Kelly and Todd 1988), rather than the more widely accepted "staging area" model of gradual settlement and cultural regionalization (Anderson 1990, 1995a, 1996a; Smallwood 2012). High-value hunting is also consistent with Gremillion's (2004) diet breadth model for the Eastern Woodlands, which contends that seedy annuals were a low-ranked resource by at least the Late Archaic.

Early archaeological applications of human behavioral ecology also date to the 1970s (Bayham 1979; Jochim 1976; Keene 1979; Wilmsen 1973), but stalled until the 1990s because of difficulties in quantifying archaeological analogs for optimality models (Bird and O'Connell 2006:148). Ethnoarchaeological and experimental data made it possible to quantify energetic returns, and behavioral ecological modeling continues to be popular in hunter-gatherer archaeological research (Bettinger 1991; Kaplan and Hill 1992; Kelly 1995; O'Connell 1995; Shennan 2002; Winterhalder and Smith 2000). Modern behavioral ecological research in archaeological practice focuses on five general themes (after Bird and O'Connell 2006): forager diet breadth (Cannon 2000; Erlandson 1991; Nagaoka 2002; Thomas 2008); the origin and spread of domesticated flora and fauna (Alvard and Kuznar 2001; Diehl 2008; Gremillion 2004); technofunctional adaptations among foragers (Bamforth 1986; Fitzhugh 2001; Goodyear 1989; Jochim 1989; Kelly 1988; Parry and Kelly 1987); central place foraging (Bird et al. 2002; Kelly 2001; Zeanah 2004); and the environmental conditions behind colonization and competitive exclusion among foraging populations (Beaton 1991; Keegan 1995; Kelly 1999; Meltzer 2002, 2009). Archaeological applications of optimality models confront an additional problem beyond those encountered in ethnographic research – the material correlates for socioecological decision-making are complex and sometimes absent, making optimality predictions (even simple ones) difficult to test.

Ethnographic and archaeological applications of human behavioral ecology operate under the assumption that human decision-making is the result of variability in situational socioecological settings, each with "a unique set of circumstances that defines the fitness-related landscape in which individuals operate" (Bird and O'Connell 2006:145). The null hypothesis underpinning these studies assumes that, if given the opportunity, humans will exhibit predictable, adaptive responses to social and ecological features of their environments. Deviations from 'optimal' behavior are the conditional

responses of interest to researchers. Context-specific predictions of human behavior require the use of formal models developed from optimization analysis (Maynard Smith 1982). Optimality modeling provides a mathematical, and (presumably) empirical way to test questions of hunter-gatherer subsistence and settlement through idealized strategies for maximizing energy and time (Surovell 2009). It offers a set of models developed primarily in the biological sciences and applies them to hunter-gatherer decision-making based largely on principles of evolutionary ecology:

> Optimal foraging models are based on the neo-Darwinian assumption that natural selection and competition are the inevitable outgrowth of reproduction in a finite environment. Natural selection will favor foraging behaviors that result in maximum fitness with regard to whatever constraints are operating. In other words, there will be differential survival of those behaviors which best allow an individual or population to achieve its life goals in a specific environment (Keene 1981:8).

These formal optimality models provide an objective framework for developing testable hypotheses about human behavior under specific conditions.

Research themes centering on human-environment interactions have a long history in the writings of southeastern archaeologists (Caldwell 1958; Griffin 1952). Human behavioral ecological modeling in particular has been used successfully in archaeological theorizing in discussions of the transition to plant cultivation and hunter-gatherer settlement strategies in unstable environments, ostensibly because population pressure is a presumed catalyst for behavioral shifts (Miller 2018; Robinson et al. 2019). Gremillion (2004) argued that hunter-gatherers in eastern Kentucky were low-level producers (*sensu* Smith 2001) by the Late Archaic, and stored starchy seeds in times of resource scarcity to eat rather than allocate time and energy to finding alternative food sources. Kuhn and Miller (2015) looked at regional trends in the maintenance and discard of lithic artifacts during the Paleoindian period in eastern Tennessee, and considered replacement costs of high-quality tool stone artifacts within the framework of marginal value theorem.

Some of the early attempts in the Southeast to investigate site frequencies and distributions in the context of environmental changes suffered from a lack of interpretive frameworks. For example, Meltzer (1988) interpreted the high number and wide distribution of Early Paleoindian sites across the Southeast as evidence of high residential mobility (*sensu* Binford 1980) rather than population increase. Anderson (1996b) interpreted this same increase in site frequency and location during the Late Archaic as evidence of population increase compared to earlier time periods. Without testable hypotheses offered through behavioral ecology, there is an issue of equifinality in these early hunter-gatherer environmental studies – increased site frequency and distribution could mean *either* more people on the landscape or fewer people moving around more often (Miller 2018:115; Surovell 2009). To solve this problem, ideal free distribution modeling (Fretwell and Lucas 1969) has been operationalized in the Southeast as the null model to analyze changes over time in site frequency, distribution, and the demographic implications associated with these shifts on changing landscapes.

IFD in Archaeology

Behavioral ecological modeling is well established as a predictive tool in a wide range of archaeological and ethnographic subject areas (Bird and O'Connell 2006; Winterhalder and Kennett 2006; Winterhalder and Smith 2000), but IFD predictions lag behind other optimality models of comparable generality (e.g., diet breadth, patch choice). It shares some similarities with applications of the marginal value theorem (MVT) and patch choice models (Charnov 1976; Kelly 1995), namely, that they all assume individuals have the necessary ecological information available to make foraging decisions, and movement among habitats or patches is unrestricted. Unlike the MVT, IFD incorporates predictions about population density and landscape infilling, which makes it particularly useful as an interpretive model for human demographic studies and landscape use. Winterhalder and Kennett (2006) also argue that IFD is

better-suited for regional analyses than MVT, which generates predictions for individual decision-making in discrete resource patches. IFD models are broader in scope, and predicated on the assumption that individuals are aware of multiple habitat types in their vicinity.

Recent heuristic applications of IFD in archaeological research include settlement distributions in Oceania and Australia (Allen and O'Connell 2008; Kennett et al. 2006), the establishment of permanent settlements in the Northern Channel Islands (Kennett and Winterhalder 2008; Winterhalder et al. 2010) and the spread of agriculture in Spain (McClure et al. 2009) and throughout Europe (Shennan 2007; Shennan and Edinborough 2007). In these regional contexts, IFD has been used successfully to answer archaeological questions by comparing settlement records against quantifiable metrics for habitat suitability like aerial photography, satellite imagery, and biogeographic data (Kennett and Winterhalder 2006b; Miller and Carmody 2016, 2020; Winterhalder et al. 2010).

IFD has seen a recent rise in popularity in the southeastern United States (Cook Hale and Sanger 2020; Miller 2018; Miller and Carmody 2016, 2020). Critical to the interpretations of IFD in these contexts is the determination of habitat suitability over time. Habitat suitability metrics (*sensu* Miller and Carmody 2020) are particularly difficult to consistently define in the Southeast, especially within the temporal range of this study, because assemblages span several millennia where substantial localized environmental changes occurred across the Eastern Woodlands (e.g., Delcourt and Delcourt 1981, 1983, 1985; LaMoreaux et al. 2009; Leigh 2008; Williams et al. 2004). Novel approaches to defining inter-watershed variability in habitat suitabilities include net primary productivity estimates based on paleoclimate reconstructions (Cook Hale and Sanger 2020) and fossil pollen landscape interpolations as proxies for regionalized climate changes (Miller and Carmody 2020). The interior Coastal Plain is a particularly good

region for testing optimality predictions of human responses to climatic conditions using both ecological data and the cultural-historical predictions of (or deviations from) optimality modeling because settlement strategies during major climate shifts appear both complex and localized (Anderson and Sassaman 2004; Anderson et al. 2007; Colannino 2010; Meeks and Anderson 2012; Smallwood et al. 2015; Thomas 2008). Human landscape use across the Coastal Plain is shaped by relative location and resource availability, but factors like resource access (a prediction of an ideal despotic settlement distribution) or territorial circumscription necessitate interpretations that incorporate both environmental data and sociohistorical trends.

My research is a natural progression of the major IFD studies in the region – it incorporates both paleoenvironmental data (*sensu* Cook Hale and Sanger 2020) and a relational vegetative data set (*sensu* Miller and Carmody 2020; Williams et al. 2004) to generate landscape predictions that are consistent with southeastern biomes. It builds on previous state-level interpretations of hunter-gatherer landscape use by integrating both PIDBA data and state site file records, which have historically been treated as separate entities for settlement pattern studies (Anderson et al. 2010; Miller 2016; Smallwood et al. 2015; Turck et al. 2011).

In addition to utilizing integrated site and component data, this project also uses a settlement ecology perspective (*sensu* Kellett and Jones 2017) to move beyond descriptions of settlement patterns to the actual historical processes that underlie how and *why* hunter-gatherers decide to settle on specific landscapes. Traditionally understood as an outgrowth of location studies in geography, settlement ecology has made inroads in archaeological practice through addressing causality in settlement pattern formation. This study demonstrates that incorporating a settlement ecology lens to behavioral ecology frameworks enhances the interpretive potential of optimality models in human populations, and *explains* rather than *describes* settlement pattern

change over time. Where behavioral ecology models do not specifically address the mechanisms by which optimality decisions are enacted, settlement ecology can bridge the explanatory gap through discussions of the processes inherent in settlement decisions (Kellett and Jones 2017:5; Stone 1996; Winterhalder et al. 2010). Historically, the theoretical frameworks that situate human cultural development as a response to environmental shifts do not articulate well with concepts like agency and history as mechanisms for understanding the past. The dual-theoretical approach applied herein moves optimality modeling even further toward robust conceptions of human decision-making around environmental considerations in archaeological research (Thompson 2014).

Summary

In this chapter, I contextualized the Ogeechee watershed and its environment, culture, and archaeological research. I described the geological and hydrological contexts that have been used to characterize the Ogeechee watershed and broader Coastal Plain's "reputation for poor resources" (Schnell and Wright 1993:8), and deep-time environmental history of the region via fossil pollen reconstructions (Delcourt and Delcourt 1983, 1985; LaMoreaux et al. 2009; Williams et al. 2004). I synthesized the archaeological research projects focusing on hunter-gatherer settlement and subsistence questions in the Ogeechee watershed, and contextualized them within the broader narrative of hunter-gatherer research in southeastern archaeology. I provided a brief historical lineage for the hunter-gatherer settlement models used in the Southeast, and problematized their construction in the context of southeastern biomes. Finally, I extended my discussion of behavioral ecological modeling from the previous chapter to investigate how optimality models have been used in archaeological research, and southeastern hunter-gatherer studies specifically. In the next chapter, I outline how I constructed and constrained the macrophysical climate model for the interior Coastal

Plain of Georgia, inclusive of descriptions of all data sets and spatial statistics used to test ‘goodness of fit’ for model results.

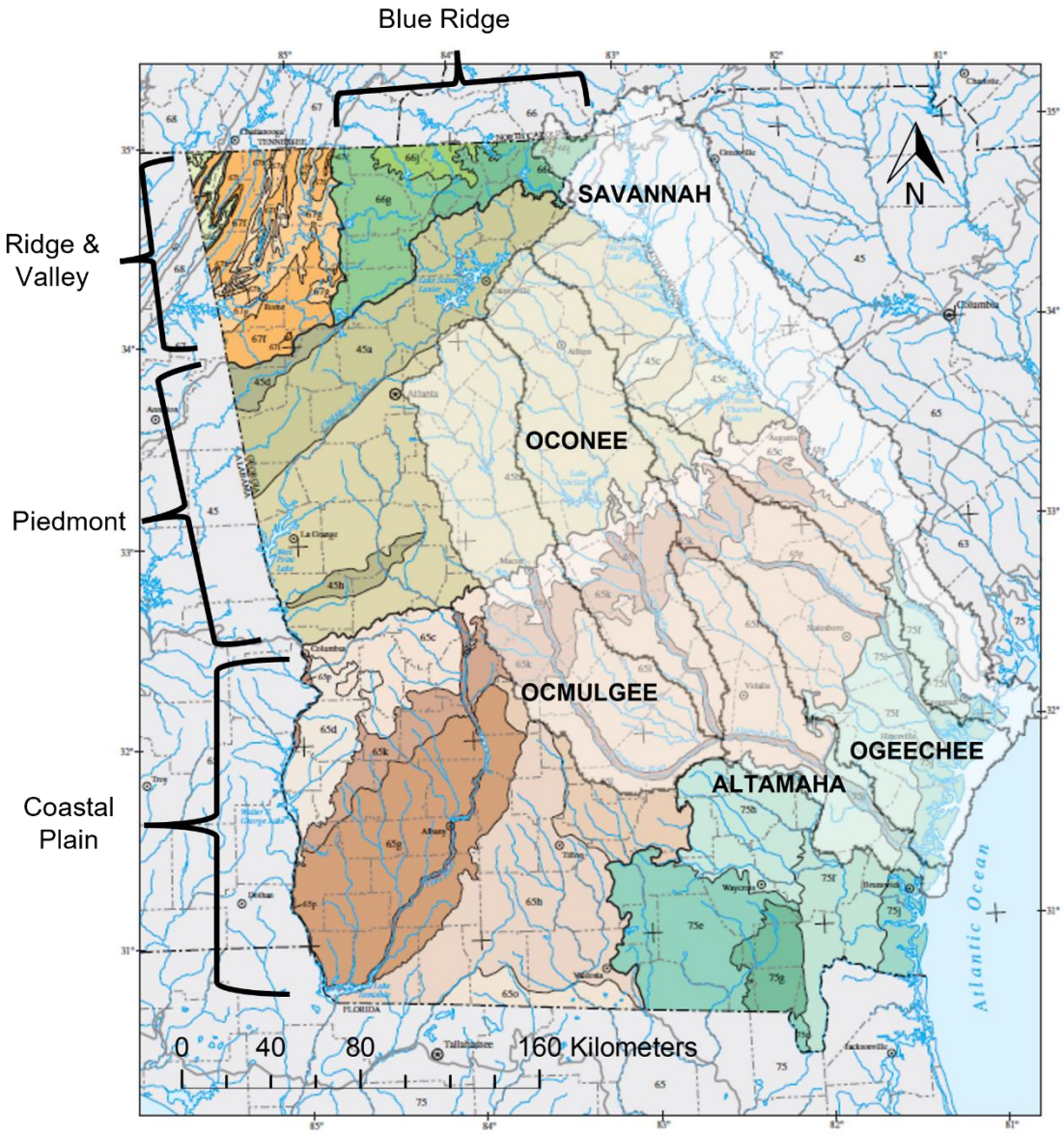

Figure 2.1: Overlay of study area watersheds onto Georgia physiographic provinces. Adapted from Griffith et al. (2001).

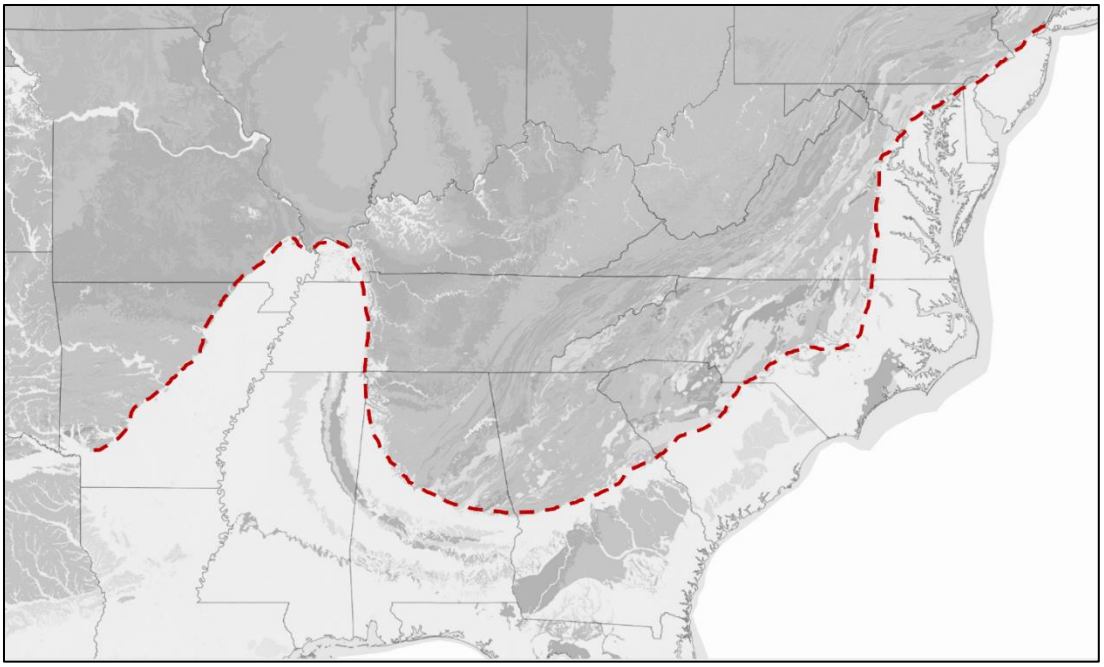

Figure 2.2: Fall Line escarpment (red dashed line) separating the Coastal Plain and Piedmont physiographic provinces. Basemap provided by ESRI.

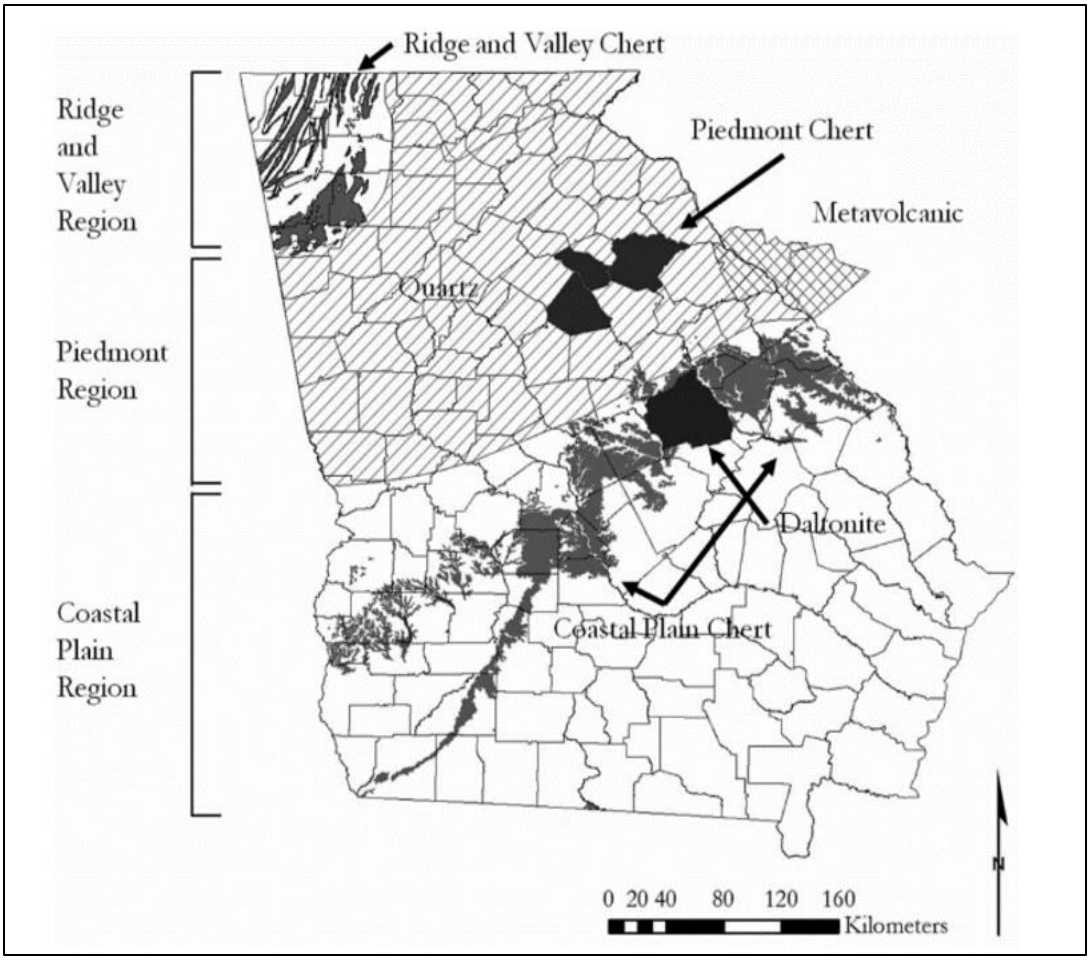

Figure 2.3: Raw material distributions within major physiographic regions of Georgia. From Smallwood et al. (2015), Figure 1.

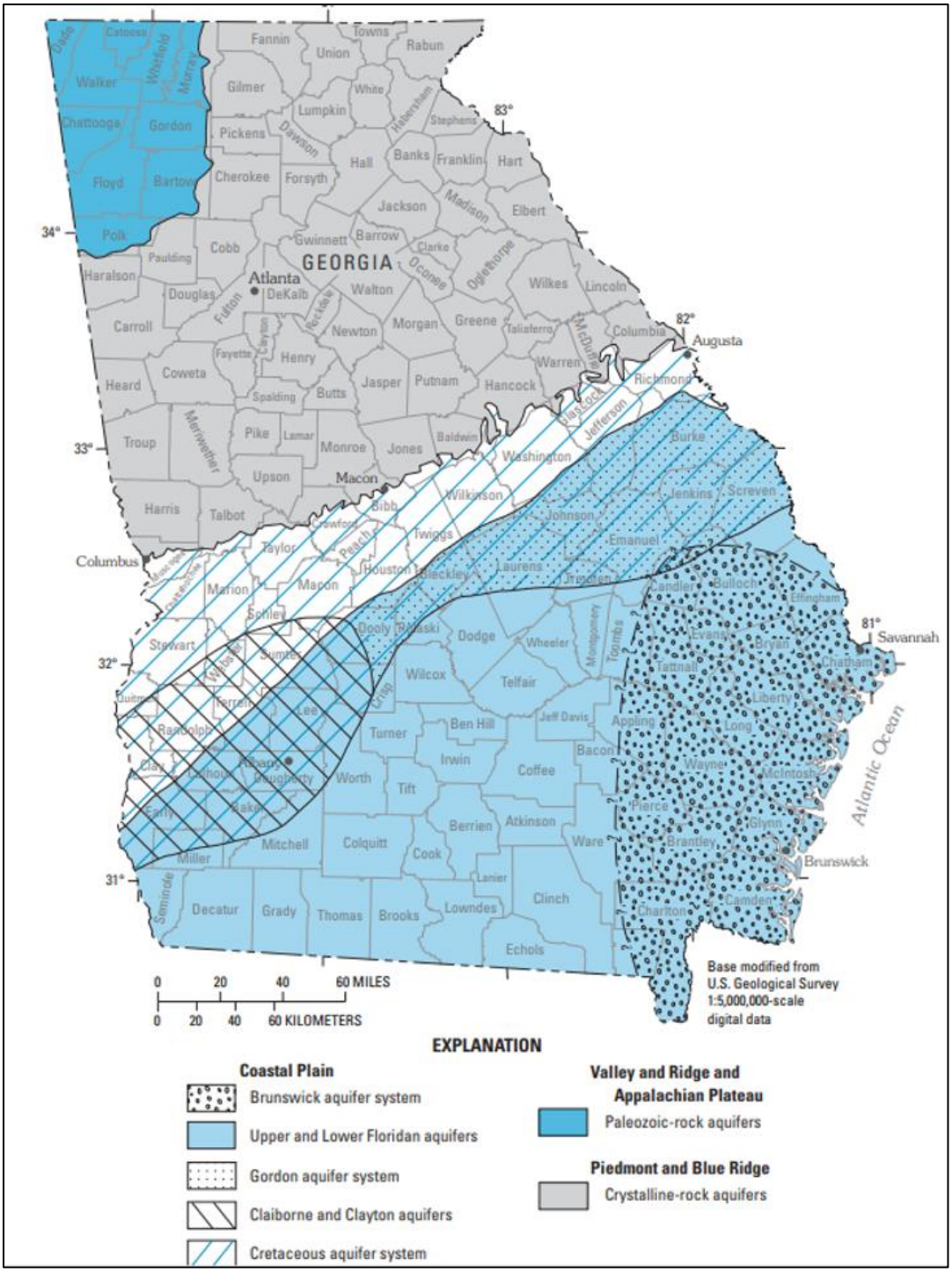

Figure 2.4: Georgia aquifer system, from Clarke and Pierce (1984).

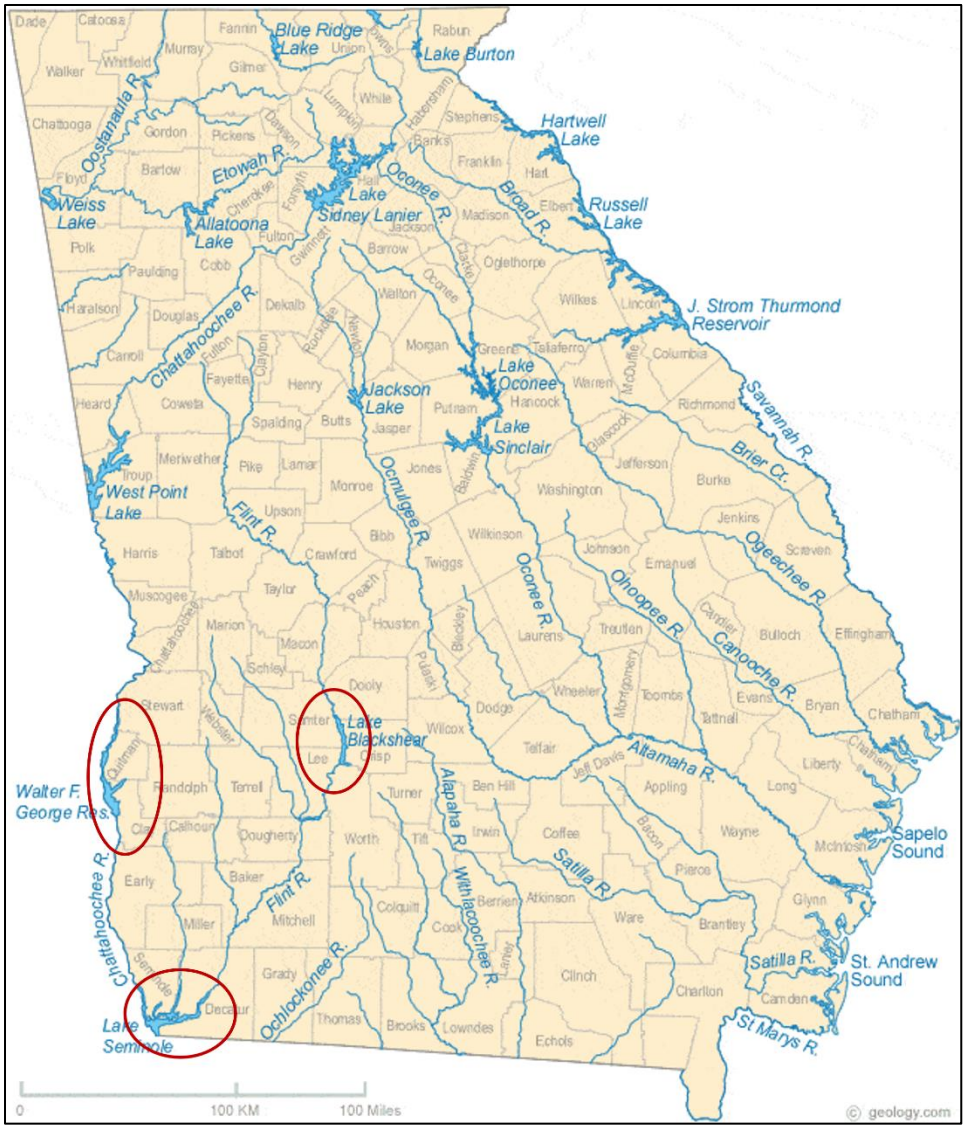

Figure 2.5: Locations of Georgia hydroelectric impoundments. The three reservoirs located below the Fall Line – Lake Seminole, Lake Blackshear, and the Walter F. Georgia Reservoir (all circled in red) – have headwaters that originate in the Piedmont physiographic province. Base map originates from Geology.com.

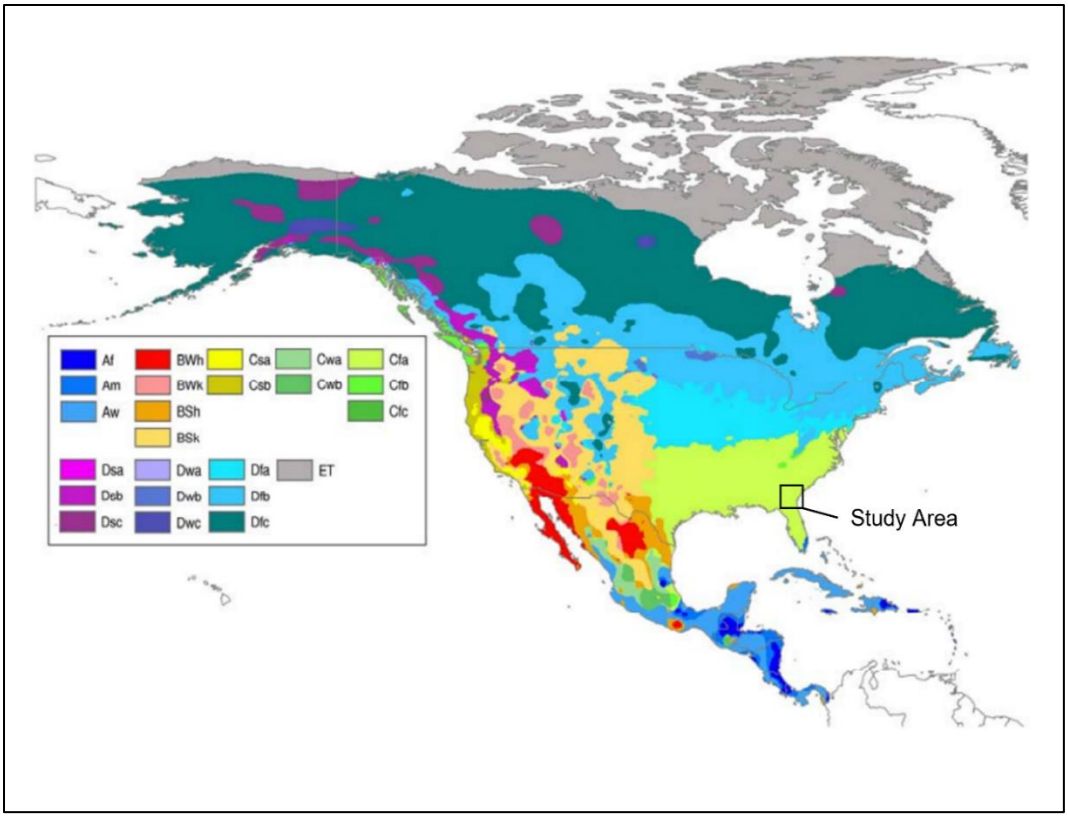

Figure 2.6: Köppen-Geiger climate type map of North America. The study area (black box) exists within the “Cfa” climate zone classification, characterized as humid subtropical/temperate with humid and hot conditions. Image adapted from Peel et al. (2007), Figure 6.

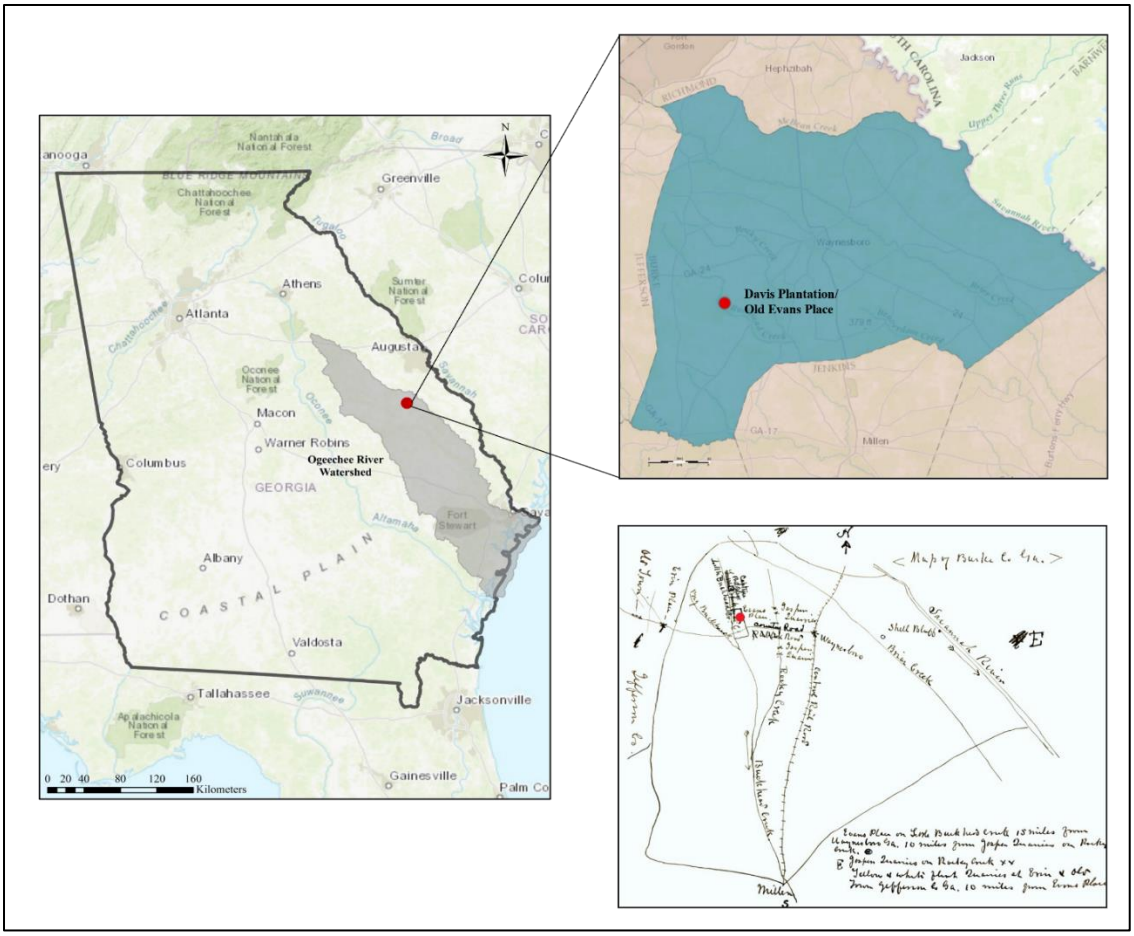

Figure 2.7: Location of Roland Steiner's Davis Plantation (red circle) in Burke County, Georgia. Clockwise from left: location of Davis Plantation within the Ogeechee watershed; location of Davis Plantation in western Burke County; location of Davis Plantation based on Steiner's hand-drawn map of Burke County. Steiner map redrafted by R. Jerald Ledbetter. Map courtesy of Smithsonian National Anthropological Archives.

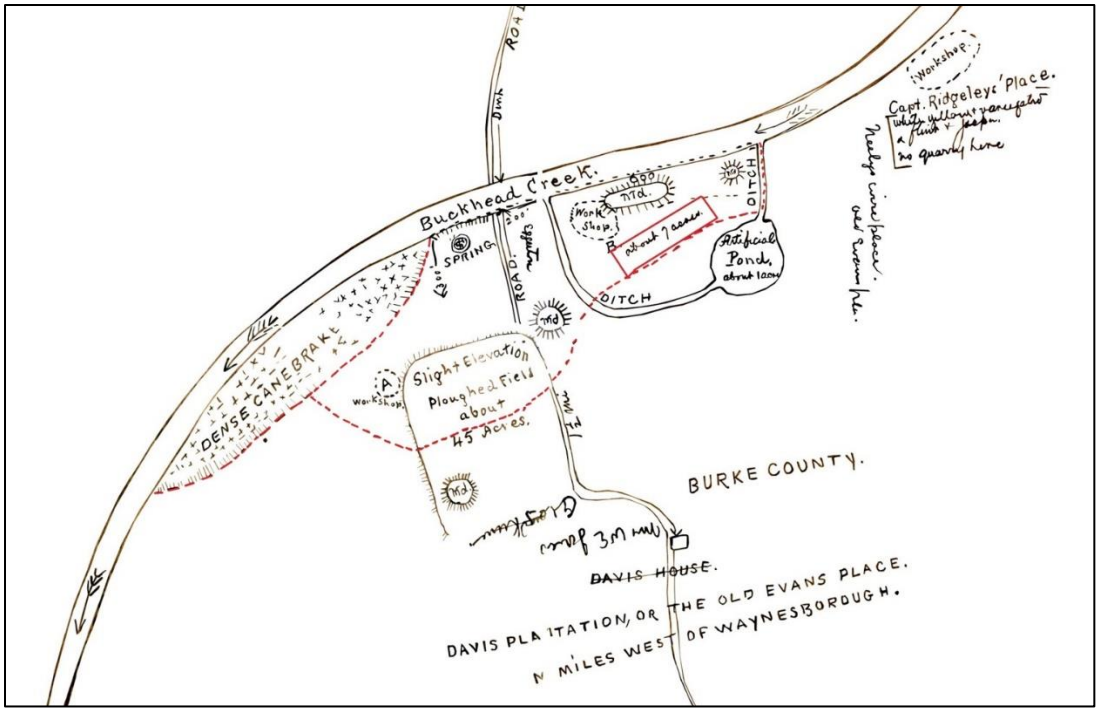

Figure 2.8: Seven-acre stretch of Davis Plantation property where all diagnostic artifacts were recovered (dotted red line). Map courtesy of the Smithsonian National Anthropological Archives. Redrafted by K. Jones.

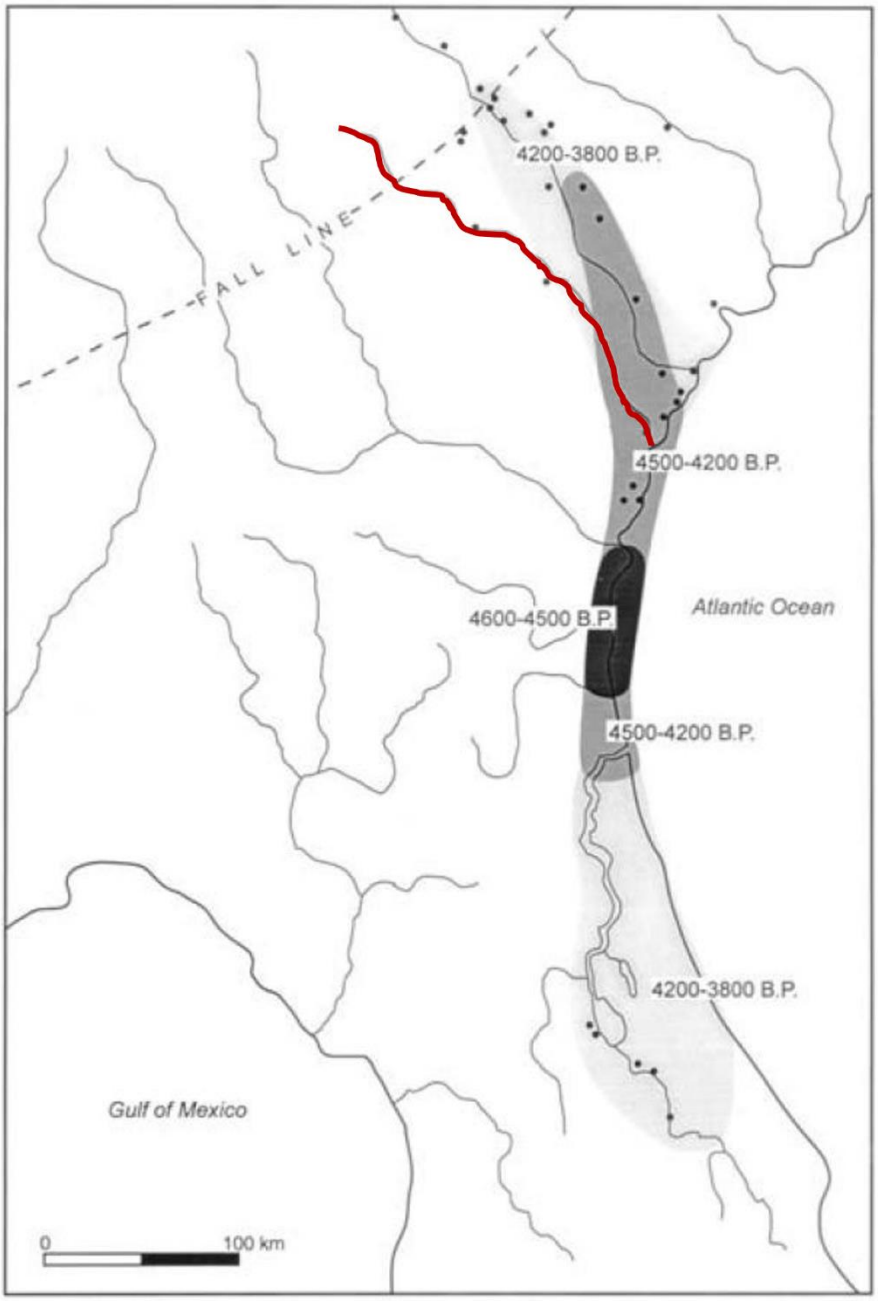

Figure 2.9: Sassaman's (2004) hypothetical model for the origin and spread of fiber-tempered ceramics (reported in uncalibrated years before present). According to this model, interior Ogeechee River sites should have pottery that post-dates 4200-3800 BP (Ogeechee River outlined in red). Figure adapted from Sassaman (2004), Figure 2.1.

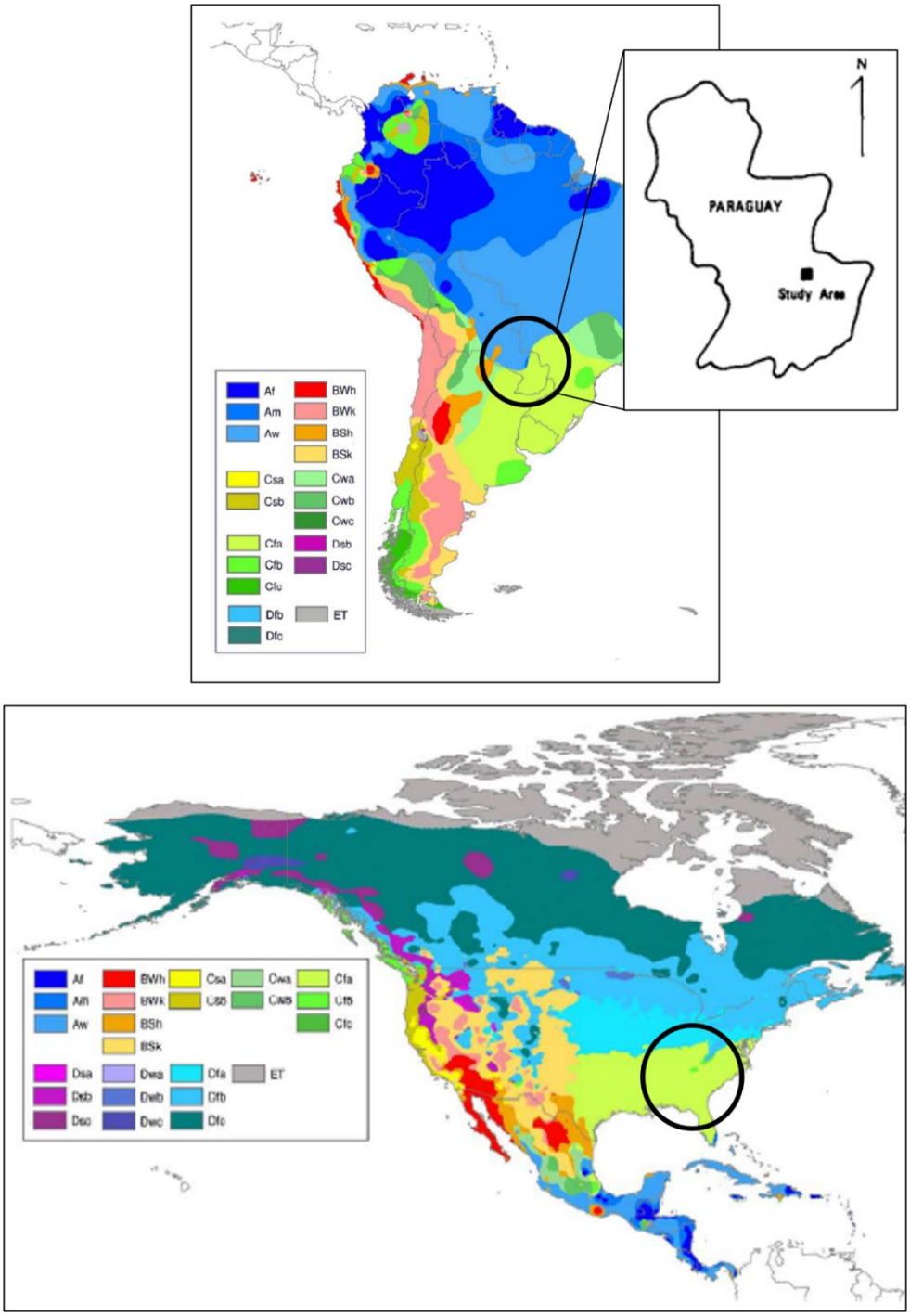

Figure 2.10: Peel et al. (2007) climate zone comparison between eastern Paraguay and ancestral territories of the Aché (top image, circled and inset) and the southeastern United States (bottom image, circled). Climate map of South America adapted from Peel et al. (2007), Figure 7. Climate map of North America adapted from Peel et al. (2007), Figure 6. Inset of Paraguay with Aché territory adapted from Hill and Hawkes (1983), Figure 5.1.

Table 2.1: Climate averages (1925-2016) for Statesboro, Georgia climate station. Data acquired from the Georgia Automated Environmental Monitoring Network (AEMN).

Time Period	Average Max Temperature (°F)	Average Min Temperature (°F)	Total Precipitation (in)	Number of Rainy Days
January	60.4	38.1	3.5	8
February	63.9	40.3	3.75	8
March	71.1	46.4	3.95	8
April	79	53.2	3.26	7
May	85.6	61.2	3.44	8
June	90.5	68	5.07	11
July	92.3	70.7	5.44	12
August	91.2	70.2	5.41	11
September	86.7	65.8	4.33	8
October	78.8	55	2.37	5
November	70	45.5	2.43	5
December	62.2	39.6	3.21	8
Year	**77.6**	**54.5**	**46.15**	**98**

Table 2.2: Fiber-temper (*T. usneoides*) and bulk combustion ceramic dates from the Jones et al. (2019) study of interior Ogeechee watershed Late Archaic sites.

Lab #	Prov	Treatment	$\delta^{13}C$,‰	^{14}C age years, BP	±	Cal. BP (95%)
UGAMS-29772	RCC Body	bulk-surf intact	-27.32	3060	25	3360-3180
UGAMS-29773	RCC Body	bulk-surf removed	-27.68	3520	25	3875-3710
UGAMS-29771	RCC Body	Fiber-acid	-23.09	3200	25	3460-3365
UGAMS-31305	RCC Body	Fiber-ABA	-19.99	3730	26	4155-3985
UGAMS-29778	VN 3-11	bulk-surf removed	-26.71	3740	22	4155-3985
UGAMS-29779	VN 3-11	bulk-surf intact	-26.7	3630	21	4065-3870
UGAMS-31306	VN 3-11	Fiber-acid	-23.15	3430	34	3830-3590
UGAMS-29774	VN 3-9	bulk-surf removed	-26.78	3760	21	4230-4005
UGAMS-29775	VN 3-9	bulk-surf intact	-26.31	3690	22	4095-3930
UGAMS-29780	VN 4-1	bulk-surf removed	-24.42	2790	21	2955-2805
UGAMS-31304	VN 4-1	bulk-surf intact	-25.56	2570	21	2755-2620
UGAMS-29776	VN 8-24	bulk-surf removed	-27.08	3380	22	3690-3570
UGAMS-29777	VN 8-24	bulk-surf intact	-26.86	3130	21	3400-3255

Table 2.3: Fiber-temper (*T. usneoides*) dates from hydrofluoric acid-isolated organics in interior Ogeechee watershed Late Archaic ceramics from the Jones et al. (2022) study. The 2-sigma (95.4%) range dates returned for Sherd 3 (highlighted in yellow) are older than Sassaman's (2004) predictions for the Georgia interior spread of Stallings ceramics.

Sample #	Organic Fraction Total Weight	Extracted Fiber Total Weight	Submitted Weight (post-ABA)	^{14}C Age	Cal. BP (95%)	δ^{13}C,‰
Sherd 1	2 mg	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Sherd 2	3 mg	0.7 mg	0.4 mg	3550±35 RCYBP	3968-3946; 3929-3812; 3804-3716	-17.4
Sherd 3	63.6 mg	0.6 mg	0.4 mg	3780±50 RCYBP	4383-4375; 4353-4328; 4299-3983	-19.4
Sherd 4	109.7 mg	0.7 mg	0.5 mg	3650±50 RCYBP	4143-4126; 4094-3840	-23

CHAPTER 3

CLIMATE MODELING OF THE INTERIOR COASTAL PLAIN

Previous ideal free distribution (IFD) studies in the Southeast (described briefly in Chapter 2) provided an initial characterization of localized landscape changes and made advancements in decoupling human decision-making from environmentally deterministic models of the early 20th century. My research is the next step in optimality modeling for the region, incorporating chronostratigraphic controls via fossil pollen data (Miller and Carmody 2020; Williams et al. 2004), net primary productivity estimates and biodiversity indices that provide quality control for the macrophysical climate model (MCM), and the incorporation of suitability metrics that include floral and non-floral elements of the landscape. In this chapter, I discuss the tiered methodology outlined in Chapter 1 for constructing the MCM, calculating NPP, generating suitability metrics for the fossil pollen and lithological data, and incorporating archaeological data from both the Paleoindian Database of the Americas (PIDBA) and Georgia's Natural, Archaeological, and Historic Resources GIS (GNAHRGIS). I address limitations of each data set, and demonstrate the necessity of a layered approach to data collection and interpretation when attempting multivariate predictive modeling like this. Statistical validation of the models will follow in the Chapter 4 discussion of results.

Tier 1: Constructing the MCM

The Bryson and DeWall (2007) macrophysical climate model (MCM) was developed in the mid-1990s as a top-down alternative to general circulation models (GCMs) and a way for social and natural scientists to generate site-specific paleoclimate reconstructions. It operates from a classical definition of climate, or the "…enduring regime of the atmosphere; it is an abstract concept. It represents a composite of the day-

to-day weather conditions, and of the atmospheric elements, within a specified area over a long period of time" (Trewartha and Horn 1980:4). For this top-down model to work, climate is considered a "boundary condition" (Bryson et al. 2009:3): atmospheric systems determine and constrain the patterns of weather for specific regions, rather than the simplified meteorological view of "climate as average weather" (Bryson et al. 2009:3). These atmospheric boundary conditions determine the state of the climate, which produces long-term weather patterns. This technique of moving from atmospheric impacts on climate down to local weather conditions is the foundation for synoptic (large-scale) climatology (Yarnal 1993).

The atmospheric impacts on climate are built into the MCM as "centers of action," or mean centers of high and low sea-level pressure representing "principal circulation features that help determine mid-latitude weather and wind systems" (Barry and Carleton 2001:209). These "centers of action" are the boundary conditions defining the climate, which in turn determines local weather patterns (Bryson and DeWall 2007; Bryson et al. 2009). Circulation centers like the North Atlantic High, the North Pacific High, the Inter-Tropical Convergence Zone (ITCZ), and the North American jet stream (collectively, the North American "centers of action") are controlled by solar energy variations, otherwise known as the global heat budget. This heat budget is affected by orbital forcing (Milankovitch periodicities), variations in atmospheric transparency like volcanic activity, and albedo effect, or the solar radiation that is reflected by different components of the atmosphere and the earth's surface. These impacts on the North American "centers of action" create the boundary conditions for hindcasting climate estimates in the model template.

The MCM calculates the differential effects of these atmospheric boundary conditions on specific locations based on their proximity to these "centers of action." As a result, the circulation centers are grouped by region. That way, when climate

conditions for specific areas are calculated, the model incorporates the closest regional circulation centers, called “modules” (Bryson et al. 2009:4). I used the North American module, which incorporates the Inter-Tropical Convergence Zone at 90° W longitude, the jet stream at 120° W longitude, the North Atlantic High atmospheric pressure region (Subtropical High/European High) at 0° W longitude, and the North Pacific High atmospheric pressure region at 135° W longitude (Agenbroad and Thayer 2019:159). I hindcasted paleoclimate conditions using modern climate normals for each of the seven weather stations from the years 1961 to 1990, curated through the National Centers for Environmental Information (NCEI) at NOAA and the High Plains Regional Climate Center (HPRCC) at the University of Nebraska-Lincoln (Table 3.1).

The MCM regresses these climate normals using the appropriate regional circulation center non-linearly using a least squares best fit between the locations of “centers of action” and the modern calibration data (Agenbroad and Thayer 2019:9). For most sites, especially those in close proximity to “centers of action,” the explained variance (r^2) is greater than 0.95 (Agenbroad and Thayer 2019:9). Assuming that the internal physics of the atmosphere are largely unchanged through time (Bryson 2019), this relationship between climate normals and “centers of action” is extrapolated back to the locations in the past to estimate temperature and precipitation values in 100-year increments. Climate normal data from specific weather stations in and around the study area ensure that local and regional factors like topography and proximity to physiographic features that impact climate trends are implicitly included in the calibrated outputs (Agenbroad and Thayer 2019; Bryson and DeWall 2007; Bryson et al. 2009). I used seven weather stations from locations within the study area, the Piedmont, and the interior Coastal Plain as local inputs into the MCM to capture variations in temperature and precipitation outputs and prevent edge effects from skewing the model (Figure 3.1). MCM inputs and outputs are included in their entirety in Appendix A.

Net Primary Productivity Estimates

After constructing the MCM and generating average temperature and precipitation outputs for each millennium, I calculated net primary productivity (NPP) estimates to inform on potential biomass changes over time in the context of climate variations during the Late Pleistocene and Holocene. NPP refers to the net content of dry organic matter in an ecosystem produced by vegetation through the proxy calculations of photosynthesis and respiration rates (Guzman and Golabi 2017; Yang 2022). It is a general estimate of the potential biomass an ecosystem can produce within specific climatic parameters (Roy et al. 2001; Del Grosso et al. 2008). The NPP of forest ecosystems is a useful interpretive metric – it examines the rate at which energy is stored as plant biomass, which informs on biomass availability to human and non-human consumers. It cannot capture the specifics of which arboreal taxa were dominant in a region or preferred by consumers, but it does inform on which watershed locations could offer the greatest overall floral subsistence potential. It has also been used as an explanatory metric for hunter-gatherer population movements and overall habitat suitability according to IFD predictions (Codding and Jones 2013), suggesting its continued utility in addressing questions of precontact population settlement.

With the understanding that biomass availability changed as climatic conditions changed in the Late Pleistocene through mid-Holocene Southeast, I calculated NPP using temperature and precipitation values generated by the MCM in millennial averages. NPP is the total amount of carbon a plant fixes (converts into a usable form), also known as its gross primary productivity (GPP) minus the amount of carbon lost during respiration (R_a). This gives the general equation:

- $\boldsymbol{NPP = GPP - R_a}$

From this base equation, I explored applications of the equation that would allow direct inputs of both temperature and precipitation, which are centennial outputs of the MCM.

The Miami model of climatic NPP (*sensu* Lieth 1972) links NPP to long-term annual mean temperature (°C) and summed precipitation (mm). According to the Miami model, NPP is assumed to increase with both increasing temperature and precipitation. It estimates NPP as a function of limiting either variable. For both variables, a saturation value of 3000 gDM/m^2/year (where "DM" represents dry matter or dry carbon) cannot be exceeded. While it has a tendency to overestimate NPP in grassland biomes (Del Grosso et al. 2008), fossil pollen studies in the area suggest that arboreal taxa were present in such frequencies that a Graminoid-dominant landscape is contraindicated (Delcourt and Delcourt 1983, 1985; LaMoreaux et al. 2009). The Miami model of climatic NPP (after Lieth 1972) is:

- $\boldsymbol{NPP = \min(NPP_P, NPP_T)}$
  where
  $NPP_T = 3000 * (1 + \exp(1.315 - 0.119 * T_{mean}))^{-1}$
  $NPP_P = 3000 * (1 - \exp(-0.000664 * P_{annual}))$

I used five temporal categories/archaeological periods, grouped by closest overlapping century to capture the centennial-level resolution of the MCM outputs: the Early-Middle Paleoindian (13,400-12,800 cal BP), the Late Paleoindian/Dalton (12,900-11,500 cal BP), the Early Archaic (11,500-8900 cal BP), the Middle Archaic (8900-5800 cal BP), and Late Archaic (5800-3200 cal BP) (Anderson and Sassaman 2012). I calculated NPP using the precipitation and temperature outputs generated by the MCM for each weather station. I time-averaged temperature and precipitation estimates by both cultural periods and millennia to generate predictions consistent with the resolution of other data sets in this study (Appendix B). Some projections exceed the saturation limit of 3000 gDM/m^2/year, particularly during the Last Glacial Maximum. In those instances, I use NPP projections, biodiversity indices for floral taxa in the fossil pollen data set, and centennial-resolution temperature and precipitation values to interrogate deviations from the saturation limit.

Tier 2: Generating Isometric Fossil Pollen Maps

After constructing the MCM and generating millennial temperature and precipitation estimates for NPP calculations, I isolated the isometric fossil pollen data for the study area from the Williams et al. (2004) interpolated fossil pollen study for North America. The study mapped the distributions of biomes present during the Late Pleistocene through the mid-Holocene from 759 chronostratigraphically controlled fossil pollen study areas and data sets in the North American Pollen Database (NAPD). From this continental data set, Williams and colleagues generated interpolated surfaces of continuous coverage for vegetation pattern changes (61 taxa) in 1000-year intervals (Cleveland 1993; Huntley et al. 1989). Fossil pollen abundances within these millennial intervals were spatially interpolated from individual study sites to a 50-km grid across the continent. From each grid point,

> … a search window measuring 300 x 300 km horizontal x 500 m vertical was extended… and pollen percentages within the window were interpolated to the grid center by averaging pollen percentages within the window according to a tri-cubic distance weighting… Pollen sites were not used for an interval if R_a [quality of age controls] > 5000 years or if R_p [quality of pollen sampling] > 2000 years (Williams et al. 2004:313).

The full fossil pollen data set is available for download as curated .din and .dat formats through the National Centers for Environmental Information (NCEI) at the National Oceanic and Atmospheric Administration (NOAA). The .din and .dat files were joined, saved in an Excel file, and projected onto a global basemap in ArcGIS Pro 2.6. From the continental data set, I clipped the gridded points to the geographic extents of Georgia, eastern Alabama, northern Florida, and western South Carolina to generate an isometric buffer around the watersheds in the study (Figure 3.2). After clipping the continental data set to the study area, 76 interpolated points remained, organized in a 50 x 50 km grid. I saved the 76 points in a shapefile layer with associated fossil pollen taxa attributes attached to each point.

The NAPD fossil pollen data set manipulated by Williams and colleagues (2004) is a useful tool in paleoenvironmental studies, particularly because it chronostratigraphically constrains major habitat shifts and offers sub-watershed resolution of biome changes. Its limitations are a function of the continental scale of the original analysis. The interpolated surfaces generated by the study are only available in 1000-year intervals. I lose sub-millennial resolution and inter-watershed variation during high-amplitude climatic intervals like the Younger Dryas. The scale of interpolation is manageable in my research design because PIDBA diagnostic data are also only available at coarse resolutions, and I can use the MCM to inform on sub-millennial climatic fluctuations because it generates data in 100-year intervals.

Tier 3: Generating High-to-Low Habitat Suitabilities

After isolating the fossil pollen data, I reviewed palynological studies in and around the watershed boundaries to identify taxa that would serve as proxy indicators for climate shifts relevant to human habitation in the interior Southeast (Delcourt and Delcourt 1983, 1984, 1985; Fearn and Cohen 1984; Grimm et al. 2001; Jackson and Whitehead 1993; Kneller and Peteet 1993; Krause et al. 2018; LaMoreaux 1999; LaMoreaux et al. 2009; Watts 1975a, 1975b, 1980; Watts and Stuiver 1980; Watts et al. 1992). From this literature review, and informed by the Miller and Carmody (2020) IFD study, I identified 13 taxa to use for generating habitat suitability metrics (Table 3.2).

I defined the habitat suitabilities for each fossil pollen point (N=76) in every millennium in the temporal range of the study (ca. 14,000-3,000 cal BP). I created suitability metrics in a similar fashion to the Miller and Carmody (2020) IFD study that incorporated fossil pollen habitat suitabilities into their demographic study of Late Pleistocene settlement changes in the Tennessee River valley. By incorporating pollen vegetational dominance patterns across the Southeast (Delcourt and Delcourt 1985:6-9; LaMoreaux et al. 2009; Miller and Carmody 2020), I generated three categories to

measure habitat suitability: oak-hickory (*Quercus*/*Carya*), total pine (*Pinus* spp.), and a mixed deciduous category comprising alder (*Alnus*), hackberry (*Celtis*), beech (*Fagus*), ash (*Fraxinus*), walnut (*Juglans*), tupelo/gum (*Nyssa*), hophornbeam/hornbeam (*Ostrya/Carpinus*), sycamore (*Platanus*), willow (*Salix*), and elm (*Ulmus*). I ranked the pollen data in categories of high, medium, and low suitability based on the following frequencies:

- **High Suitability (Rank 3)**: The projected pollen frequency of oak and hickory combined was greater than the total pine pollen frequency, *AND* the combined mixed deciduous pollen frequency was greater than the total pine pollen frequency. In these conditions, hunter-gatherers had the economic benefit of available oak and hickory mast products, a high-ranked gathered item and preferred food source for the highly-ranked white-tailed deer (Carmody 2014; Ditchkoff 2011; Gardner 1997; Morey 1996; Reidhead 1981; Simard et al. 2008; Strickland and Demaris 2000; Walker et al. 2001). Additionally, hunter-gatherers would have access to a broader range of forageable products afforded by the presence of other deciduous taxa that appear on the landscape after the retraction of boreal pine (Delcourt and Delcourt 1983, 1985; Krause et al. 2018; LaMoreaux 1999; LaMoreaux et al. 2009).
- **Medium Suitability (Rank 2)**: The projected frequency of oak and hickory combined was greater than the total pine pollen frequency, but pine pollen frequency was higher than the combined mixed deciduous frequency. The implication of this greater pine-to-mixed deciduous frequency is the overall lower floral biodiversity of the location impacting hunter-gatherer settlement preferences.
- **Low Suitability (Rank 1)**: The projected pollen frequency of all pine species was higher than both the combined oak and hickory frequencies *AND* the combined

mixed deciduous frequencies. Pine-dominant landscapes are considered low suitability habitats after the onset of the Holocene Climatic Optimum for their homogenized forest cover, low incidence of floral biodiversity in the understory (LaMoreaux et al. 2009), and low occurrence of forageable items (Larson 1980; Schnell and Wright 1993).

After grouping taxa into specific habitat suitabilities, I ran the frequency calculations through the VBA syntax Field Calculator in the pollen point attribute table in ArcMap. I added the total frequencies of *Quercus* and *Carya* (oak and hickory) species together for each of the 76 isometric pollen points and output those values into a new attribute column for each millennium. Then I did the same for all *Pinus* (pine) species, and finally with the mixed deciduous taxa. Here is an example of the VBA script used in ArcMap to generate a high-suitability calculation:

- IF [“Quercu” + “Carya”] > [“TPinus”] AND [“Alnus” + “Betula” + “Celtis” + “Fagus” + “Fraxiu” + “Juglan” + “Nyssa” + “Ostrya” + “Platan” + “Salix” + “Ulmus”] > [“TPinus”] THEN “3”

I then color-coordinated suitabilities according to rank for each millennium: Rank 1 (Low) = Red; Rank 2 (Medium) = Yellow; Rank 3 (High) = Green (Figure 3.3). After generating all suitabilities, I saved each millennium’s suitability as a separate shapefile in a master geodatabase.

After generating suitabilities for the entire study area, I ran a proximity analysis in ArcMap to identify, at the county level, which interpolated pollen point was closest to individual counties in the study area. Instead of point-based data, the interpolated pollen points were directly joined to counties such that counties contained the interpolated fossil pollen habitat suitability metrics based on the pollen point each county was nearest to on the 50 x 50 km grid (Figure 3.4). Normalizing the data to the county level of analysis made analyses across archaeological data sets more consistent. Because

PIDBA data are only available by individual county, I could run statistical analyses by county-level data through associating pollen habitat suitabilities to individual counties and normalizing GNAHRGIS data to counts by county.

After generating fossil pollen habitat suitabilities and joining them to nearest counties in the study area, I considered incorporating an additional suitability metric to capture high-quality tool stone locations within the state. If hunter-gatherers were preferentially 'tethering' to lithic outcrops, I should see a high correlation between site locations and counties with both high fossil pollen suitabilities and accessible tool stone. Access to high-quality tool stone was demonstrably important in the hunter-gatherer Southeast (Daniel 1998, 2001; Gardner 1974, 1977; Meltzer 1984, 1989; Smallwood et al. 2015, 2018; Walker and Driskell 2007). If settlement locations correlate significantly with tool stone locations, the interpretive potential of the IFD is more dynamic than relying solely on floral diversity. Proximity to raw material sources has a well-documented correlation with high rates of artifact discard, suggesting finished tools were discarded in areas where they could be easily replaced (Andrefsky 1994; Beck et al. 2002; Ingbar 1994; Kuhn 2004; Surovell 2009). Models of hunter-gatherer settlement necessitating close proximity to lithic outcrops like the high-technology forager model (Kelly and Todd 1988), the Flint Run model (Gardner 1974, 1977) or the Hardaway model (Daniel 1998, 2001) can be explored more fully in the context of localized environmental change. Instead of treating lithic outcrops as part of the "null model" of the IFD, it is actively incorporated as an intentional choice hunter-gatherers make as part of their landscape-level decision-making regarding settlement location.

I chose high-quality tool stone locations based on both Goodyear's (2018) and Smallwood and colleagues' (2015) designations of Late Pleistocene cryptocrystalline outcrops (Figure 3.5). I georeferenced the tool stone locations to the ArcMap base layer, then isolated the individual counties that intersected with these tool stone locations and

saved them as a shapefile. I exported those tool stone counties from the main fossil pollen suitability data set and added another suitability rank across all millennia:

- **Very High Suitability (Rank 4)**: The projected pollen frequency of oak and hickory combined was greater than the total pine pollen frequency, *AND* the combined mixed deciduous pollen frequency was greater than the total pine pollen frequency, *AND* the county contains a high-quality tool stone outcrop.

The incorporation of high-quality tool stone necessitated another color code: Rank 4 (Very High Suitability) = Blue (Figure 3.6). Tool stone locations created noticeable hotspots of very high suitability in the Allendale-Brier Creek region (Goodyear 1979, 2018; Parish and Burke 2022) between the Middle Savannah and Middle Ogeechee Rivers and in the Piedmont where concentrations of Piedmont chert are present (Goad 1979; Smallwood et al. 2015). The addition of tool stone to the habitat suitability metric also brought the overall suitability of the central Coastal Plain up to a Medium suitability level post-Younger Dryas cooling.

Biodiversity Indices

After selecting fossil pollen taxa to use as climate proxies for the study area, I compared their biodiversity indices to the temperature and precipitation outputs of the MCM. I compiled the biodiversity metrics of temperature and precipitation minima and maxima for each taxa I isolated in the fossil pollen habitat suitability maps. I acquired data from open-access biodiversity sites like the Global Biodiversity Information Facility (gbif.org), the USDA PLANTS catalog (plants.usda.gov), and published ecological and biogeographic resources (Chanez Rodriguez-Ramirez et al. 2021; Gil-Pelegrin et al. 2017; Grauke and Heerema 2015; Richardson 1998; Shamoun et al. 2001; Whittemore et al. 2018) (Table 3.3).

Tier 4: Hindcasting Archaeological Site Data

After generating fossil pollen habitat suitabilities for each millennium, I aggregated and normalized archaeological site data from two sources: the Paleoindian Database of the Americas (PIDBA) and Georgia's Natural, Archaeological, and Historic Resources GIS (GNAHRGIS). PIDBA is a digital repository for county-level distributions of recorded diagnostic Paleoindian period bifaces (Anderson et al. 2010), while GNAHRGIS is the formal digital counterpart to and database for the Georgia Archaeological Site File (GASF). PIDBA generates entries for individual bifaces per county, while GNAHRGIS records sites with high precision that may contain multiple components or diagnostics within a single site entry. The frequency and distribution of diagnostics (at the county or site level) are imperfect proxy measures for reconstructing demography, but are useful for generating inferences about landscape use (*sensu* Andrefsky 2009). Diagnostic biface locations inform on habitat use, because the assumption is that they were discarded in the context of hunting or as sources of flaked tools that were repurposed for activities other than hunting (Kelly 1988; Kelly and Todd 1988).

Several biases impact recovery rates of bifaces and accurate recording of archaeological site components. Modern surface visibility, population density, and locations of projects necessitating Section 106 compliance archaeology are the most significant factors responsible for differential landscape coverage (Buchanan 2003; Lepper 1985; Prasciunas 2011; Shott 2002). Miller (2016) also identified the differential recovery rates of Paleoindian period bifaces in the Southeast, and attributed proximity to lithic outcrops and landscape features like river convergences to the increased rate of recording in some counties.

GNAHRGIS data are available at much higher spatial resolution than PIDBA county-level data. For this study, I converted individual site data to site counts-by-county

to ensure that PIDBA and GNAHRGIS data sets were at comparable spatial resolutions. By analyzing site and component locations at the county level, I have the benefit of a robust Late Pleistocene data set through PIDBA as well as multiple interpretive avenues using both total biface counts per county and site locations that record a single location for multiple diagnostics. For example, Elliott (2010) and Jones and colleagues (2016) recorded more than 120 diagnostic Paleoindian period bifaces from the Davis Plantation site in Burke County. County-level density using PIDBA would record more than 120 entries for that one location in Burke County, while the GNAHRGIS entry records a single site with multiple diagnostic components. By using both counts-per-county and site locations, I can both address sampling biases and investigate component densities. Statistical investigations of spatial and temporal biases are included in Chapter 4.

GNAHRGIS data were queried from the master site database by phase, period, and component (Table 3.4). I normalized site data to archaeological period classifications and counties. For example, all “Morrow Mountain PPK” entries were reclassified as “Middle Archaic,” and then all duplicate entries for individual sites were removed from the data set. I also removed all sites with undifferentiated labels like the antiquated “Unknown Indian” or “General Archaic” if I couldn’t ascribe a specific archaeological period to the site. Similarly, sites with missing coordinates or county information were also removed from the data set. After conducting data hygiene on the state site file database, I was left with 41 Early-Middle Paleoindian sites, 154 Late Paleoindian/Dalton sites, 1,120 Early Archaic sites, 1,670 Middle Archaic Sites, and 2,487 Late Archaic Sites, for a total of 5,472 data points from the GNAHRGIS database (Figure 3.7) (Appendix C). I isolated sites by these broad temporal designations, reprojected them onto a geographic coordinate system basemap in ArcMap, and saved each time period as a single layer. I joined the site data to each county in the watershed with a habitat suitability metric to generate county-level site densities, which normalized

GNAHRGIS sites to total sites per county, making site file data directly comparable to PIDBA county-level data.

I downloaded the Georgia PIDBA data from the open-access PIDBA website (pidba.utk.edu). I used Smallwood and colleagues' (2015) designations for major temporal categories of Late Pleistocene bifacial forms, and grouped them into broad categories that could be tracked at the millennial scale, consistent with the fossil pollen data resolution (Table 3.5). After consolidating biface types into categories, I was left with 218 Middle Paleoindian (Clovis) points, 158 Middle Paleoindian (non-Clovis fluted and unfluted) points, and 499 Late Paleoindian (Dalton and Dalton variant) points, for a total of 875 unique points. I spatially joined the PIDBA data to each county in the watershed study area that had an associated habitat suitability metric. I separated bifaces into the broad categories of Early/Middle Paleoindian (Clovis), Middle Paleoindian (everything other than Clovis), and Late Paleoindian/Dalton (Figure 3.8).

For both the GNAHRGIS and PIDBA county data sets, I calculated county-level site and component densities, and ran the densities through the Getis-Ord Gi* hot spot analysis tool in the ArcMap Spatial Statistics toolbox to analyze the archaeological data in the context of meaningfully-correlated habitat suitabilities. The tool identifies non-random clusters of high ("hot spot") and low ("cold spot") values for given variables, and assumes that values in the data set are randomly dispersed. The tool ranks each input within the context of neighboring inputs. To be a statistically significant hot or cold spot, the local sum of an input and its neighboring inputs is compared proportionally to the sum of all inputs in the feature class. If the local sum is different than expected, and when the difference is too large to be the result of random chance, it returns a statistically significant z-score (standard deviation). The larger the z-score, the more intense and non-random the clustering of high values (hot spots). For statistically significant negative z-scores, the more intense and non-random the lack of clustering is

in the data set (Figure 3.9). The complete results of hot spot analyses and their z-scores are discussed in Chapter 4.

Summary

In this chapter, I discussed my tiered approach to archaeoclimate modeling and redundant data sets needed for model validation and interpretation. I described the MCM and its inputs, and how the outputs of the MCM are used to generate NPP estimates for the study area. I discussed the data sets necessary for generating fossil pollen habitat suitabilities, and how lithological units were incorporated into those suitability metrics. Finally, I described how archaeological components were normalized and hindcasted onto these habitat suitabilities at the county level of analysis. In the next chapter, I discuss the results of this multivariate analysis, including a comprehensive overview of the MCM outputs and expectations, NPP trends and deviations, biodiversity indices and constraints, and statistical analyses of site data with habitat suitabilities.

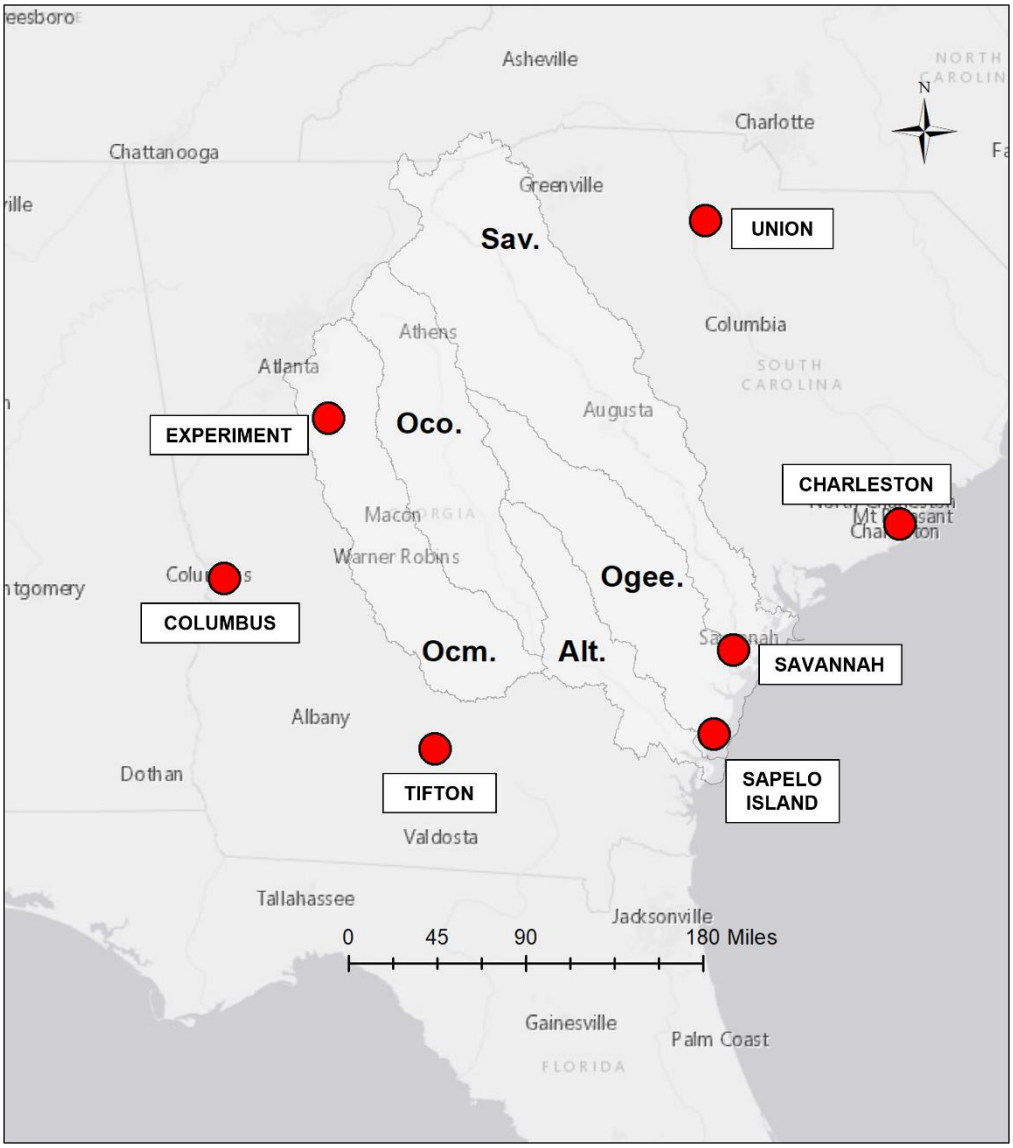

Figure 3.1: Weather station locations for climate model inputs.

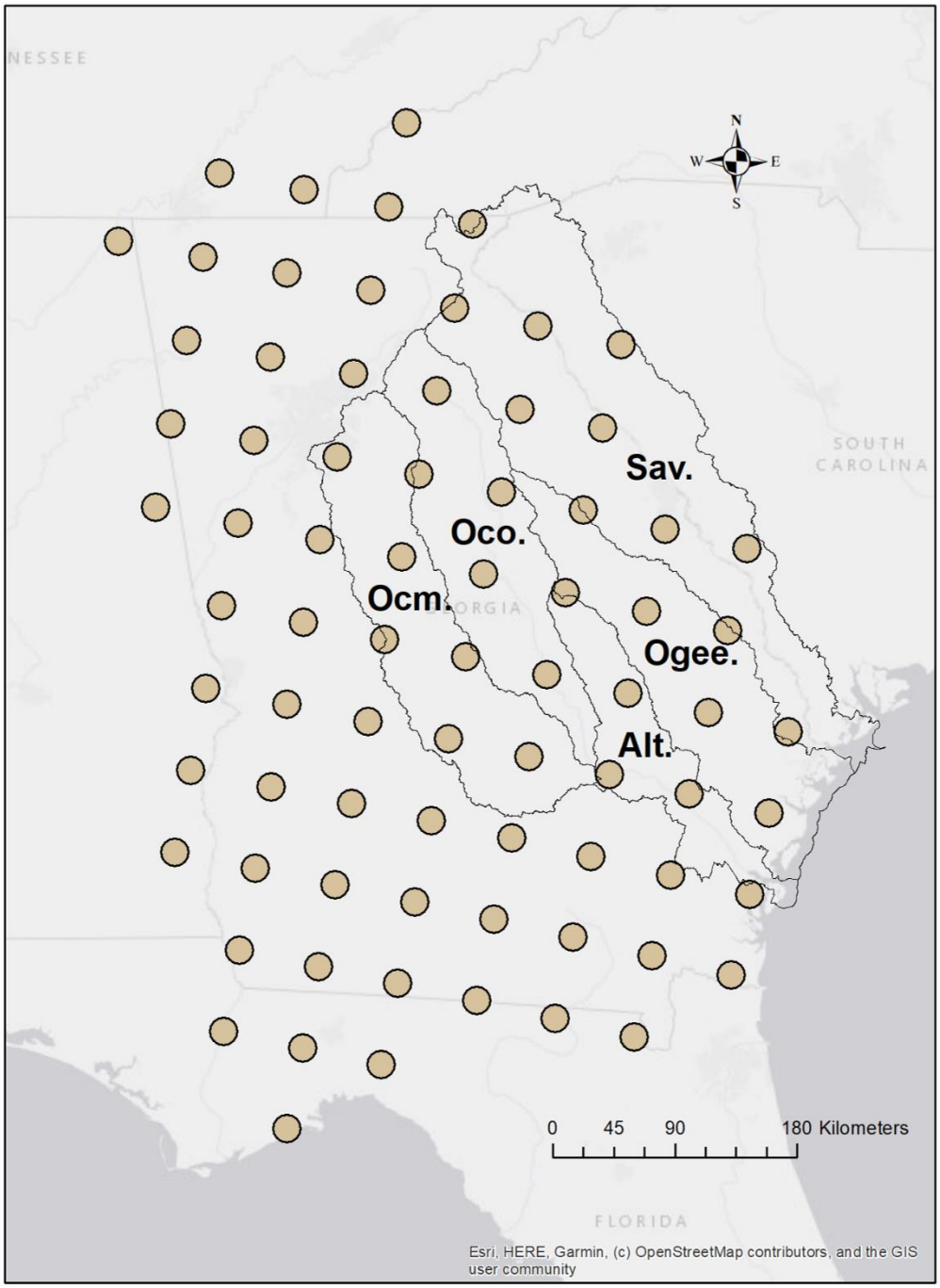

Figure 3.2: Isometric fossil pollen points from the Williams et al. (2004) continental fossil pollen study, clipped to the study area.

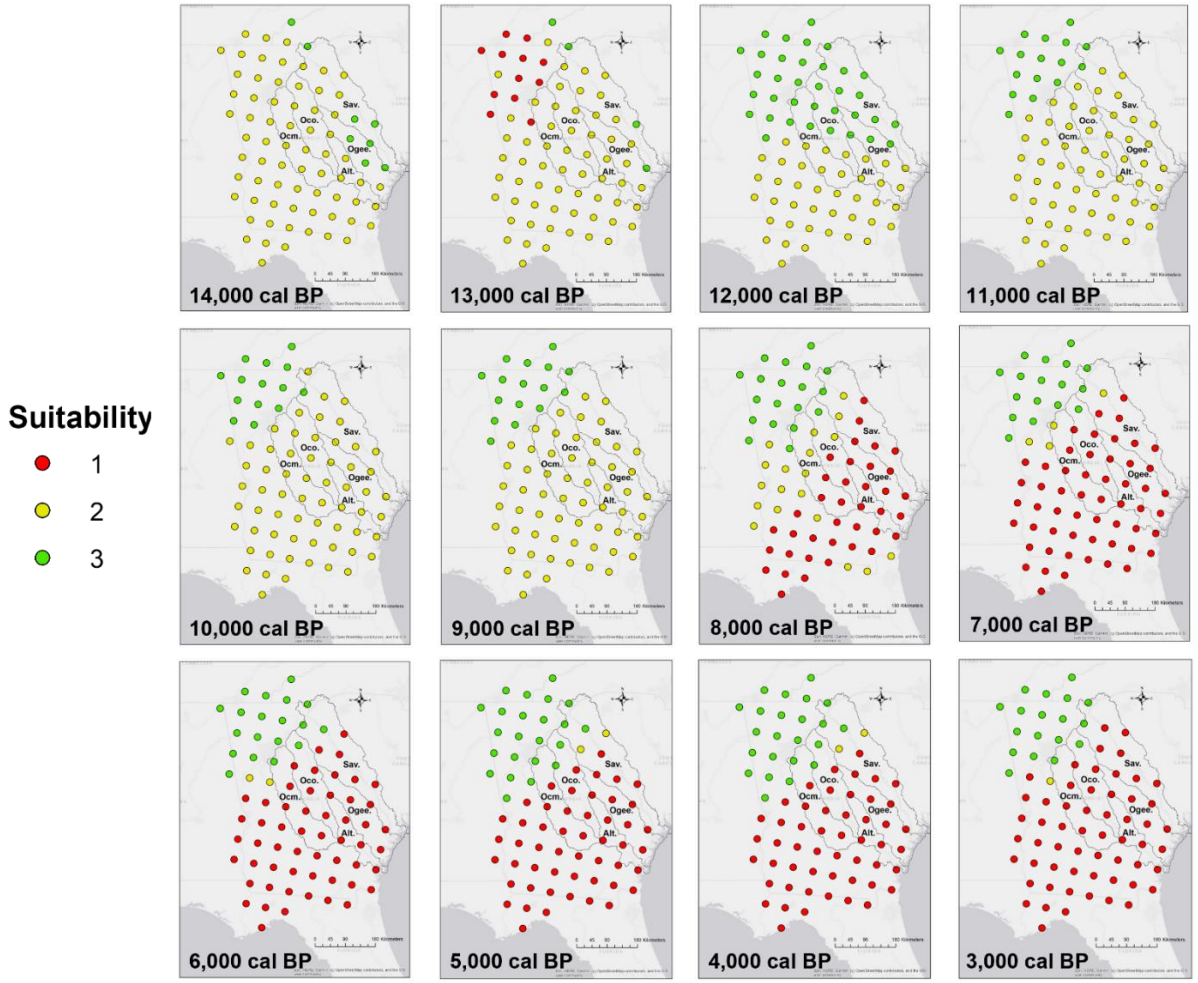

Figure 3.3: Ranked isometric fossil pollen habitat suitabilities for temporal range of the study, ca. 14,000-3,000 cal BP [High Suitability = 3 (Green Dots); Medium Suitability = 2 (Yellow Dots); Low Suitability = 1 (Red Dots)]. Suitability metrics follow categories established by Miller and Carmody (2020) based on relative frequencies of *Quercus*, *Carya*, *Pinus*, and mixed deciduous taxa.

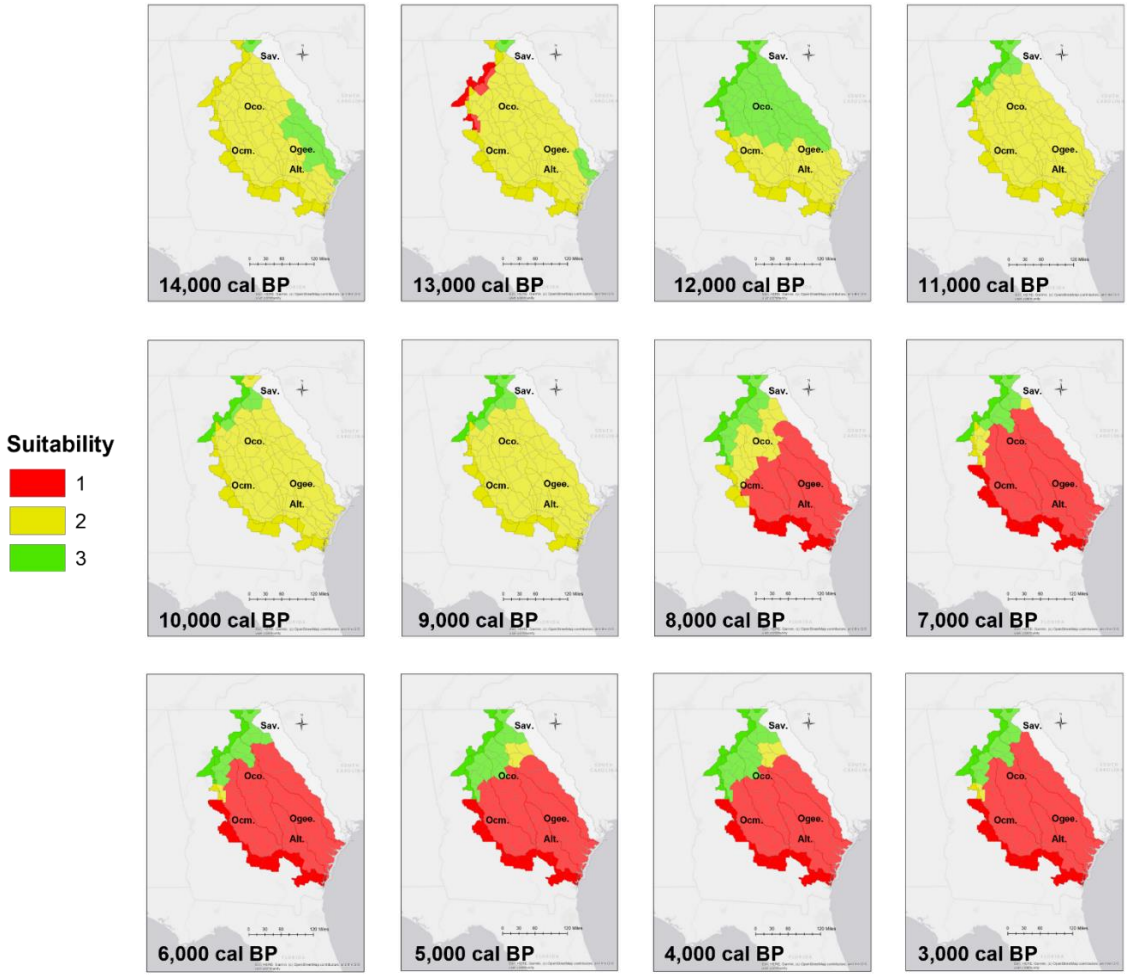

Figure 3.4: Ranked county habitat suitabilities based on spatial join between isometric fossil pollen habitat suitability point data and Georgia counties within watershed extents of the study area. Suitability metrics follow categories established by Miller and Carmody (2020) based on relative frequencies of *Quercus, Carya, Pinus*, and mixed deciduous taxa [High Suitability = 3 (Green Shading); Medium Suitability = 2 (Yellow Shading); Low Suitability = 1 (Red Shading)].

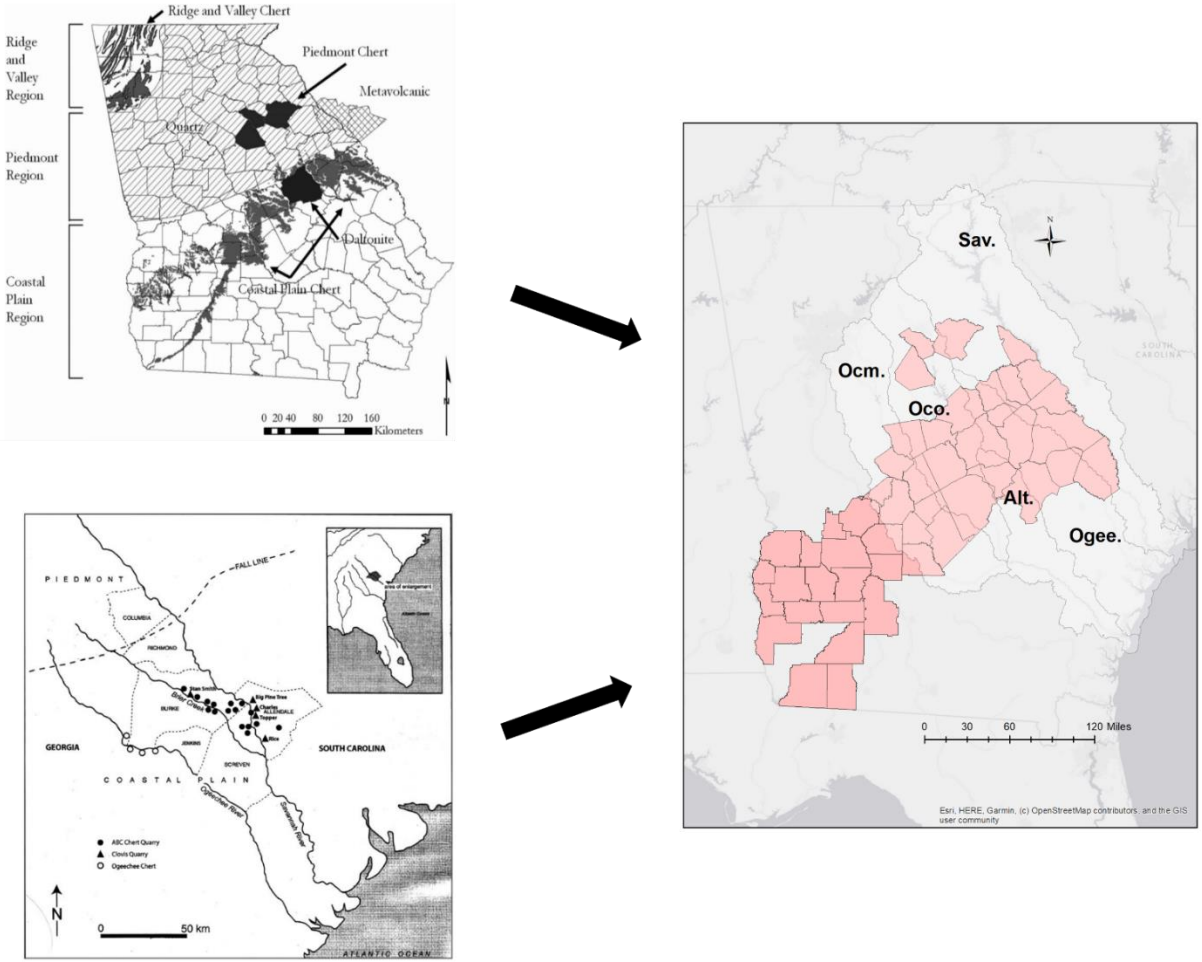

Figure 3.5: High-quality tool stone locations based on county occurrence (right). County-level lithological information derived from Smallwood et al. (2015:25), Figure 1 (top left) and Goodyear (2018:248), Figure 12.1 (bottom left).

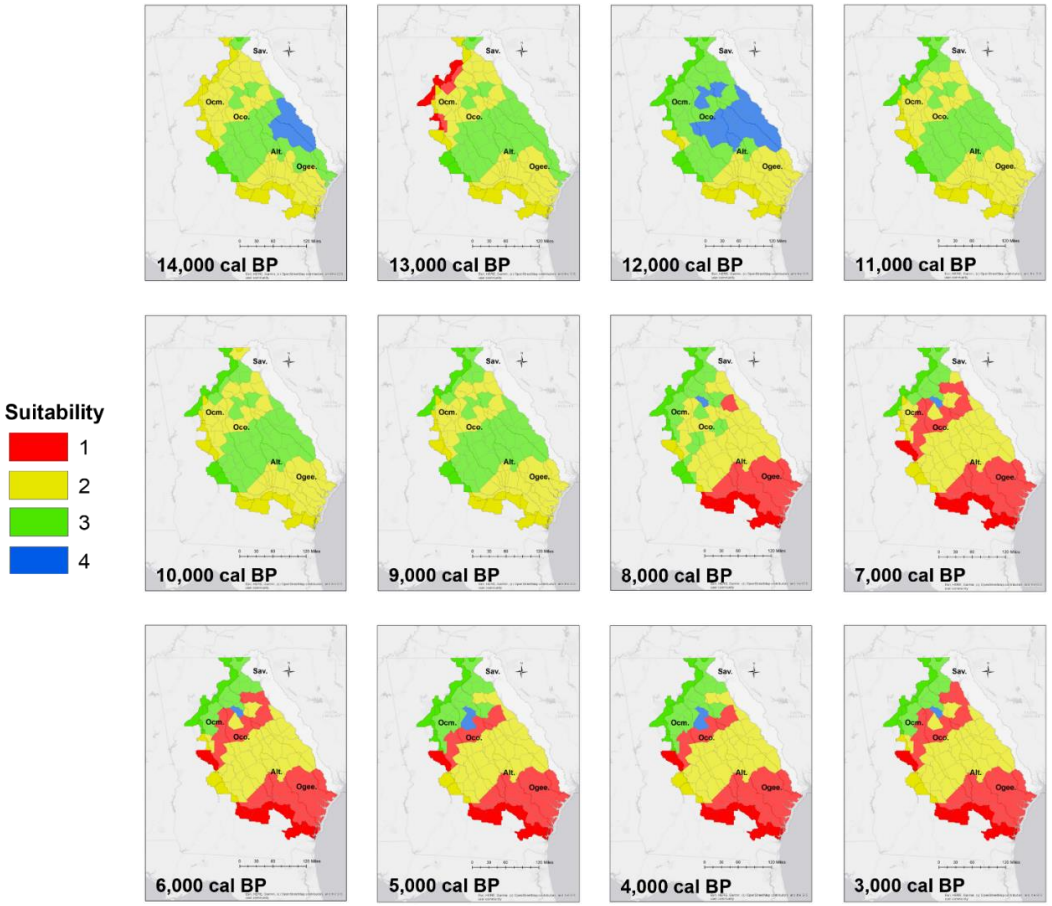

Figure 3.6: Ranked county habitat suitabilities based on spatial join between isometric fossil pollen habitat suitability point data, high quality tool stone, and Georgia counties within watershed extents of the study area. Suitability metrics follow categories established by Miller and Carmody (2020) based on relative frequencies of *Quercus, Carya, Pinus*, and mixed deciduous taxa with an additional suitability metric for counties with high quality tool stone [Very High Suitability = 4 (Blue Shading); High Suitability = 3 (Green Shading); Medium Suitability = 2 (Yellow Shading); Low Suitability = 1 (Red Shading)].

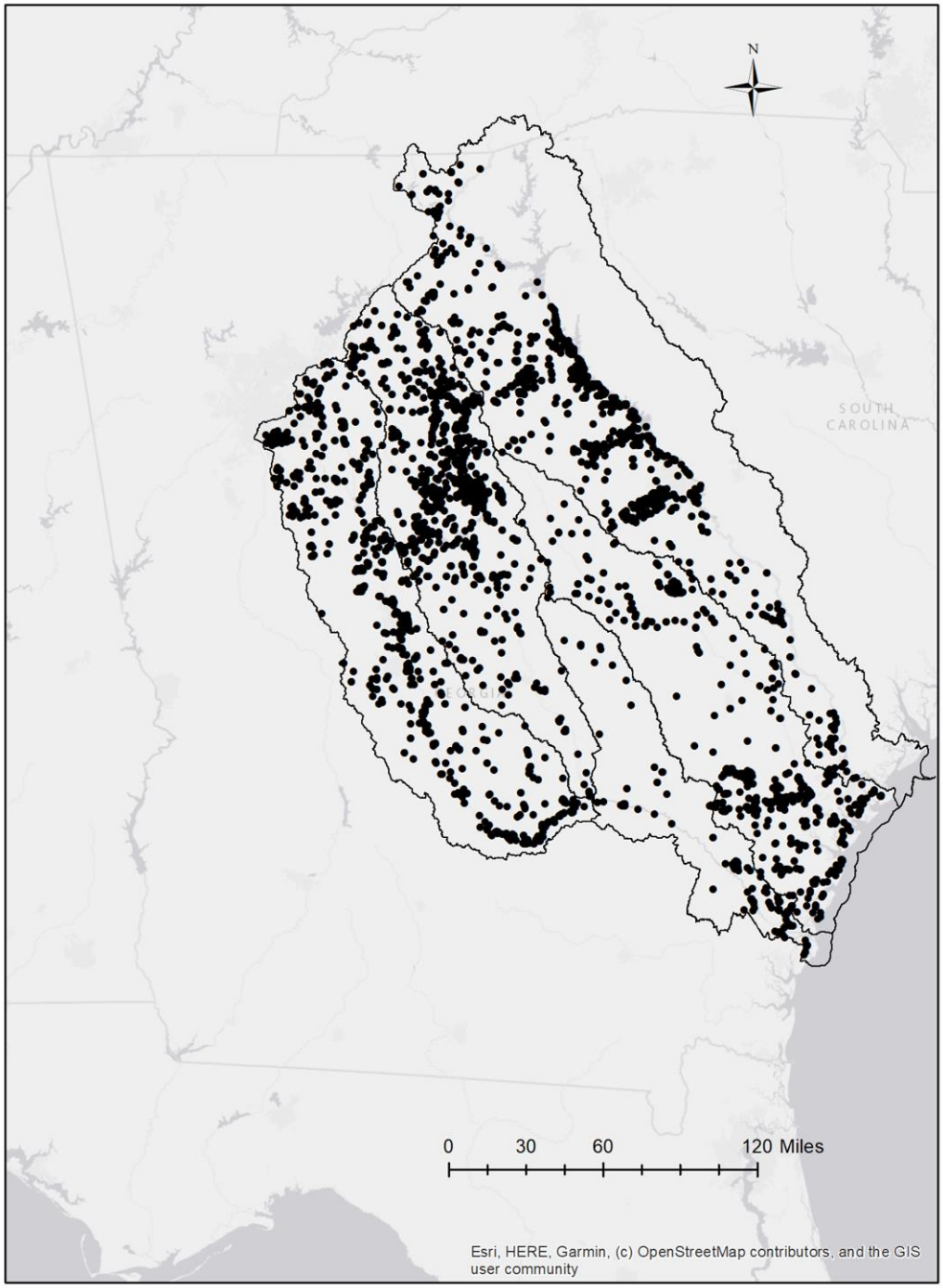

Figure 3.7: All GNAHRGIS sites (Paleoindian through Late Archaic) clipped to watershed study area extents. Data used with permission of the Georgia Archaeological Site File.

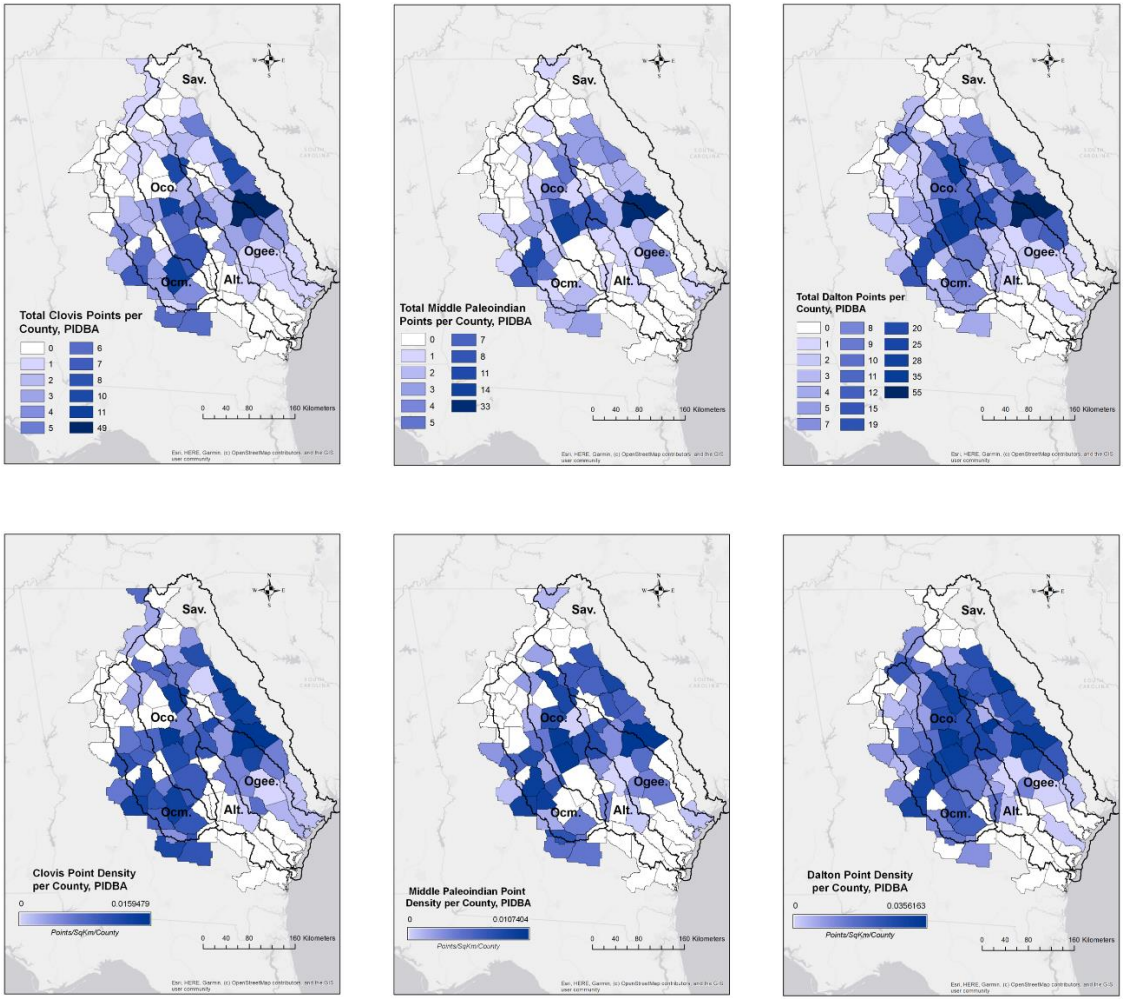

Figure 3.8: Total counts of Paleoindian materials per county (top row) and conversion to counts-by-county density (bottom row). Data downloaded from PIDBA repository: pidba.utk.edu.

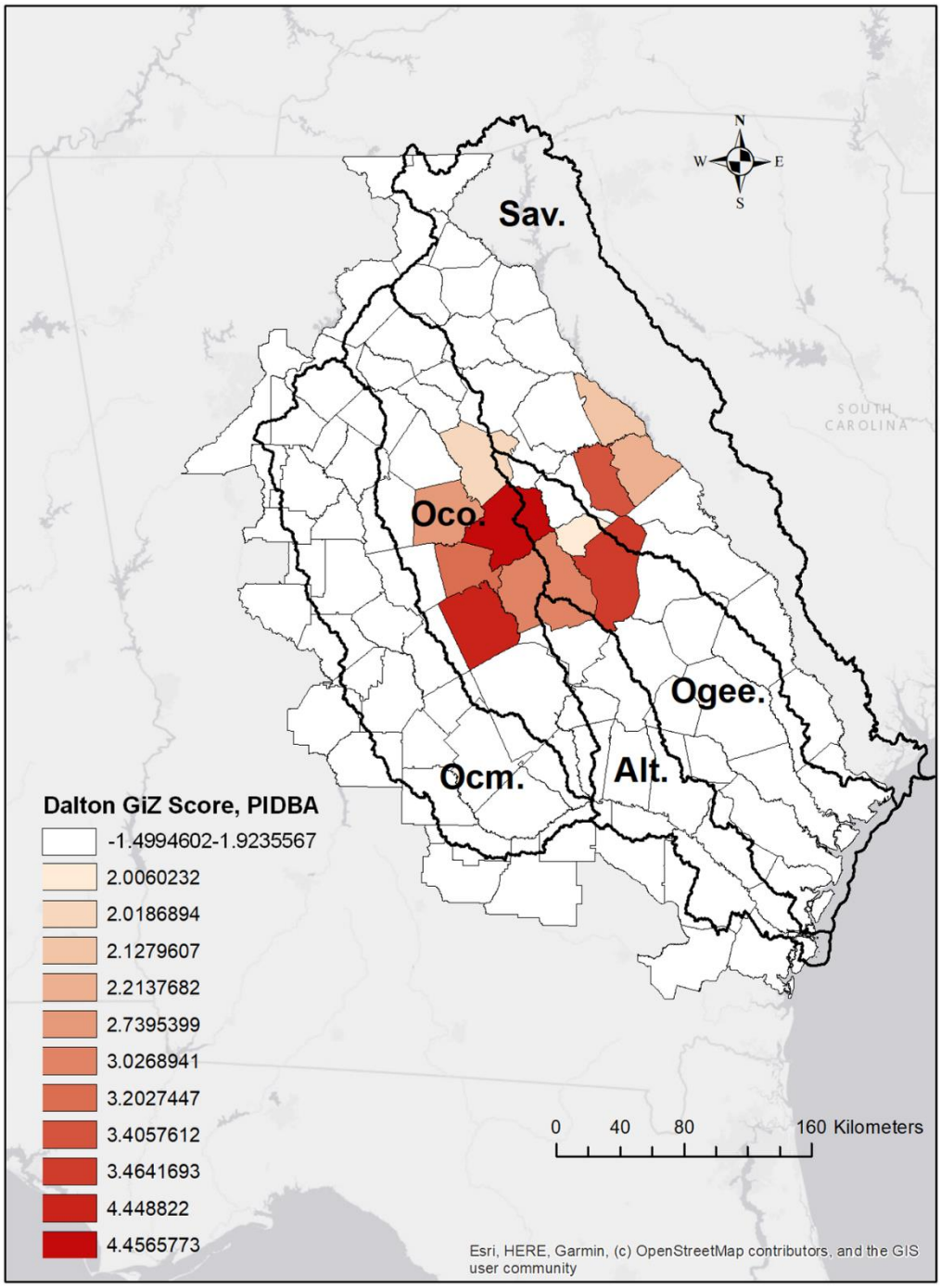

Figure 3.9: Example of hotspot (Getis-Ord Gi*) analysis of Dalton point locations (from PIDBA county data) that cluster significantly within the study watersheds.

Table 3.1: Climate normals (1961-1990) for weather stations in watershed study area. Temperature and precipitation normals acquired from the High Plains Regional Climate Center (HPRCC), and total evaporation estimates come from NOAA annual pan evaporation technical reports for the United States.

	Value	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
COLUMBUS	Max Temp (°F)	57.60	57.60	61.50	68.90	77.10	84.08	89.80	91.60	91.10	86.10	77.20	67.70	**75.86**
	Max Temp (°C)	14.22	16.39	20.50	25.06	28.93	32.11	33.11	32.83	30.06	25.11	19.83	15.22	**24.44**
	Min Temp (°F)	36.50	38.90	45.10	52.20	61.10	68.70	71.90	71.30	66.20	54.30	44.20	38.10	**54.04**
	Min Temp (°C)	2.50	3.83	7.28	11.22	16.17	20.39	22.17	21.83	19.00	12.39	6.78	3.39	**12.22**
	Avg Temp (°F)	47.05	50.20	57.00	64.65	72.59	79.25	81.75	81.20	76.15	65.75	55.95	48.75	**65.02**
	Avg Temp (°C)	8.36	10.11	13.89	18.14	22.55	26.25	27.64	27.33	24.53	18.75	13.31	9.31	**18.33**
	Total Precip (mm)	105.16	114.30	143.76	101.09	95.25	99.57	134.11	101.09	83.82	57.91	91.95	115.06	**1242.57**
	Total Evap (mm)	26.92	44.81	79.50	117.35	153.16	164.85	155.19	135.38	97.54	72.90	36.58	14.48	**1098.65**
SAPELO ISLAND	Max Temp (°F)	60.70	63.50	69.70	76.10	81.90	86.60	89.40	88.40	84.70	77.80	67.90	63.30	**75.83**
	Max Temp (°C)	15.94	17.50	20.94	24.50	27.72	30.33	31.89	31.33	29.28	25.44	19.94	17.39	**24.50**
	Min Temp (°F)	40.70	42.70	49.30	56.00	63.70	69.70	72.60	72.60	69.70	60.40	49.20	43.90	**57.54**
	Min Temp (°C)	4.83	5.94	9.61	13.33	17.61	20.94	22.56	22.56	20.94	15.78	9.56	6.61	**14.28**
	Avg Temp (°F)	50.70	53.10	59.50	66.05	72.80	78.15	81.00	80.50	77.20	69.10	58.55	53.60	**66.69**
	Avg Temp (°C)	10.39	11.72	15.28	18.92	22.67	25.64	27.22	26.94	25.11	20.61	14.75	12.00	**19.39**
	Total Precip (mm)	96.52	97.79	99.57	76.20	79.25	125.73	153.67	188.47	165.35	81.28	69.09	86.61	**1319.53**
	Total Evap (mm)	33.02	47.75	84.84	126.49	161.54	166.12	168.40	134.11	101.85	79.76	43.69	19.05	**1166.62**
SAVANNAH	Max Temp (°F)	59.70	62.40	70.10	77.50	84.00	88.80	91.10	89.70	85.20	77.50	70.00	62.30	**76.53**
	Max Temp (°C)	15.39	16.89	21.17	25.28	28.89	31.56	32.83	32.06	29.56	25.28	21.11	16.83	**24.72**
	Min Temp (°F)	49.60	53.10	64.50	70.80	79.40	84.80	85.90	85.80	80.90	71.60	62.30	54.40	**70.26**
	Min Temp (°C)	9.78	11.72	18.06	21.56	26.33	29.33	29.94	29.89	27.17	22.00	16.83	12.44	**23.67**
	Avg Temp (°F)	54.65	57.75	67.30	74.15	81.70	86.80	88.50	87.75	83.05	74.55	66.15	58.35	**73.39**
	Avg Temp (°C)	12.58	14.31	19.61	23.42	27.61	30.44	31.39	30.97	28.36	23.64	18.97	14.64	**24.19**
	Total Precip (mm)	91.19	81.79	96.01	76.96	103.89	143.76	162.05	189.48	113.54	60.71	55.63	75.18	**1250.19**
	Total Evap (mm)	N/A	N/A	N/A	N/A	N/A	159.00	195.07	166.12	147.32	130.56	75.18	76.96	**950.21**

Table 3.1 (Cont.): Climate normals (1961-1990) for weather stations in watershed study area.

	Value	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
TIFTON	Max Temp (°F)	59.90	63.90	71.20	78.70	85.30	90.10	92.20	91.00	86.80	79.60	68.40	63.00	**77.51**
	Max Temp (°C)	15.50	17.72	21.78	25.94	29.61	32.28	33.44	32.78	30.44	26.44	20.22	17.22	**25.39**
	Min Temp (°F)	36.50	38.50	44.80	52.30	60.20	66.40	69.80	69.60	64.70	54.50	43.40	38.80	**53.29**
	Min Temp (°C)	2.50	3.61	7.11	11.28	15.67	19.11	21.00	20.89	18.17	12.50	6.33	3.78	**11.89**
	Avg Temp (°F)	48.20	51.20	58.00	65.50	72.75	78.25	81.00	80.30	75.75	67.05	55.90	50.90	**65.40**
	Avg Temp (°C)	9.00	10.67	14.44	18.61	22.64	25.69	27.22	26.83	24.31	19.47	13.28	10.50	**18.64**
	Total Precip (mm)	111.00	110.49	114.30	82.80	92.20	109.98	127.51	127.00	83.06	57.91	61.21	99.31	**1176.78**
	Total Evap (mm)	51.56	83.82	121.41	132.33	143.76	152.65	150.62	110.24	150.37	106.68	80.26	66.04	**1349.76**
EXPERIMENT	Max Temp (°F)	51.50	55.90	64.60	73.00	79.80	86.10	88.40	87.70	82.80	73.80	64.80	55.50	**72.00**
	Max Temp (°C)	10.83	13.28	18.11	22.78	26.56	30.06	31.33	30.94	28.22	23.22	18.22	13.06	**22.22**
	Min Temp (°F)	30.90	33.40	41.40	49.20	57.10	64.50	67.70	67.00	61.40	49.10	41.70	34.10	**49.80**
	Min Temp (°C)	-0.61	0.78	5.22	9.56	13.94	18.06	19.83	19.44	16.33	9.50	5.39	1.17	**9.89**
	Avg Temp (°F)	41.20	44.70	53.00	61.10	68.50	75.40	78.10	77.40	72.10	61.50	53.30	44.80	**60.90**
	Avg Temp (°C)	5.11	7.06	11.67	16.17	20.28	24.11	25.61	25.22	22.28	16.39	11.83	7.11	**16.06**
	Total Precip (mm)	124.44	120.87	143.82	113.99	110.93	102.77	124.19	108.63	78.54	77.78	89.25	117.81	**1313.00**
	Total Evap (mm)	65.54	79.05	121.89	159.63	192.02	202.98	193.29	177.23	143.06	110.16	77.52	60.18	**1582.53**
CHARLESTON	Max Temp (°F)	57.1	59.8	65.8	72.9	79.6	84.9	88.5	87.1	83	75.1	67.6	60	**73.5**
	Max Temp (°C)	13.94	15.44	18.78	22.72	26.44	29.39	31.39	30.61	28.33	23.94	19.78	15.56	**23.06**
	Min Temp (°F)	42.4	44.9	51.5	58.8	67.4	73.8	77	76.1	72.2	61.9	53.4	45.5	**60.4**
	Min Temp (°C)	5.78	7.17	10.83	14.89	19.67	23.22	25.00	24.50	22.33	16.61	11.89	7.50	**15.78**
	Avg Temp (°F)	49.8	52.4	58.7	65.9	73.5	79.4	82.8	81.6	77.6	68.5	60.5	52.8	**67**
	Avg Temp (°C)	9.89	11.33	14.83	18.83	23.06	26.33	28.22	27.56	25.33	20.28	15.83	11.56	**19.44**
	Total Precip (mm)	91.95	66.55	97.28	61.98	70.36	125.98	139.70	166.12	155.70	76.71	55.37	70.61	**1178.31**
	Total Evap (mm)	65.532	81.788	133.86	166.116	182.88	183.896	191.516	167.39	136.65	116.33	81.788	62.23	**1569.97**

Table 3.1 (Cont.): Climate normals (1961-1990) for weather stations in watershed study area.

	Value	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
UNION	Max Temp (°F)	51.602	56.102	64.994	74.102	81.104	87.296	90.194	89.204	83.606	74.3	64.994	55.094	**72.698**
	Max Temp (°C)	10.89	13.39	18.33	23.39	27.28	30.72	32.33	31.78	28.67	23.50	18.33	12.83	**22.61**
	Min Temp (°F)	26.708	28.292	35.492	43.592	52.394	60.8	65.102	64.292	57.506	44.204	36.392	29.3	**45.302**
	Min Temp (°C)	-2.94	-2.06	1.94	6.44	11.33	16.00	18.39	17.94	14.17	6.78	2.44	-1.50	**7.39**
	Avg Temp (°F)	39.2	42.206	50.306	58.892	66.794	74.102	77.702	76.802	70.592	59.306	50.792	42.206	**59.108**
	Avg Temp (°C)	4.00	5.67	10.17	14.94	19.33	23.39	25.39	24.89	21.44	15.17	10.44	5.67	**15.06**
	Total Precip (mm)	126.75	112.01	136.65	87.88	95.00	105.16	108.20	111.25	101.85	96.52	92.46	105.16	**1278.89**
	Total Evap (mm)	42.67	55.12	90.93	133.35	159.51	168.15	176.28	162.56	119.63	86.87	52.58	38.1	**1285.75**

Table 3.2: Fossil pollen taxa used in this study and their climatic indicators.

Taxa	Common Name	Climatic Indicator	Source
Alnus	Alder	Mesic habitat; cool, riparian environment, moisture increase	LaMoreaux 1999; LaMoreaux et al. 2009
*Carya**	Hickory	Mast producer, mesic, cool-temperate, mixed hardwood environments	Delcourt and Delcourt 1985; LaMoreaux 1999; LaMoreaux et al. 2009; Miller and Carmody 2020
Celtis	Hackberry	"Swamp complex" alluvial bottomlands	Delcourt and Delcourt 1985; LaMoreaux 1999; LaMoreaux et al. 2009
Fagus	Beech	Mesic, cool-temperate, mixed hardwood environments	Delcourt and Delcourt 1985; LaMoreaux 1999; LaMoreaux et al. 2009
Fraxinus	Ash	Mesic, cool-temperate, mixed hardwood environments	Delcourt and Delcourt 1985; LaMoreaux 1999; LaMoreaux et al. 2009
Juglans	Walnut	Mast producer; mesic, cool-temperate, mixed hardwood environments	Delcourt and Delcourt 1985; LaMoreaux 1999; LaMoreaux et al. 2009
Nyssa	Tupelo, Gum	"Swamp complex" alluvial bottomlands	Delcourt and Delcourt 1985; Kutzbach et al. 1998; LaMoreaux 1999; LaMoreaux et al. 2009
*Ostrya/Carpinus***	Hophornbeam/Hornbeam	Mesic, cool-temperate, mixed hardwood environments	Delcourt and Delcourt 1985; Krause et al. 2018; LaMoreaux 1999; LaMoreaux et al. 2009
Pinus	Pine	Xeric, warm environments	Delcourt and Delcourt 1985; Krause et al. 2018; LaMoreaux 1999; LaMoreaux et al. 2009; Watts 1970, 1975a, 1975b, 1980
Platanus	Sycamore	Mesic, cool-temperate, mixed hardwood environments	Delcourt and Delcourt 1985; Krause et al. 2018; LaMoreaux 1999; LaMoreaux et al. 2009
*Quercus**	Oak	Mast producer, mesic, cool-temperate, mixed hardwood environments	Delcourt and Delcourt 1985; Krause et al. 2018; LaMoreaux 1999; LaMoreaux et al. 2009; Miller and Carmody 2020
Salix	Willow	"Swamp complex" alluvial bottomlands	Delcourt and Delcourt 1985; LaMoreaux 1999; LaMoreaux et al. 2009
Ulmus	Elm	Mesic, cool-temperate, mixed hardwood environments	Delcourt and Delcourt 1985; LaMoreaux 1999; LaMoreaux et al. 2009

* *Carya* and *Quercus* share a pollen-vegetational relationship in fossil pollen studies, and are typically the dominant hardwoods in mixed forests where they occur (Delcourt and Delcourt 1985; Miller and Carmody 2020).

** *Ostrya* and *Carpinus* are palynologically undifferentiated genera (Delcourt and Delcourt 1994).

Table 3.3: Biodiversity indices for fossil pollen taxa used in this study.

Taxa	*Native Varietals	Common Name	Mean Annual Precipitation Range (mm)	Mean Annual Precipitation Range (in)	Mean Annual Temperature Range (°C)	Mean Annual Temperature Range (°F)	Lifespan
Alnus	*A. maritima*	Alder	950 to 4000mm average	37.4 to 157.5in average	13.5 to 18 °C average	56.3 to 64.4 °F average	100 years max
	A. serrulata						
Carya	*C. carolinae-septentrionalis*	Hickory	510 to 1500mm average; up to 2030 mm recorded	20 to 59in average; up to 80in recorded	4 to 27 °C average; -40 to 46 °C recorded	39.2 to 80.6 °F average; -40 to 114.8 °F recorded	150 to 200 average; 350+ max
	C. cordiformis						
	C. glabra						
	C. illinoinensis						
	C. laciniosa						
	C. myristiciformis						
	C. ovalis						
	C. ovata						
	C. pallida						
	C. texana						
	C. tomentosa						
Celtis	*C. laevigata*	Hackberry	356 to 1700mm average	14 to 66.9in average	-1 to 27 °C average; -29 °C recorded	30.2 to 80.6 °F average; -20.2 °F recorded	150 to 200 average
	C. tenuifolia						
Fagus	*F. grandifolia*	Beech	760 to 1270mm average	29.9 to 50in average	4 to 21 °C average; 38 to -42 °C recorded	39.2 to 69.8 °F average; 100.4 to -43.6 °F recorded	200 to 300 average; 400 max
Fraxinus	*F. americana*	Ash	380 to 1520mm average	15 to 59.8in average	-5 to 18 °C average; 28 to -34 °C recorded	23 to 64.4 °F average; 82.4 to -29.2 °F recorded	75 to 150 averages; 250+ max
	F. caroliniana						
	F. pennsylvanica						
	F. profunda						
	F. quadrangulata						

Table 3.3 (Cont.): Biodiversity indices for fossil pollen taxa used in this study.

Taxa	*Native Varietals	Common Name	Mean Annual Precipitation Range (mm)	Mean Annual Precipitation Range (in)	Mean Annual Temperature Range (°C)	Mean Annual Temperature Range (°F)	Lifespan
Juglans	*J. cinerea*	Walnut	630 to 2030mm average	24.8 to 79.9in average	4 to 16 °C average; -34 to 41 °C recorded	39.2 to 60.8 °F average; -29.2 to 105.8 °F recorded	75 to 150 average; 250 max
	J. nigra						
Nyssa	*N. aquatica*	Tupelo, Gum	530 to 1700mm average	20.8 to 99.9in average	7 to 28 °C average; 46 to -29 °C recorded	44.6 to 82.4 °F average; 114.8 to -20.2 °F recorded	250 average; 679 max
	N. biflora						
	N. ogeche						
	N. sylvatica						
Ostrya/Carpinus (Betulaceae)	*C. caroliniana*	Hophornbeam/ Hornbeam	460 to 1630mm average	18.1 to 64.2in average	-18 to 29 °C average	-0.4 to 84.2 °C average	50 to 150 average
	O. virginiana						
Pinus	*P. clausa*	Pine	360 to 2030mm average	14.2 to 79.9in average	-7 to 29 °C average; -40 to 43 °C recorded	19.4 to 84.2 °F average; -40 to 109.4 °F recorded	100 to 200 average; 450 max
	P. echinata						
	P. elliottii						
	P. glabra						
	P. palustris						
	P. pungens						
	P. rigida						
	P. serotina						
	P. strobus						
	P. taeda						
	P. virginiana						
Platanus	*P. occidentalis*	Sycamore	760 to 2030mm average	29.9 to 79.9in average	4 to 21 °C average; 41 to -34 °C recorded	39.2 to 69.8 °F average; 105.8 to -29.2 °F recorded	200 to 300 average; 500 to 600 max

Table 3.3 (Cont.): Biodiversity indices for fossil pollen taxa used in this study.

Taxa	*Native Varietals	Common Name	Mean Annual Precipitation Range (mm)	Mean Annual Precipitation Range (in)	Mean Annual Temperature Range (°C)	Mean Annual Temperature Range (°F)	Lifespan
Quercus	*Q. alba*	Oak	250 to 2030mm average	9.8 to 79.9in average	2 to 28 °C average; 46 to -46 °C recorded	35.6 to 82.4 °F average; 114.8 to -50.8 °F recorded	80 to 300 average; 450+ max
	Q. arkansana						
	Q. austrina						
	Q. chapmanii						
	Q. coccinea						
	Q. durandii						
	Q. falcata						
	Q. geminata						
	Q. georgiana						
	Q. hemisphaerica						
	Q. imbricaria						
	Q. incana						
	Q. laevis						
	Q. laurifolia						
	Q. lyrata						
	Q. margaretta						
	Q. marilandica						
	Q. michauxii						
	Q. minima						
	Q. montana						
	Q. muehlenbergii						
	Q. myrtifolia						
	Q. nigra						
	Q. oglethorpensis						

Table 3.3 (Cont.): Biodiversity indices for fossil pollen taxa used in this study.

Taxa	*Native Varietals	Common Name	Mean Annual Precipitation Range (mm)	Mean Annual Precipitation Range (in)	Mean Annual Temperature Range (°C)	Mean Annual Temperature Range (°F)	Lifespan
Quercus (Cont.)	*Q. pagoda*	Oak	250 to 2030mm average	9.8 to 79.9in average	2 to 28 °C average; 46 to -46 °C recorded	35.6 to 82.4 °F average; 114.8 to -50.8 °F recorded	80 to 300 average; 450+ max
	Q. palustris						
	Q. phellos						
	Q. prinoides						
	Q. prinus						
	Q. pumila						
	Q. rubra						
	Q. shumardii						
	Q. similis						
	Q. sinuata						
	Q. stellata						
	Q. velutina						
	Q. virginiana						
Salix	*S. caroliniana*	Willow	500 to 1300mm average	19.7 to 51.2in average	15 to 34 °C average; 46 to -50 °C recorded	59 to 93.2 °F average; 114.8 to -58 °F recorded	30 to 100 average; 150 max
	S. eriocephala						
	S. floridana						
	S. humilis						
	S. nigra						
	S. sericea						
Ulmus	*U. alata*	Elm	380 to 2110mm average	15 to 83.1in average	-18 to 27 °C average; 46 to -40 recorded	-0.4 to 83.1 °F average; 114.8 to -40 °F recorded	150 to 300 average
	U. americana						
	U. rubra						
	U. serotina						

Table 3.4: GNAHRGIS typological, component, and archaeological period categories used in this study.

PERIOD	SOURCE
EARLY-MIDDLE PALEOINDIAN	
Clovis PPK	Anderson et al. (2015); Cambron and Hulse (1964)
Early Paleo Indian	
Folsom PPK	Cambron and Hulse (1964)
LATE PALEOINDIAN (DALTON)	
Dalton PPK	Anderson et al. (2015); Cambron and Hulse (1964); Meeks and Anderson (2012)
EARLY ARCHAIC	
Big Sandy PPK	Cambron and Hulse (1964)
Bolen Beveled PPK	Florida Museum Bullen Collection
Decatur PPK	Cambron and Hulse (1964)
Early Archaic	
Ecusta PPK	Cambron and Hulse (1964)
Greenbriar PPK	Cambron and Hulse (1964)
Kanawah PPK	Broyles (1971)
Kirk Corner Notched PPK	Cambron and Hulse (1964)
Kirk Serrated PPK	Cambron and Hulse (1964)
Kirk Stemmed PPK	Cambron and Hulse (1964); Farr (2006)
LeCroy PPK	Cambron and Hulse (1964)
Lerma PPK	Cambron and Hulse (1964)
Palmer PPK	Cambron and Hulse (1964); Coe (1959)
Stanly PPK	Cambron and Hulse (1964); Coe (1959)
Taylor PPK	Cambron and Hulse (1964)
MIDDLE ARCHAIC	
Alachua	Florida Museum Bullen Collection
Arredondo PPK	Cambron and Hulse (1964); Florida Museum Bullen Collection
Benton Stemmed	Cambron and Hulse (1964); Johnson and Brookes (1989)
Brier Creek	Cambron and Hulse (1964) *see 'Guilford' description*
Guilford PPK	Cambron and Hulse (1964)
Middle Archaic	
Morrow Mountain PPK	Cambron and Hulse (1964)
Old Quartz PPK	Shah and Whitley (2009)
Pasco	*Collector type*
Rheems Creek PPK	Cambron and Hulse (1964)
White Springs PPK	Cambron and Hulse (1964)
LATE ARCHAIC	
Abbey PPK	Cambron and Hulse (1964)
Adena PPK	Cambron and Hulse (1964)
Elora PPK	Cambron and Hulse (1964)
Fiber-Tempered	UGA Archaeology Indigenous Ceramic Type Collection

Table 3.4 (Cont.): GNAHRGIS typological, component, and archaeological period categories used in this study.

PERIOD	SOURCE
LATE ARCHAIC (Cont.)	
Gary PPK	Cambron and Hulse (1964)
Gary Stemmed PPK	Cambron and Hulse (1964)
Gulf Formational	Brawner (1993)
Hernando PPK	Farr (2006); Florida Museum Bullen Collection
Kays PPK	Cambron and Hulse (1964)
Late Archaic	
Limestone PPK	Cambron and Hulse (1964)
Maples PPK	Cambron and Hulse (1964)
McIntire PPK	Cambron and Hulse (1964)
Mud Creek PPK	Cambron and Hulse (1964)
Otarre	*Collector type;* see Whatley (2002)
Paris Island PPK	Elliott and Sassaman (1995)
Pickwick PPK	Cambron and Hulse (1964)
Savannah River PPK	Cambron and Hulse (1964); Florida Museum Bullen Collection
St. Simons	UGA Archaeology Indigenous Ceramic Type Collection
Stallings Island	Sassaman (1993); UGA Archaeology Indigenous Ceramic Type Collection
Stamp Creek	Caldwell (1958)
Thom's Creek	Sassaman (1993)
Wade PPK	Cambron and Hulse (1964)

**N.B.$_1$ These typologies do not necessarily coincide with the full length of each archaeological period; however, many of these types lack chronological controls, and the fossil pollen data set necessitates millennial-level resolution of archaeological data.*
**N.B.$_2$ "PPK" is short for "projectile point/knife," a catch-all category for finished, stemmed bifaces.*

Table 3.5: Diagnostic Paleoindian biface forms and their temporal ranges. Categories adapted from Smallwood et al. (2015) and Anderson et al. (2015).

Period	Component	Age Range (cal BP)
Early-Middle Paleoindian	Clovis	13,200-12,750
	Cumberland	12,950-12,550
	Barnes	
	Redstone	
	Folsom	
Middle-Late Paleoindian	Beaver Lake	12,600-12,000
	Quad	
	Suwannee	
	Simpson	
Late Paleoindian	Dalton	12,000-11,400
	Greenbrier	
	Hardaway	

CHAPTER 4

RESULTS

In this chapter I provide a detailed description of the results of the macrophysical climate model (MCM) for the interior Coastal Plain of Georgia. I focus on one variable at a time, following the tiered approach of my research design and explaining diachronic changes for each component of the analysis. In the summary, I provide an outline of the major trends in environmental changes and settlement variability for the temporal range of the study. My synthesis here underpins my discussion in the following chapter, where I integrate the behavioral ecology framework with the climatic, environmental, and archaeological data sets to assess how well the derived regional models conform to an ideal free distribution (IFD) of settlement.

Macrophysical Climate Modeling (MCM): Expectations and Trends

I compared the graphed outputs of the MCM (Figures 4.1 and 4.2) to other paleoclimate studies in Georgia and the broader Coastal Plain region (Delcourt and Delcourt 1977, 1983, 1985; Fearn and Cohen 1984; Grimm et al. 2001; Jackson and Whitehead 1993; Kneller and Peteet 1993; Krause et al. 2018; LaMoreaux 1999; LaMoreaux et al. 2009; Meeks and Anderson 2012; Otvos 2005; Watts 1980; Watts and Stuiver 1980; Watts et al. 1992). At the millennial scale, MCM output trends for the interior Coastal Plain are consistent with known climatic conditions identified through proxy indicators like fossil pollen (Delcourt and Delcourt 1985; LaMoreaux 1999; LaMoreaux et al. 2009; Krause et al. 2018; Watts 1980) and paleomeanders (Leigh and Feeney 1995; Leigh 2006, 2008; Leigh et al. 2004).

Statistical validation of the MCM temperature and precipitation outputs is automatically generated by the MCM template, and tests the local temperature and

precipitation inputs against the inputs from the relative locations of the North American atmospheric module (Table 4.1). All temperature regressions produced a high coefficient of correlation against the North American atmospheric climate module (r^2 ranges from 0.95 to 0.98) with significant *p*-values (less than 0.05), suggesting the proximities of the North American climate module "centers of action" accurately predict long-term temperature trends for the weather stations in the study. The centennial average precipitation outputs produced greater variation in coefficients of correlation (r^2 ranges from 0.85 to 0.96) with significant *p*-values for all weather stations except Union, South Carolina ($p = 0.05591$). The correlation coefficient variation range for precipitation may help explain why net primary productivity (NPP) estimates using the centennial outputs of the MCM exceed the saturation threshold for the Miami model for NPP (Lieth 1972) of 3000 $gDM/m^2/yr$. Because the Miami model uses the minimum limit for either temperature or precipitation to calculate annual NPP, in situations where the annual carbon production is exceeded (Figures 4.3 and 4.4) there is a chance the precipitation variance is being overestimated by the MCM outputs. All weather stations that exceed the NPP threshold fall below the 0.95 r^2 threshold for the coefficient of correlation for precipitation.

During the Bølling-Allerød interstadial, "no analog" climate conditions characterized southeastern landscapes as environmental conditions shifted rapidly from the arid and cool Older Dryas stadial to the rapid warming immediately preceding the Younger Dryas stadial (Leigh 2008:97; Rasmussen et al. 2006). MCM mean annual temperature trends for Georgia and South Carolina weather stations (Figure 4.1) during this interstadial demonstrate that the interior Coastal Plain experienced high-amplitude climatic fluctuation, with rapidly warming temperatures from ca. 13,500 to 13,200BP, and a steady increase in temperatures up to the transition to the Younger Dryas stadial at approximately 12,900BP. Annual precipitation totals generated by the MCM for this

period are among the highest average outputs for the study, ranging from nearly 1800cm (Savannah) to 1250cm annually (Charleston) (Figure 4.2). The high average centennial precipitation outputs are also consistent with the climate-induced hydrologic shifts characteristic of the Bølling-Allerød, which marks a distinct transition from braided to meandering stream conditions (Leigh 2006, 2008). The deeply-incised channels that dated to the Bølling-Allerød are indicative of paleodischarge rates up to four times that of modern channels (Leigh 2006).

The MCM signals the onset of the Younger Dryas at approximately 12,900BP with an abrupt temperature decrease and corresponding decrease in annual precipitation. Younger Dryas environmental effects manifested in the Southeast as highly regionalized and non-uniform trends (Meeks and Anderson 2012:112-113), as evidenced in the MCM temperature and precipitation outputs with periods of high-amplitude temperature and precipitation fluctuation immediately preceding a steep annual precipitation decrease at ca. 12,300BP. A corresponding temperature rise at ca. 12,300BP may help explain the phenomenon of human population reorganization in the interior Coastal Plain, described by Smallwood and colleagues (2015) as a response to the destabilization of the coastal zone from high-amplitude climatic fluctuations during the Younger Dryas.

Early Holocene climatic warming was a slow and gradual process, reaching near-modern mean annual temperatures by the onset of the Middle Holocene. After a punctuated increase in mean annual temperature at ca. 12,300, near the end of the Younger Dryas, temperatures fluctuated by more than 3°C for nearly 3500 years before stabilizing at ca. 9000BP. Precipitation amplitude shifts are even more pronounced during the Early Holocene, with a peak of more than 1600mm annual precipitation at ca. 11,000BP, and a low of less than 950mm annual precipitation at ca. 9300BP. The high-amplitude precipitation shifts are consistent with recurrent issues paleoclimate

specialists have with estimating Early Holocene precipitation trends. According to Leigh (2008:100), no “indisputable proxies” for precipitation trends exist in the interior Coastal Plain because conditions were highly variable from century to century.

The Middle Holocene temperature and precipitation trends accurately predict the climatic stabilization event known as the Holocene Climatic Optimum, defined as the period of extended warm temperatures from approximately 9000-5000BP (Sassaman and Anderson 1996; Schuldenrein 1996). Both mean annual temperature and annual precipitation increase throughout the Middle Holocene, consistent with both fossil pollen and paleodischarge predictions for the interior Coastal Plain (LaMoreaux et al. 2009:307; Leigh and Feeney 1995:689).

Net Primary Productivity (NPP) Trends

I calculated NPP via the Miami model (*sensu* Lieth 1972) at two resolutions: by time-averaging millennial temperature and precipitation outputs of the MCM (Figure 4.3), and by time-averaging major archaeological periods down to rounded centuries to investigate variations that may provide insights into human habitation of the interior Coastal Plain (Figure 4.4):

- Early/Middle Paleoindian: 13,400 to 12,800 BP
- Late Paleoindian/Dalton: 12,900 to 11,500 BP
- Early Archaic: 11,500 to 8900 BP
- Middle Archaic: 8900 to 5800 BP
- Late Archaic: 5800 to 3200 BP

At the time-averaged millennial scale, NPP exceeded the 3000 gDM/m^2/yr saturation threshold of the equation at 14,000BP, 13,000 BP, and 11,000 BP. The Columbus, Savannah, Tifton, and Experiment stations, collectively representing the lower Coastal Plain, and southern Piedmont physiographic regions (Figure 3.1), exceeded the NPP

saturation threshold at 14,000 BP, at the onset of the Bølling-Allerød interstadial. This interstadial is characterized by “no-analog” climatic conditions across the Southeast (Leigh 2008:97; Williams and Jackson 2007) and high-amplitude climate shifts, wherein the dry and cool conditions of the Oldest Dryas stadial were quickly replaced by warmer temperatures. The high NPP values could be explained, in part, by the co-occurrence of boreal pine forests and their rapid replacement with cool mixed deciduous forests characterized by both retreating mesic boreal pines and infilling cool-temperate deciduous taxa like *Quercus, Carya, Ostrya/Carpinus, Fagus, Ulmus, Fraxinus, Juglans,* and *Platanus* (Delcourt and Delcourt 1985:18; Krause et al. 2018:9). The climate conditions for this interstadial are also characterized by increased summer precipitation, which is reflected in the MCM outputs (Figure 4.5). All four of the weather stations that exceeded the saturation threshold of the Miami model produced sub-optimal r^2 values for precipitation (Table 4.1) when regressed against the North American atmospheric climate module, suggesting that the MCM may be overestimating precipitation outputs, such that NPP saturation limits were exceeded for those stations.

Millennial NPP trends indicate the highest sustained annual carbon output occurred during the Bølling-Allerød interstadial at the 14,000BP and 13,000BP millennial intervals. A second NPP peak occurred during the 11,000BP interval, during a period of high-amplitude climatic fluctuation near the onset of the Early Holocene. The lowest recorded millennial interval NPP is 1916.3 gDM/m^2/yr from the Savannah weather station at ca. 8000BP, during the Holocene Climatic Optimum (Appendix B). NPP remains lower on average through the late Early Holocene and throughout the Middle Holocene, perhaps reflecting the shift from dense mixed deciduous arboreal vegetation to more monodominant *Pinus* forests in the interior Coastal Plain by the Middle Holocene. When time-averaged by archaeological period, NPP exceeds the 3000 gDM/m^2/yr saturation threshold of the Miami model only during the Early-Middle

Paleoindian period. This environmental scenario, in which available dry carbon meets the saturation threshold of the landscape, is the backdrop to hunter-gatherer settlement theories predicated on the assumption that the local environment was the primary driver of settlement locations (Anderson 1995b; Anderson and Sassaman 1996a, 1996b). Across all weather stations, NPP steadily declines from the Late Paleoindian period (Dalton-era) through the Middle Archaic period, followed by an increase in NPP during the Late Archaic period.

Fossil Pollen and Lithologic Habitat Suitabilities and Biodiversity Index Trends

Before running least squares best fit regressions on habitat suitabilities and their correlation with archaeological settlement pattern data, I derived Getis Ord Gi* (hotspot analysis) z-scores (hereafter, GiZ scores) for habitat suitabilities with and without lithologic units added to the overall suitability metric (Appendix E). The outputs of Getis Ord Gi* hotspot spatial analyses are z-scores, or standard deviations. Very high or very low (negative) z-scores are found on the tails of a normal distribution curve. When associated with low *p*-values, very high and very low z-scores (> 1.96 or < -1.96) indicate that it is unlikely an observed spatial pattern in the data set is the result of random distribution. If z-scores fall between 1.96 and -1.96, the null hypothesis (random distribution) cannot be rejected. After generating z-scores for each habitat suitability-normalized county in the watershed extents of the study area, I used the biodiversity indices for target taxa and their frequency distributions in tandem with MCM and NPP trends to create a multivariate explanation for shifts in these habitat suitability hotspots over time.

Fossil Pollen and Lithologic Habitat Suitabilities

I generated fossil pollen and lithologic habitat suitabilities beginning at 14,000BP, after the onset of the Bølling-Allerød interstadial (Figure 4.6). Fossil pollen habitat suitability z-scores indicate a significant hotspot in the central Savannah and Ogeechee

River valleys in Burke County, with radiating high z-score clusters moving upriver and downriver from Burke County. The addition of lithic suitabilities not only increases the values of the z-score hotspot clusters around the Burke County region, but also indicates that significant hotspots exist in the Fall Line zone west into the Middle Oconee and Ocmulgee River valleys. Significant cold spots of low habitat suitability cluster in the northern Piedmont in the upper Savannah and Ocmulgee River valleys, as well as in the lower Oconee and Ocmulgee watersheds and Middle Altamaha watershed south of the Fall Line. The cold spot z-scores that appear with the addition of lithologic units suggest that, when lithic outcrop locations are included as part of the overall habitat suitability metric, there are areas of demonstrably poor habitat suitability by comparison, indicating a high degree of habitat contrast.

At 13,000BP, near the end of the Bølling-Allerød interstadial, fossil pollen habitat suitability z-scores indicate significant suitability hotspots at the mouth of the Savannah and Ogeechee Rivers in coastal Chatham and Bryan Counties, and upstream to adjacent Effingham County (Figure 4.7). An additional hotspot in Towns County in the Blue Ridge province suggests the “no analog” environmental conditions of the Bølling-Allerød manifested in a cool-mixed forest assemblage at the northern extent of the study area (Williams and Jackson 2007). Five counties in the upper Oconee and Ocmulgee watersheds cluster as significant cold spots, suggesting the northern Piedmont during this period was likely still dominated by cool boreal taxa like *Picea* (spruce) and *Abies* (fir) while the Coastal Plain was infilling with mixed deciduous cool-temperate taxa like *Quercus, Carya, Ostrya/Carpinus, Fagus, Ulmus, Fraxinus,* and *Juglans* (Delcourt and Delcourt 1985:18; Krause et al. 2018:9). The addition of lithic suitabilities consolidated hotspots to the Fall Line zone, with high z-scores concentrated in the Fall Line regions of the Ogeechee, Oconee, and Ocmulgee watersheds. A large cluster of significant cold spots appear in the upper Savannah, Oconee, and Ocmulgee watersheds, further

reinforcing the idea that Piedmont landscapes were less suitable than the Fall Line ecotone and Coastal Plain habitats near the close of the Bølling-Allerød interstadial.

At 12,000BP, during the Younger Dryas stadial, the abrupt shift to cool and dry climatic conditions manifested in the fossil pollen suitability z-scores as a large cluster of hotspots comprising most of the watershed extents north of the Fall Line (Figure 4.8). This clustering is consistent with fossil pollen evidence from the Piedmont indicating the expansion of *Quercus* and other cool-mesic mixed deciduous taxa (Delcourt 1980; LaMoreaux et al. 2009:307; Meeks and Anderson 2012). A significant cold spot stretching from the coast toward the central Ocmulgee watershed is consistent with predictions made by Smallwood and colleagues (2015), who suggested that the abrupt climate changes of the Younger Dryas stadial destabilized the coastal zone and made the interior Coastal Plain region more unpredictable for human settlement, triggering a population reorganization toward the Piedmont. The addition of lithic suitabilities pulls the hotspot clusters closer to the Fall Line zone, with the highest concentration of hotspots in the Middle Savannah, Upper Ogeechee, and Middle Oconee watersheds. Cold spot clusters consolidate to the coastal zone and lowest reaches of the Ogeechee, Altamaha, Oconee, and Ocmulgee watersheds.

At 11,000BP during the Early Holocene, the only significant hotspots in the study area cluster at the northern extents of the Savannah and Oconee watersheds, in the northern Piedmont and Blue Ridge provinces (Figure 4.9). Cool-mesic deciduous taxa began their slow retraction toward the northern reaches of the study area by the onset of the Early Holocene, and continued to gradually shift northward for the duration of the epoch (Leigh 2008). The addition of lithic suitabilities pulled the hotspot clusters toward the Fall Line zone, with remnant clustering in Rabun and Habersham Counties in the northern Savannah watershed. Significant cold spots cluster in the northern Ocmulgee watershed and the lower Coastal Plain in the Ogeechee, Altamaha, Oconee, and

Ocmulgee watersheds. From 10,000 to 9000BP, during the gradual and continued climatic warming characteristic of the Early Holocene, hotspot clusters mirror those identified at 11,000BP for both pollen and pollen with lithologic units included, further reinforcing fossil pollen record studies suggesting that Early Holocene climatic shifts were gradual (Figures 4.10 and 4.11) (Leigh 2008:99; Webb et al. 1998).

At 8000BP, during the Middle Holocene and coinciding with Holocene Climatic Optimum, significant hotspots cluster in the northern extent of the study area in the Savannah, Oconee, and Ocmulgee watersheds. Weak cold spot clusters occur in the lower Ocmulgee, Altamaha, and western Ogeechee watersheds (Figure 4.12). The consolidation of hotspots to the northern Piedmont and Blue Ridge provinces reflects the general climatic trend of increased temperature and sub-optimal annual precipitation leading to the contraction of mixed deciduous taxa into the Piedmont (LaMoreaux 1999; LaMoreaux et al. 2009). The addition of lithic suitabilities further differentiates the Piedmont suitabilities from the Coastal Plain, creating a large and significant cluster of cold spots in the lower Coastal Plain extents of the Ogeechee, Altamaha, and Ocmulgee watersheds. This trend toward cold spot clustering in the lower Coastal Plain with coinciding hotspot consolidation in the northern Piedmont and Blue Ridge provinces continues through 3000BP (Figures 4.13 to 4.17), suggesting that the climatic stabilization characteristic of the Middle Holocene resulted in the spread of low suitability taxa like *Pinus* throughout the Coastal Plain and the consolidation of high suitability deciduous taxa in the Piedmont and Blue Ridge provinces (LaMoreaux 1999; LaMoreaux et al. 2009; Watts 1975b; Webb et al. 1998).

Biodiversity Indices and MCM Outputs

I generated biodiversity indices to investigate average temperature and annual precipitation tolerances for the target taxa in the study, as well as average lifespans for genera native to Georgia (Table 3.3). In doing so, I evaluated the accuracy of the

modeled outputs against the interpolated frequencies of target taxa from the continental fossil pollen study, which generated isometric point values from chronostratigraphically controlled fossil pollen frequencies (Williams et al. 2004). The biodiversity index constraints are a form of quality control for the hypothesized MCM outputs, such that any temperature or precipitation outputs from the MCM that don't conform to the environmental tolerances of the target taxa must be inaccuracies with the modeled data or indicative of high-amplitude fluctuations between centennial intervals.

For example, the low-end annual precipitation requirement for native varietals of *Ulmus* (elm), including *U. alata, U. americana, U. rubra,* and *U. serotina,* is 380mm (Bey 1990; Burns and Honkala 1990b; Snow 1990). If any centennial outputs of the MCM for any weather station generate precipitation values below 380mm annually, especially for consecutive centuries, that region is inferentially less suitable for the growth and proliferation of *Ulmus* species. If the interpolated fossil pollen records for *Ulmus* indicate relatively high frequencies during the same periods of modeled low precipitation (for *Ulmus,* the highest frequency range occurs between 14,000 and 10,000 BP), then I have to interpretively consider (1) the accuracy of the modeled outputs, and (2) the likelihood of highly localized and non-uniform environmental changes during periods of climatic fluctuation, especially sub-centennial variation that can't be captured by the resolution of the MCM (Meeks and Anderson 2012; Miller et al. 2022a).

For the temporal range of the study (ca. 14,000 to 3000 cal BP), annual precipitation totals at the centennial level of MCM outputs returned modeled values above the low-end tolerances ($\geq$ 250 to 950mm annual precipitation) for all target taxa across all weather stations, with the exception of one centennial output at 9300 BP from the Savannah, Georgia, weather station, which returned an annual total of 949.09mm (Appendix A). These centennial outputs for precipitation demonstrate that, within and around the watershed extents of the study area, annual precipitation met or exceeded

the low-end requirements for the target taxa, at least at the centennial level of temporal resolution provided by the MCM.

I plotted both mean annual temperature averages (Figure 4.1) and mean seasonal temperature averages based on seasonal low temperatures (January), high temperatures (July), and intervals between minima and maxima (April and October) (Figure 4.18) to identify trends and high-amplitude centennial fluctuations. All weather stations generated centennial monthly averages and annual temperatures that fall within the minimum and maximum recorded temperatures (in °C) for each target taxa. The following sections explore each target genus and its relative temperature and precipitation constraints, with commentary on diachronic habitat suitabilities in the context of the NPP outputs.

Alnus

There are two *Alnus* (alder) species native to Georgia, *A. maritima* and *A. serrulata,* with mean annual precipitation ranges of 950 to 4000mm on average and mean temperature ranges of 13.5 to 18°C (CNCPP 1997; USDA PLANTS 2022a). *Alnus* was most abundant from approximately 8000 BP near the onset of the Middle Holocene to 4000 BP, post-dating the Holocene Climatic Optimum (Figure 4.19), with an average frequency peak at ca. 5000 BP. Its frequency outliers exceed 40% of the total pollen count at ca. 7000, 5000, and 4000 BP. *Alnus* frequencies peak during a time of “wetter than modern climatic conditions” (Leigh and Feeney 1995:689) for the interior Coastal Plain, suggesting it is an accurate indicator taxa for mesic conditions (LaMoreaux et al. 2009).

Carya

There are 11 native varietals of *Carya* (hickory) in Georgia (Table 3.3), all of which produce edible fruits (nuts) that were a highly-desirable subsistence product for both hunter-gatherers and prey species alike (Carmody 2014; Ditchkoff 2011; Gardner

1997; Grauke and Heerema 2015; Hollenbach and Carmody 2022; Miller and Carmody 2020; Morey 1996; Reidhead 1981; Simard et al. 2008; Strickland and Demaris 2000; Walker et al. 2001). In the Southeast, *Carya* nuts have a high post-encounter return rate (Fritz et al. 2001; Gardner 1997; Hollenbach 2009; Scarry 2003), and "…paired with their high fat content and storability, hickory nuts are a relatively high ranked resource that could have provided critical nutrition (fats) in spring when game was particularly lean" (Hollenbach and Carmody 2022:240).

Georgia *Carya* varietals have a mean annual precipitation range of 510 to 1500mm on average and mean temperature ranges of 4 to 27°C (with extremes of -40 to 46°C on record) (Burns and Honkala 1990b; Grauke and Heerema 2015; USDA PLANTS 2022b). *Carya* frequencies peak at 14,000 BP, the earliest millennium within the temporal range of the study, and decline consistently until 3000 BP, with small rebounds (<1% frequency increase) at both 9000 and 7000 BP (Figure 4.20). The height of *Carya* abundance aligns with the Bølling-Allerød interstadial and Younger Dryas, during and immediately after the "no analog" climatic conditions of the lower Southeast (Leigh 2008:97; Williams and Jackson 2007). The decline in *Carya* abundance after ca. 12,000 BP can be explained, in part, by the steep precipitation decrease during the Younger Dryas and steady temperature increase during the Early Holocene, during which time *Carya* contracted to the Piedmont and Ridge and Valley regions (Delcourt and Delcourt 1985:18; Krause et al. 2018:9).

Celtis

There are two *Celtis* (hackberry) species native to Georgia, *C. laevigata* and *C. tenuifolia*, with mean annual precipitation ranges of 356 to 1700mm on average and mean temperature ranges of -1 to 27°C on average (Bishop 2001; Sullivan 1993). *Celtis* frequencies peaked at 13,000 BP at just above 0.4% abundance, and again at 3000 BP at just under 0.2% abundance (Figure 4.21). *Celtis* is among the "swamp complex" taxa

(*sensu* Delcourt and Delcourt 1985:9), characteristic of the poorly-drained alluvial habitats that occur along major river valleys in the Coastal Plain. While low in abundance compared to other target taxa, *Celtis* peaks as expected during the Bølling-Allerød interstadial, when climatic conditions were regionally variable, but generally manifested as higher annual precipitation totals and increased temperatures across the Southeast (Miller et al. 2022a; Williams and Jackson 2007).

Fagus

Only one species of *Fagus* (beech) is native to Georgia – *F. grandifolia*, the American beech, with an annual precipitation range of 760 to 1270mm on average and a mean temperature range of 4 to 21°C (with extremes of -42 to 38°C on record) (Bishop 2001; Chanez Rodriguez-Ramirez et al. 2021; Tubbs and Houston 1997). *Fagus* frequencies peak from 13,000 to 12,000 BP, averaging 7.5 to 7.8% of total pollen assemblages, with a steep decline in abundance by 11,000 BP at only 1.5% average frequency (Figure 4.22). *Fagus* is a proxy indicator for mesic cool-temperate conditions in the Southeast (Delcourt and Delcourt 1985; Krause et al. 2018; LaMoreaux 1999; LaMoreaux et al. 2009; Watts 1975b). Its frequency peak from ca. 13,000 to 12,000 BP coincides with the rapidly changing climatic conditions of the Bølling-Allerød interstadial and Younger Dryas, suggesting non-uniform environmental conditions in parts of the Southeast (Hussey 1993; Meeks and Anderson 2012). Because *Fagus* is adapted to cool, wet conditions, the steep precipitation decline after the Younger Dryas and succeeding temperature increase at the onset of the Early Holocene suggests the study area and adjacent physiographic regions became sub-optimal environments for the continued proliferation of mesic, cold-temperate-adapted taxa.

Fraxinus

There are five species of *Fraxinus* (ash) native to Georgia (*F. americana, F. caroliniana, F. pennsylvanica, F. profunda,* and *F. quadrangulata*), with mean annual

precipitation ranges of 380 to 1520mm on average and mean temperature ranges of -5 to 18°C (with extremes of -34 to 28°C on record) (Bishop 2001; Harms 1997; Kennedy 1997; Schlesinger 1997; Whittemore et al. 2018). *Fraxinus* frequencies peak at 14,000 and 12,000 BP at approximately 1.2% and 1.6% of the total pollen assemblages, respectively (Figure 4.23). Small peaks (>1% abundance) appear at 6000 and 4000 BP as well. *Fraxinus* is common in the "no analog" assemblages of the Bølling-Allerød interstadial, wherein the pollen record reflects a cool-mixed forest assemblage of mesic boreal and cool-temperate mixed deciduous taxa (Leigh 2008:97; Williams and Jackson 2007). The consistent frequency decline post-12,000 BP suggests that *Fraxinus*, a cool-temperate and mesic indicator taxon with a 75-150 year average lifespan (Harms 1997; Kennedy 1997; Schlesinger 1997), did not thrive in the Georgia interior during the rapid warming and low precipitation environment characteristic of the later Younger Dryas-to-Early Holocene transition.

Juglans

There are two *Juglans* (walnut) species native to Georgia, *J. cinerea* and *J. nigra*, with mean annual precipitation ranges of 630 to 2030mm on average and mean temperature ranges of 4 to 16°C (with extremes of -34 to 41°C on record) (Bishop 2001; Rink 1997; Williams 1997). While *Juglans* is a mast producer like both *Quercus* and *Carya*, and similarly allelopathic (Rietveld 1979; Williams 1997), it is short-lived in comparison to other southeastern mast producers and intolerant to shady understories (Baker 1948; Rink 1997). If *Juglans* does not dominate among arboreal taxa in a mixed forest environment overstory, it remains diminutive in size and mast output, coexisting in low frequencies among other understory mixed deciduous taxa (Williams 1997). *Juglans* frequencies are low throughout the temporal range of the study (sub-0.25% average frequency), but peak from 14,000 to 11,000 BP, and again at 6000 BP (Figure 4.24). Similar to *Fraxinus*, *Juglans* is common among the "no analog" assemblages of the

Bølling-Allerød interstadial and the cool-mixed forest assemblage of mesic boreal and cool-temperate mixed deciduous taxa (Leigh 2008:97; Williams and Jackson 2007). The conspicuous low frequency period from 10,000 to 7000 BP coincides with the Early-Middle Holocene temperature increase and extended millennia of low mean annual precipitation and summer precipitation (Figures 4.1 and 4.2).

Nyssa

There are four species of *Nyssa* (tupelo/gum) native to Georgia (*N. aquatica, N. biflora, N. ogeche,* and *N. sylvatica*), with mean annual precipitation ranges of 530 to 1700mm on average and mean temperature ranges of 7 to 28°C (with extremes of -29 to 46°C on record) (Bishop 2001; Johnson 1997; Kossuth and Scheer 1997; McGee 1997). *Nyssa* frequencies peak at 8000 BP, and again from 5000 to 3000 BP during the Middle Holocene (Figure 4.25). Similar to *Celtis*, *Nyssa* is one of several "swamp complex" taxa (*sensu* Delcourt and Delcourt 1985:9) that thrives in the poorly-drained alluvial habitats of river valleys within the Coastal Plain. Interestingly, the highest frequencies of *Nyssa* occur during millennia with lower mean annual rainfall (although still above the low-end threshold of tolerance for the genus) than the observed frequency peak during the Younger Dryas identified in other interior Georgia fossil pollen studies (LaMoreaux et al. 2009:306). This may indicate the interior Coastal Plain climate and landscapes were refugia for "swamp complex" taxa that declined significantly after the Younger Dryas.

Ostrya/Carpinus

There are two species of *Ostrya* and *Carpinus* (hophornbeam and hornbeam, respectively) native to Georgia (*O. virginiana* and *C. caroliniana*), with mean annual precipitation ranges of 460 to 1630mm on average and mean temperature ranges of -18 to 29°C (Bishop 2001; Metzger 1997a, 1997b). These genera are palynologically undifferentiated, in that their pollen grains are morphologically indistinguishable from each other using standard palynological analytical techniques (Delcourt and Delcourt

1994; Kapp 1969; McAndrews et al. 1973). Delcourt and Delcourt (1994:137) identified that in eastern North American fossil pollen assemblages, *Ostrya* likely dominates among Betulaceae (birch family) genera.

Ostrya/*Carpinus* frequencies peak at 14,000 BP, with a slight plateau between 13,000 and 12,000 BP, and then a steady decline to 9000 BP where frequencies remain below 1% abundance for the remainder of the study period (Figure 4.26). This trend is consistent with the Delcourt and Delcourt (1994) observations of *Ostrya* and *Carpinus* proliferation across the Eastern Woodlands post-LGM. They suggest the precipitous decline post-8000 BP in *Ostrya* and *Carpinus* fossil pollen abundance is a "predictable response of forest species to cyclic changes in seasonality of climates resulting from systematic changes in solar radiation received by the earth due to changes in the timing of perihelion" (Delcourt and Delcourt 1994:137). *Ostrya* and *Carpinus* are floral indicators for mesic cool-temperate mixed hardwood environments (Delcourt and Delcourt 1985, 1994; Krause et al. 2018; LaMoreaux 1999; LaMoreaux et al. 2009). Their sustained low abundance by the onset of the Middle Holocene coincides with both the lowest annual centennial precipitation rates and highest mean annual temperatures hypothesized by the MCM, as well as the highest average summer seasonal temperatures (Figures 4.1, 4.2, and 4.18).

Pinus

There are 11 native varietals of *Pinus* (pine) in Georgia (Table 3.3), all of which are classified into the subgenus Diploxylon, the "hard" or "yellow" pine group, characterized by its dense structure (Baker and Langdon 1990; Bishop 2001; Boyer 1990; Bramlett 1990; Burns and Honkala 1990a; Carter and Snow 1990; Kossuth and Michael 1990; Lawson 1990; Little and Garrett 1990; Reeves 2007). Georgia *Pinus* species have mean annual precipitation ranges of 360 to 2030mm on average, and mean temperature ranges of -7 to 29°C (with extremes of -40 to 43°C on record) (Burns

and Honkala 1990a). *Pinus* is one of the most abundant individual genera among target taxa in this study, with average millennial frequencies ranging from approximately 18.5% to nearly 42% of the total pollen assemblage (Figure 4.27).

From the LGM to the start of the Bølling-Allerød interstadial, *Pinus* assemblages were dominated by boreal species (likely *P. strobus*) (LaMoreaux et al. 2009:305-306). The co-occurrence of boreal pines with mesic cool-temperate deciduous genera like *Quercus* and *Carya* suggests the Coastal Plain was a refugium for deciduous taxa by at least the onset of the Bølling-Allerød (Soltis et al. 2006). The eventual replacement of boreal pines with deciduous understory competitors in the cooling river valleys is visible in the interpolated fossil pollen record (*sensu* Williams et al. 2004), and persists until approximately 7000 BP, at which point pine frequencies outpace mixed deciduous taxa (Figure 4.28).

Pinus is an indicator taxa for xeric, warm environments, suggesting that by 7000 BP, its abundance in the fossil pollen record can be explained by the warm temperatures and lower average annual precipitation characteristic of the modern interior Coastal Plain (Figures 4.1 and 4.2). This period of *Pinus* abundance coincides with both lower average pollen concentrations from Coastal Plain cores throughout the Middle Holocene (Christensen 1981; LaMoreaux et al. 2009:307; Patterson and Sassaman 1988) and the lowest calculated NPP outputs for the study area (Figure 4.3). This could be an indicator that, by the Middle Holocene, climatic conditions were sub-optimal for dense arboreal vegetation. Charcoal concentrations in the fossil pollen record also coincide with the increased presence of pine, particularly by 4500 BP, reinforcing the concept that drier landscape conditions supporting the proliferation of pine also promoted the spread of fires (Christensen 1981; Delcourt and Delcourt 1985).

Platanus

Only one species of *Platanus* (sycamore) is native to Georgia – *P. occidentalis*, with a mean annual precipitation range of 760 to 2030mm and mean temperature range of 4 to 21°C (with extremes of -34 to 41°C on record) (Wells and Toliver 1987). *Platanus* frequencies peak at 14,000 BP at the height of the "no analog" climate conditions of the Bølling-Allerød interstadial in the Southeast supporting both boreal coniferous and cool-temperate mixed deciduous taxa (Delcourt and Delcourt 1985:18; Krause et al. 2018:9; Leigh 2008:97; Williams and Jackson 2007). The general frequency decline to sub-0.2% abundance post-12,000 BP suggests that *Platanus*, a cool-temperate and mesic indicator taxon, did not thrive in the Georgia interior during the transition to warm, xeric conditions characteristic of the later Younger Dryas-to-Early Holocene transition (Figure 4.29).

Quercus

There are 37 native varietals of *Quercus* (oak) in Georgia (Table 3.3), all of which produce edible acorns or oaknuts with high post-encounter caloric return rates (Hollenbach and Carmody 2022), which made them a desirable subsistence product for hunter-gatherers as well as prey species including squirrels, deer, and turkeys (Carmody 2014; Hollenbach 2005, 2009; Hollenbach and Carmody 2022; Petruso and Wickens 1984; Reidhead 1981). Similar to *Carya, Quercus* is a long-lived allelopathic mast producer, all of which are qualities that contribute to its dominance on the southeastern landscape post-LGM (Baldwin and Crosby 2016; Hollenbach and Carmody 2022:232-233).

Georgia *Quercus* species have mean annual precipitation ranges of 250 to 2030mm, and mean temperature ranges of 2 to 28°C (with extremes of -46 to 46°C on record) (Burns and Honkala 1990b; Gil-Pelegrin et al. 2017). Along with *Pinus*, *Quercus* is one of the most dominant individual genera among target taxa in this study, with

average millennial frequencies ranging from approximately 23.8% to 46% of the total pollen assemblage (Figure 4.30). *Quercus* frequencies peak at approximately 10,000BP during the Early Holocene, reflecting the general southeastern fossil pollen trend of diminished *Pinus* frequencies and abundant *Quercus, Carya*, and various other mixed deciduous taxa (Krause et al. 2018:9; LaMoreaux et al. 2009; Leigh 2008:99). Pollen-based temperature analogs indicate the Early Holocene was characterized by gradual warming, and the dominance of *Quercus* during this period reinforces this concept (Leigh 2008:99; Webb et al. 1998). After 10,000BP, *Quercus* frequencies gradually decline and eventually stabilize by 6000BP, coinciding with the inverse rise in *Pinus* frequency across the interior Coastal Plain (Figure 4.28), suggesting the steep precipitation decrease during the Younger Dryas and Early Holocene and subsequent temperature increase led to the contraction of cool-mesic *Quercus* species into the Piedmont and Ridge and Valley regions (Delcourt and Delcourt 1985; Krause et al. 2018:9).

Salix

There are six native varietals of *Salix* (willow) in Georgia (Table 3.3), with mean annual precipitation ranges of 500 to 1300mm and mean temperature ranges of 15 to 34°C (with extremes of -50 to 46°C on record) (Burns and Honkala 1990b; Pitcher and McKnight 1990). *Salix* frequencies peak at 10,000 BP during the Early Holocene, and again at 5000BP during the Middle Holocene (Figure 4.31). Similar to both *Celtis* and *Nyssa*, *Salix* is one of several “swamp complex” taxa (*sensu* Delcourt and Delcourt 1985:9) that thrives in the poorly-drained alluvial habitats of river valleys within the Coastal Plain. The highest frequencies of *Salix* occur at both 10,000BP and 5000BP, during millennia with low mean annual rainfall (although still above the low-end threshold of tolerance for the genus), paralleling the same trends seen in *Nyssa* frequencies. This trend might suggest that, contrary to results seen in other fossil pollen studies

suggesting a frequency peak of “swamp complex” taxa during the Younger Dryas, the interior Coastal Plain may have been wetter than what the MCM can capture in centennial intervals, or may have been experiencing amplified summer seasonality generating increased rainfall (LaMoreaux et al. 2009:306).

Ulmus

There are four native varietals of *Ulmus* (elm) in Georgia (*U. alata, U. americana, U. rubra,* and *U. serotina*), with mean annual precipitation ranges of 380 to 2110mm and mean temperature ranges of -18 to 27°C (with extremes of -40 to 46°C on record) (Bey 1990; Burns and Honkala 1990b; Snow 1990). *Ulmus* frequency shifts mirror those of other deciduous taxa like *Carya* and *Ostrya/Carpinus*, with frequency peaks from 14,000 to 13,000BP, with a gradual decline until 9000BP where frequencies remain below 1% abundance through the later Early Holocene and throughout the Middle Holocene (Figure 4.32). *Ulmus* is an arboreal indicator genus for mesic cool-temperate mixed hardwood environments (Delcourt and Delcourt 1985; Krause et al. 2018; LaMoreaux et al. 2009). Its sustained low abundance by the onset of the Middle Holocene coincides with both the lowest annual centennial precipitation rates and highest mean annual temperatures hypothesized by the MCM (Figures 4.1 and 4.2), suggesting the climatic conditions of the interior Coastal Plain were sub-optimal environments for the continued proliferation of mesic, cold-temperate-adapted taxa.

Summary of Fossil Pollen Trends

Fossil pollen frequencies for the study area mirror the trends seen in the broader Southeast from the Bølling-Allerød interstadial through the Middle Holocene, and offer insights into interpreting NPP millennial trends. NPP millennial estimates reach their peak from ca. 14,000 to 13,000BP (Figure 4.3), coinciding with the millennia in which nine of the thirteen target taxa in the study reach their maximum abundance. The “no analog” conditions of the Southeast during the Bølling-Allerød (Leigh 2008) and variable

regional climatic manifestations of the succeeding Younger Dryas provided the optimal conditions for the spread of cool-temperate, mesic, mixed deciduous taxa. Eight of the thirteen taxa reach their lowest frequencies from approximately 10,000 to 6000BP, coinciding with the lowest estimated NPP outputs for all weather stations. The sustained low frequencies of mixed deciduous taxa during the later Early Holocene and early Middle Holocene coincide with the lowest annual centennial precipitation outputs and highest mean annual temperature outputs hypothesized by the MCM (Figures 4.1 and 4.2). By the Early Holocene, the interior Coastal Plain became a sub-optimal environment for the continued proliferation of mesic, cold-temperate-adapted taxa, allowing the encroachment and near-replacement of these taxa with monodominant *Pinus* by ca. 7000BP.

Archaeological Settlement Pattern Trends

After characterizing the environments of the interior Coastal Plain through climate modeling, NPP estimates, and fossil pollen trends, I incorporated archaeological biface and site data to situate human habitation within the broader context of environmental change in the interior Coastal Plain. These trends and their statistical significance are discussed below, and their implications in Chapter 5.

Prior to running least squares best fit regressions between habitat suitabilities and their correlation with archaeological data, I derived GiZ scores from archaeological point and site densities per county to normalize spatial distributions. After generating z-scores for each archaeological period in both the Paleoindian Database of the Americas (PIDBA) and Georgia's Natural, Archaeological, and Historic Resources GIS (GNAHRGIS), I ran linear and polynomial regressions to identify best fit. For all regression analyses, the GiZ scores for habitat suitabilities with and without lithologies for each millennium were the predictor variables, and archaeological GiZ scores were the dependent (response) variables. By using millennial habitat suitability GiZ scores as

the predictor variables, I can identify if suitability hotspots significantly correlate with archaeological settlement distributions. These correlations (or lack thereof) provide the framework for testing the IFD null model – the 'ideal' settlement pattern that represents a baseline for optimal distribution of archaeological sites.

Settlement Trends by Archaeological Period

Before generating GiZ scores for point and site data, I converted PIDBA county-level diagnostic biface data and GNAHRGIS site data into county-normalized density maps. One confounding variable in normalizing PIDBA and GNAHRGIS data sets to the county level of analysis is that PIDBA county densities incorporate every diagnostic point, whereas a Paleoindian GNAHRGIS entry could potentially include multiple diagnostics (or inferential evidence of Paleoindian occupation) for a single site. GNAHRGIS county densities for Paleoindian materials could represent a broader range of site types with the inclusion of diagnostic and non-diagnostic material evidence. PIDBA county data represent more site locations where discarded diagnostics were found. It is limited to only those entries where known and named fluted and unfluted Paleoindian materials were identified. Where county density and GiZ scores diverge between PIDBA and GNAHRGIS data sets, consideration of this confounding variable is provided.

Early/Middle Paleoindian Clovis point and site densities were calculated from both PIDBA and GNAHRGIS data. When normalized for county size, Clovis (PIDBA) biface densities cluster near the Fall Line, along the Middle Savannah River, in the Middle Oconee watershed, and in the southernmost Ocmulgee watershed counties (Figure 4.33). This spatial patterning indicates that the highest densities of Clovis points are located in the Fall Line ecotone and interior Coastal Plain. Clovis (GNAHRGIS) site densities are more dispersed, with the highest concentrations in the northernmost Georgia counties within the Savannah River watershed, the Upper Oconee River basin,

Burke County within the Ogeechee and Savannah watersheds, and the Ocmulgee watershed south of the Fall Line (Figure 4.34). This diffuse distribution could reflect the scarcity of Clovis sites in the GNAHRGIS database (N=41 within the study area), or spatial patterns distinct from PIDBA diagnostics reflecting settlement types different from those that generate diagnostic bifaces.

Middle Paleoindian PIDBA bifaces representing non-Clovis fluted and unfluted forms (Table 3.5) do not have an analogous grouping in GNAHRGIS because GNAHRGIS entries are not inclusive of forms that are used almost exclusively by avocationalists and artifact collectors. Middle Paleoindian biface county densities cluster near the Fall Line, the northern Oconee and Savannah watersheds, and south of the Fall Line in the Ogeechee, Altamaha, and western Ocmulgee watersheds (Figure 4.35). Conspicuous gaps in point recovery bracket the northern and southern watershed boundaries of the study area, with the exception of Chatham County on the coast, which registers one single Middle Paleoindian PIDBA biface entry.

Dalton point and site densities were calculated from both PIDBA and GNAHRGIS data. When normalized for county size, Dalton and Dalton-variant (PIDBA) biface densities cluster near the Fall Line zone, with dense clusters appearing north of the Fall Line in the Upper Oconee, Middle Savannah, and Ocmulgee watersheds (Figure 4.36). Densities get progressively lower moving south of the Fall Line zone, and disappear entirely approaching the coast, with the exception of low-density Liberty County in the Ogeechee watershed. Similar to Clovis (GNAHRGIS) densities, Dalton (GNAHRGIS) densities are dispersed, with clusters in the Fall Line zone, the Upper Oconee, the length of the Savannah River, along the coast, and in the interior Coastal Plain in the Lower Oconee and Ocmulgee watersheds (Figure 4.37). The Altamaha watershed, the central Ogeechee watershed, and the Ocmulgee watershed north of the Fall Line contain multi-county gaps in Dalton site locations.

Archaic period site densities all derive from GNAHRGIS county-normalized site data. Early Archaic sites cluster north of the Fall Line in the Savannah, Oconee, and Ocmulgee watersheds, as well as south of the Fall Line in the Ocmulgee watershed (Figure 4.38). While most counties in the watershed study area have at least one Early Archaic site recorded, county densities south of the Fall Line are noticeably less dense than those north of the Fall Line. Middle Archaic period site densities cluster north of the Fall Line, with a density gradient that gets progressively lower further south, with gaps in county coverage in the lower Ogeechee and Altamaha watersheds (Figure 4.39). Late Archaic period site densities cluster north of the Fall Line, along the Georgia coast, and in the Ocmulgee watershed south of the Fall Line (Figure 4.40). The lowest county densities, including a county gap in site recordation, are in the interior Coastal Plain within the lower Ogeechee, Altamaha, and Oconee watersheds.

Archaeological Settlement GiZ Scores

After generating county densities for both PIDBA biface data and GNAHRGIS site locations, I calculated GiZ scores for all county point and site densities to identify significant hotpot clusters and conspicuous cold spots in their spatial arrangement. Clovis (PIDBA) GiZ scores produced a hotspot in the Middle Savannah and Upper Ogeechee watersheds, with significant clustering centered on Burke and Richmond Counties (Figure 4.41). A less significant hotspot also appears in the Lower Oconee watershed south of the Fall Line. Clovis (GNAHRGIS) GiZ scores produced hotspots in the northernmost extent of the Savannah watershed, and smaller hotspots in the Upper Oconee watershed and the Ocmulgee watershed south of the Fall Line. Middle Paleoindian (PIDBA) GiZ scores produced a significant hotspot cluster running east-west along the Fall Line, with highly significant clustering in the Oconee and Ocmulgee watersheds (Figure 4.42). Dalton (PIDBA) GiZ scores produced significant hotspots along the Fall Line in the Oconee, Altamaha, and Ogeechee watersheds, with a

significant cluster centering on Hancock County in the Oconee and Ogeechee watersheds north of the Fall Line. A cluster of lower significance also appears in the Middle Savannah River valley in Lincoln, Columbia, and McDuffie Counties. Dalton (GNAHRGIS) GiZ scores produced a hotspot cluster just north of the PIDBA hotspot cluster, within the Oconee, Savannah, and Ogeechee watersheds and centering on Oglethorpe County (Figure 4.43).

Early Archaic site GiZ scores produced a hotspot cluster similar in spatial arrangement and relative significance to the Dalton (GNAHRGIS) hotspot cluster, suggesting some degree of settlement continuity in density distribution between the Late Paleoindian period Dalton horizon and the succeeding Early Archaic period (Figure 4.44). An additional significant cluster appears in Columbia County in the Middle Savannah basin. Middle Archaic site GiZ scores similarly follow the hotspot patterning of the preceding Early Archaic period (Figure 4.45). The Late Archaic deviates from the preceding two periods, with a significant cluster in the Upper Oconee watershed centered on Greene County, and a significant cluster along the coast, including Chatham, Bryan, and Liberty Counties (Figure 4.46).

Correlation Statistics

After generating GiZ scores for county-normalized fossil pollen habitat suitability, fossil pollen and lithologic unit habitat suitability, PIDBA biface densities, and GNAHRGIS site densities, I ran linear and polynomial regression analyses on all site and habitat suitability GiZ scores. I used overlapping millennial habitat suitability GiZ scores for each archaeological period as the explanatory variables (X) and the PIDBA and GNAHRGIS archaeological period GiZ scores as the dependent variables (Y). For example, the Early Archaic period lasts from 11,500 to 8900 cal BP (Anderson and Sassaman 2012). I regressed the Early Archaic GiZ scores against fossil pollen and fossil pollen with the addition of lithologic units at 11,000BP, 10,000BP, 9000BP, and

8000BP to capture the greatest degree of overlap between millennial suitabilities and archaeological periods.

Running regressions against the GiZ scores for county-normalized data addresses spatial biases related to inflated or depressed recovery rates and site identifications. If specific counties return high or low GiZ scores because of factors like proximity to lithic raw material outcrops or intensity of archaeological research, this should have an effect on all archaeological periods. Those counties with disproportionate research and recovery rates should generate highly significant (positive) GiZ scores across all periods in the temporal range of the study. To determine if biface and site locations were clustered, random, or dispersed (*sensu* Robinson et al. 2019), and if the spatial patterning is significant compared to other clusters in the data set, GiZ score regressions will identify the degree of clustering relative to all other points. Additionally (and unlike Local Moran's I) it relationally discriminates between hotspots (Local Moran's I 'high-high' clustering) and cold spots (Local Moran's I 'low-low' clustering). It regresses two sets of spatial dependencies based on the total values of observed data, rather than assessing patterns based exclusively on location, as is the case with Ripley's K or nearest neighbor functions (Getis and Ord 2010; Vidanapathirana 2021).

I calculated least squares best fit regressions in JMP Pro 16 using the "Fit Y by X" regression tool, then generated linear and polynomial (quadratic, cubic, and quartic) fit lines to explore 'goodness of fit' between habitat suitabilities and archaeological periods at each millennium. If site clusters follow an ideal free distribution model of settlement, I should see a high correlation coefficient (r^2) against the explanatory variables with low *p*-values (≤ 0.05), suggesting the data trends are not the result of random chance. If factors other than habitat suitability as defined herein influenced settlement patterns, goodness of fit will be low, and alternatives to ideal free distribution

must be considered. A high r^2 value is difficult define in the social sciences (Moksony 1999; Ozili 2022). Its most common interpretation is that it offers high explanatory power to predictive models (as it often does in the physical sciences), leading to the belief that a high r^2 must offer the 'true' or 'best' fit of model parameters. Research in structural equation modeling (Chin 1998; Hair et al. 2014) suggests an appropriate range of acceptability for social science r^2 is 0.33 to 0.5 for a weak-to-moderate coefficient of variance, 0.5 to 0.67 for moderate-to-strong, and anything above 0.67 is a strong model (Moksony 1999). Because the goal of this research is not to predict human behavior, but to assess whether or not specific predictor variables have a significant effect on human decision-making, these modified r^2 ranges will be referenced to assess 'goodness of fit' for my regression analyses.

I regressed Clovis (PIDBA) and Clovis (GNAHRGIS) GiZ scores against fossil pollen and fossil pollen with lithologic unit GiZ scores at 13,000BP and 12,000BP (Figures 4.47 and 4.48). The strongest correlations occur between Clovis (PIDBA) GiZ scores and fossil pollen and lithic suitability GiZ scores at both 13,000BP (r^2 = 0.53 to 0.60, *p*-value = 0.0001) and 12,000BP (r^2 = 0.28 to 0.43, *p*-value = 0.0001) (Table 4.2). Clovis GiZ values derived from GNAHRGIS site data produced the weakest correlations for every habitat suitability GiZ score. Among habitat suitabilities, all regressions involving pollen-only GiZ scores performed poorly. The strongest fit between Clovis (PIDBA) GiZ scores and fossil pollen and lithic habitat suitability GiZ scores at 13,000BP corresponds with the documented height of Early-to-Middle Paleoindian hunter-gatherer occupations and widespread use of Clovis technology across the Southeast (Anderson et al. 2015; Miller et al. 2022a). The moderate-to-strong r^2 for Clovis (PIDBA) against pollen and lithic habitat suitability GiZ scores at 13,000BP, in addition to the relatively high degree of homoscedasticity of the PIDBA dataset against pollen and lithic habitat

suitability GiZ scores at 13,000BP, supports settlement interpretations consistent with hunter-gatherer decision-making around ranked resource bases.

Middle Paleoindian (PIDBA) GiZ score regressions against fossil pollen and fossil pollen and lithologic unit GiZ scores at 12,000BP produced a weak correlation between archaeological GiZ scores and fossil pollen with lithologic unit suitability GiZ scores (r^2 = 0.26 to 0.31, *p*-value = 0.0001), and no correlation when regressed against pollen-only GiZ scores (Figure 4.49, Table 4.3). The low r^2 with corresponding low *p*-value demonstrates that even noisy, high-variability data has significant trends, indicating that the predictor variable (in this case, the millennial habitat suitability GiZ scores) still provides information about the response variable even though data points display a high degree of heteroscedasticity. This situation necessitates consideration of human activity and decision-making variance that can't be explained by habitat suitability alone.

I regressed Late Paleoindian/Dalton (PIDBA) and (GNAHRGIS) GiZ scores against fossil pollen and fossil pollen with lithologic unit GiZ scores at 12,000BP and 11,000BP (Figures 4.50 and 4.51). The strongest correlations occur between Dalton (PIDBA) GiZ scores and fossil pollen and lithic suitability GiZ scores at 12,000BP (r^2 = 0.55 to 0.73, *p*-value = 0.0001) and 11,000BP (r^2 = 0.32 to 0.33, *p*-value = 0.0001), and a weak-to-moderate polynomial fit between the Dalton (GNAHRGIS) GiZ and fossil pollen habitat suitability GiZ at 12,000BP (r^2 = 0.20 to 0.37, *p*-value = 0.0001) (Table 4.4). The Dalton horizon trends with both the Clovis and Middle Paleoindian regressions, suggesting that throughout the Late Pleistocene and Early Holocene Paleoindian occupations of the interior Coastal Plain, habitat suitability corresponds strongly with locations of high-quality tool stone as well as locations of high suitability arboreal resources like *Quercus, Carya,* and mixed deciduous taxa. The weak correlation between Dalton (GNAHRGIS) and fossil pollen habitat suitability at 12,000BP also supports interpretations consistent with the continued importance of arboreal habitat

suitability to hunter-gatherers by the Dalton horizon, when infilling of the southeastern landscape began in earnest prior to the Early Archaic (Anderson 2001; Miller et al. 2022a; Smallwood et al. 2022).

Early Archaic GiZ score regressions against fossil pollen and fossil pollen with lithologic unit GiZ scores at 11,000BP, 10,000BP, 9000BP, and 8000BP produced weak correlation coefficients across all habitat types in all millennia (Figures 4.52 and 4.53, Table 4.5). Habitat suitabilities with and without lithologic unit GiZ scores at 8000BP were the only predictors with low *p*-values using linear regression. Polynomial regressions produced low *p*-values for all other millennia, but especially for suitability GiZ scores with lithologic units included. The low r^2 with corresponding low *p*-values, particularly for habitat suitability GiZ scores with lithologic unit predictors included, suggests that there is a statistically significant correlation between Early Archaic site clusters and habitat suitability clusters, but the relationship is far from monocausal. Perhaps more than any preceding archaeological period, habitat suitability scores are poor predictors for site clustering, necessitating consideration of human decision-making variables outside of environmental suitability for settlement choice.

Middle Archaic GiZ score regressions against fossil pollen and fossil pollen with lithologic unit GiZ scores at 8000BP, 7000BP, 6000BP, and 5000BP produced weak linear correlation coefficients across all habitat types in all millennia (Figures 4.54 and 4.55, Table 4.6). Polynomial regressions produced weak-to-moderate r^2 values for pollen habitat suitability GiZ scores at both 8000BP and 5000BP. Interestingly, although r^2 values for all pollen and pollen with lithologic unit GiZ scores were in the weak to weak-to-moderate range, all *p*-values were significant (less than 0.05). The Middle Archaic is also the first archaeological period in the study to show the highest ‘goodness of fit’ between site clusters and pollen-only habitat suitability GiZ scores. While habitat suitability clusters are not the best predictor of site clustering for the Middle Archaic

period, it appears that among environmental variables being tested, high suitability arboreal taxa best explain Middle Archaic site clustering trends. Superficially, these trends reaffirm Middle Archaic culture histories that suggest site distributions are adaptations to the changing environmental conditions of the Holocene Climatic Optimum, and specifically the retraction of *Quercus* and *Carya* into the Piedmont with the corresponding proliferation of *Pinus* in the Coastal Plain (Figure 4.28) (Delcourt and Delcourt 1985; LaMoreaux 1999; LaMoreaux et al. 2009; Shah and Whitley 2009:48). Similar to Early Archaic predictors, weak habitat suitability regression scores necessitate alternative considerations of human decision-making regarding settlement choice.

Late Archaic GiZ score regressions against fossil pollen and fossil pollen with lithologic unit GiZ scores at 5000BP, 4000BP, and 3000BP produced weak linear and polynomial correlations across all habitat types in all millennia (Figures 4.56 and 4.57, Table 4.7). Although r^2 values for all pollen and pollen with lithologic unit GiZ scores were weak, *p*-values for fossil pollen suitability clusters at 5000BP and 4000BP were significant (less than 0.05) for both linear and polynomial regressions. Similarly, *p*-values for linear regression pollen and lithologic unit GiZ scores were also significant at both 5000BP and 4000BP. The highest 'goodness of fit' between site clusters and habitat suitability clusters occurs between Late Archaic site clusters and fossil pollen with lithologic units using linear regression, although all polynomial regressions for fossil pollen habitat suitability clusters produced significant *p*-values. By 3000BP, correlation coefficients are weak (less than 0.33) and all *p*-values are high (greater than 0.05), indicating there is no statistical relationship between site clusters and habitat suitability clusters at 3000BP for any palimpsest Late Archaic settlement pattern configuration.

Summary

In this chapter I presented the results of macrophysical climate modeling across seven weather stations within and around the watershed study area, and demonstrated

that the outputs of the model are consistent with the climate history of the interior Coastal Plain. I used the outputs of the climate models to calculate net primary productivity (NPP) at time-averaged millennial intervals and archaeological periods. NPP estimates were highest (sometimes exceeding the saturation threshold of the model) during the Bølling-Allerød interstadial and the earliest millennium of the Early Holocene, both of which were periods of high-amplitude climatic fluctuation across the Southeast. NPP decreased across the Coastal Plain from the Late Paleoindian period through the Middle Archaic, and increased slightly during the Late Archaic. These NPP fluctuations are consistent with the transition from mixed deciduous forests to monodominant *Pinus* across the Coastal Plain, and the decline in frequency among mixed deciduous taxa. I calculated hotspot clusters of both habitat suitabilities and archaeological sites, and used both in a series of regression analyses to identify correlations between archaeological site locations and high quality habitats. In the next chapter, I consider the environmental and archaeological variables together and revisit the optimality assumptions of ideal free distribution modeling to interpret hunter-gatherer settlement patterns in the interior Coastal Plain.

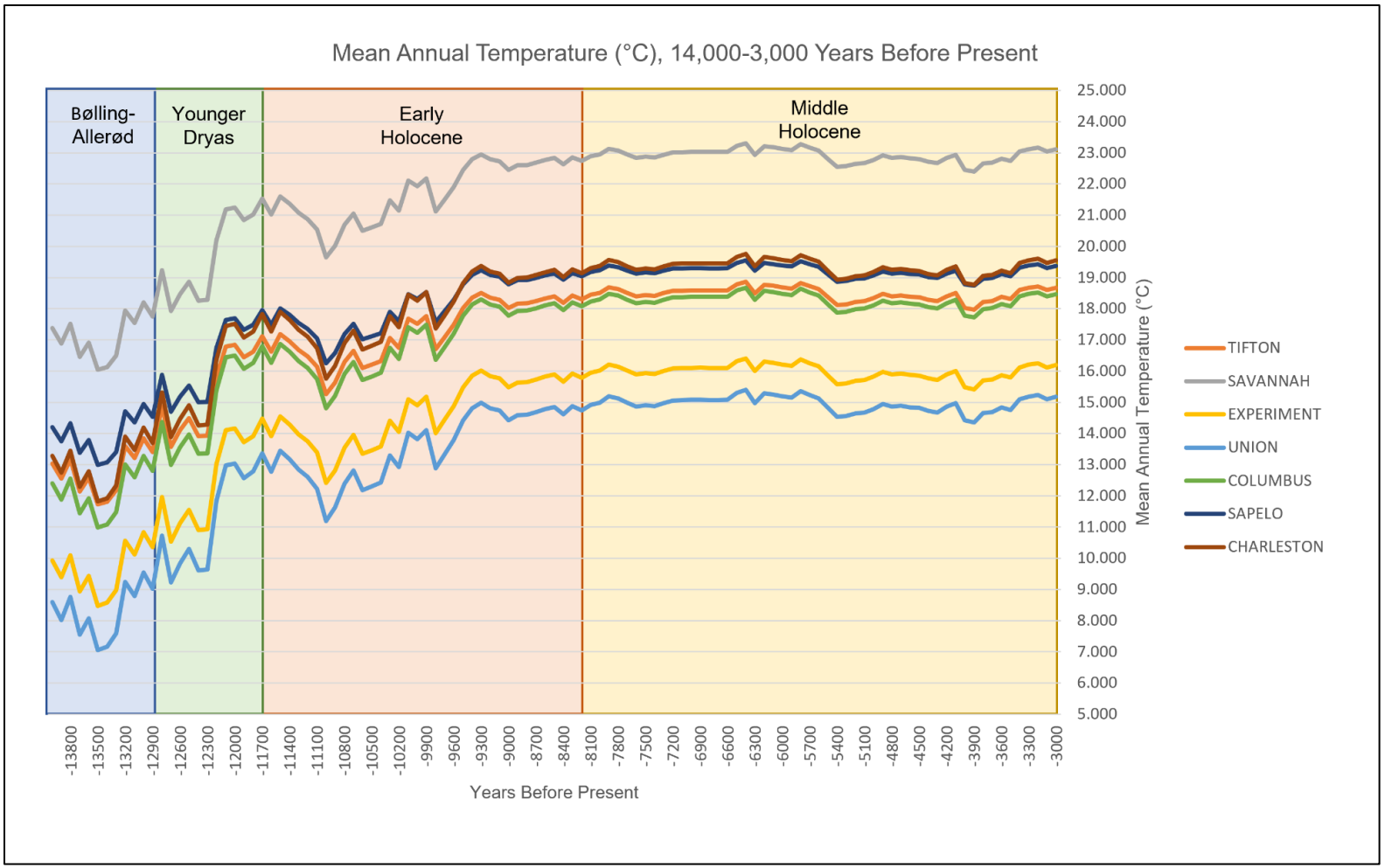

Figure 4.1: MCM outputs comparing seven targeted weather stations in the study area. Graph measures mean annual temperature fluctuations (°C) from 14,000 to 3,000 years before present. Global climate event durations are color blocked and labeled behind the graphed data.

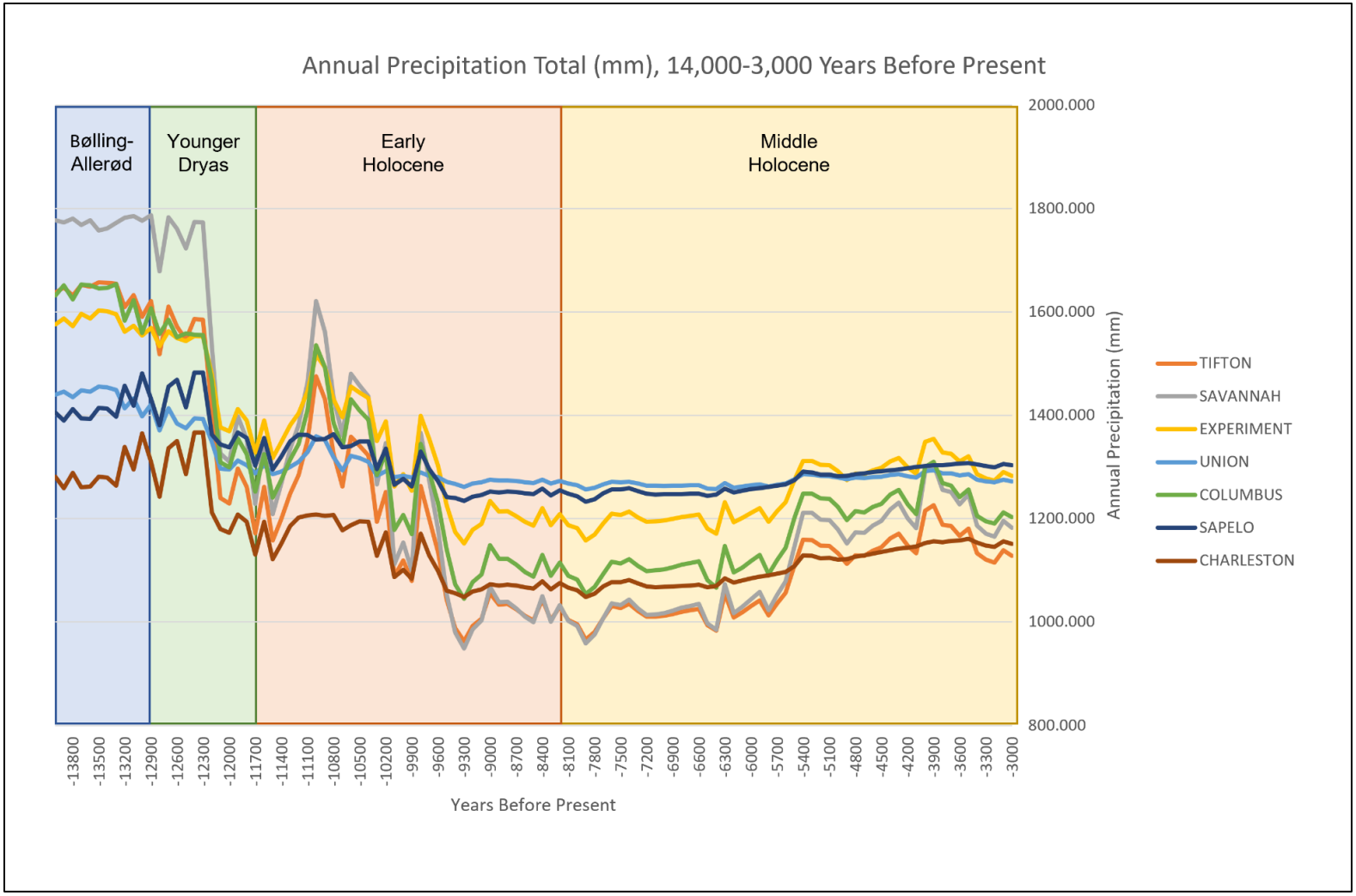

Figure 4.2: MCM outputs comparing seven targeted weather stations in the study area. Graph measures annual cumulative precipitation fluctuations (mm) from 14,000 to 3,000 years before present. Global climate event durations are color blocked and labeled behind the graphed data.

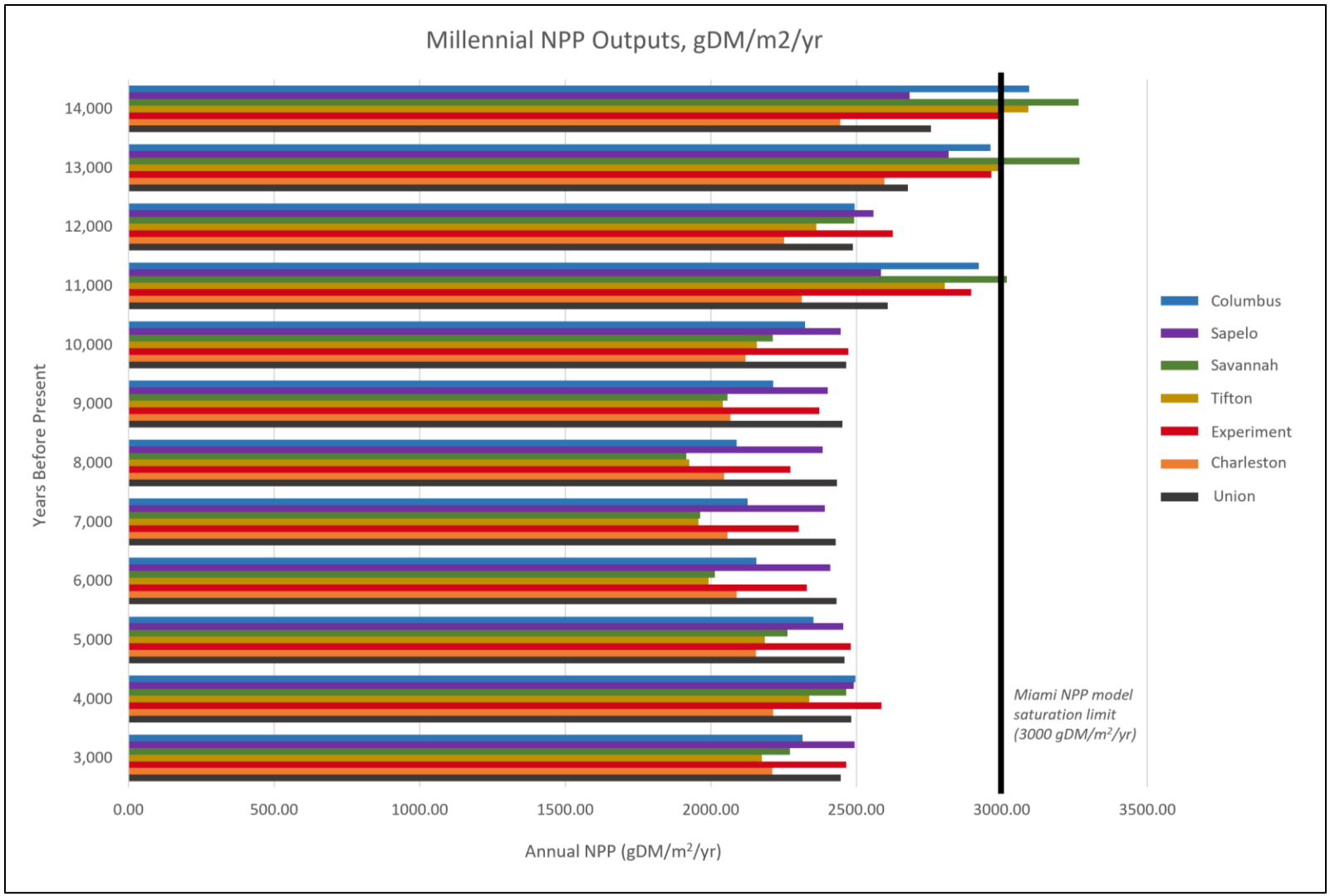

Figure 4.3: Time-averaged millennial net primary productivity (NPP) outputs for each weather station in the study area using the Miami model (Lieth 1972).

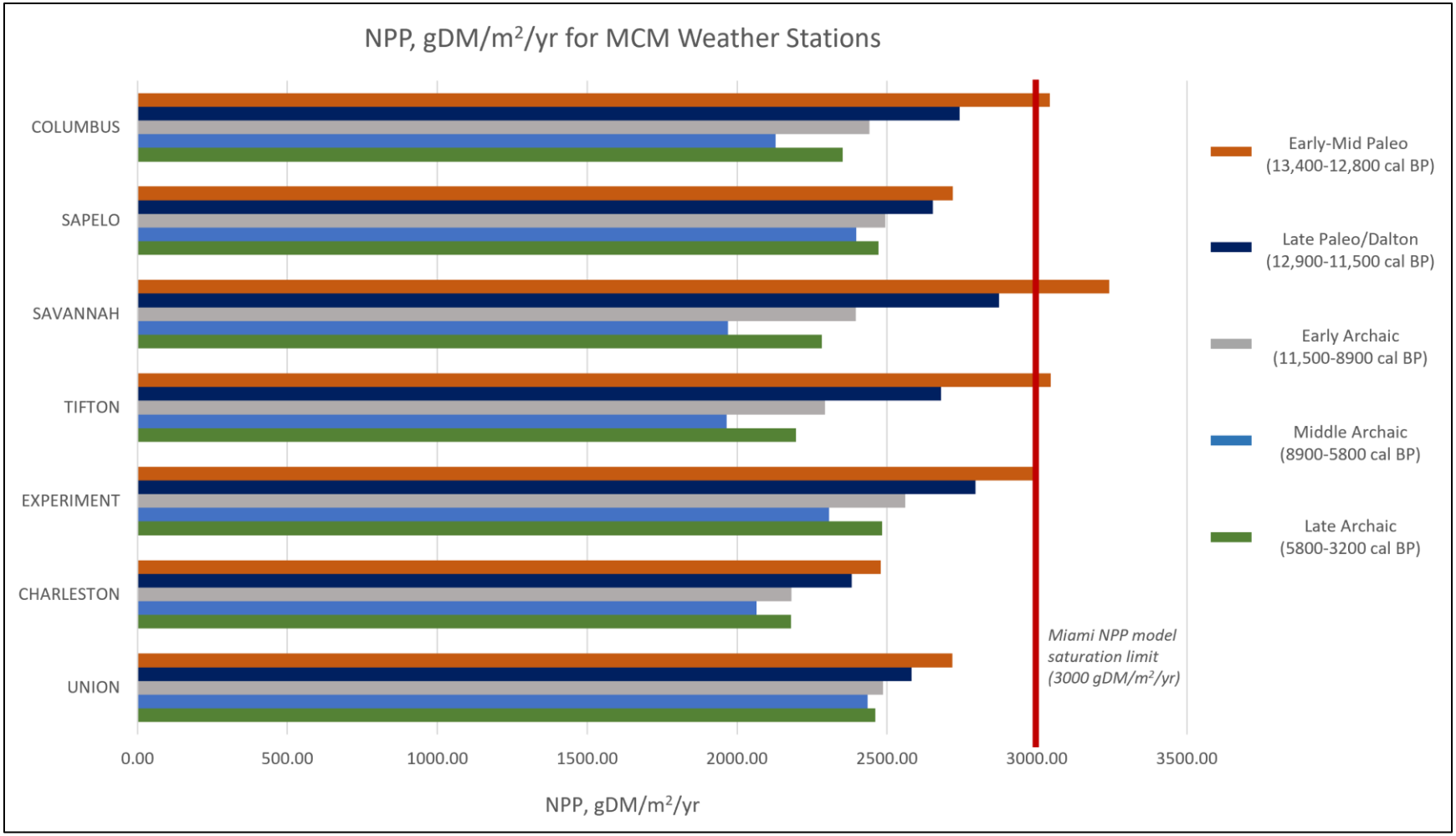

Figure 4.4: Time-averaged net primary productivity (NPP) estimates by major archaeological periods, rounded to the nearest century. NPP was calculated using the Miami model (Lieth 1972).

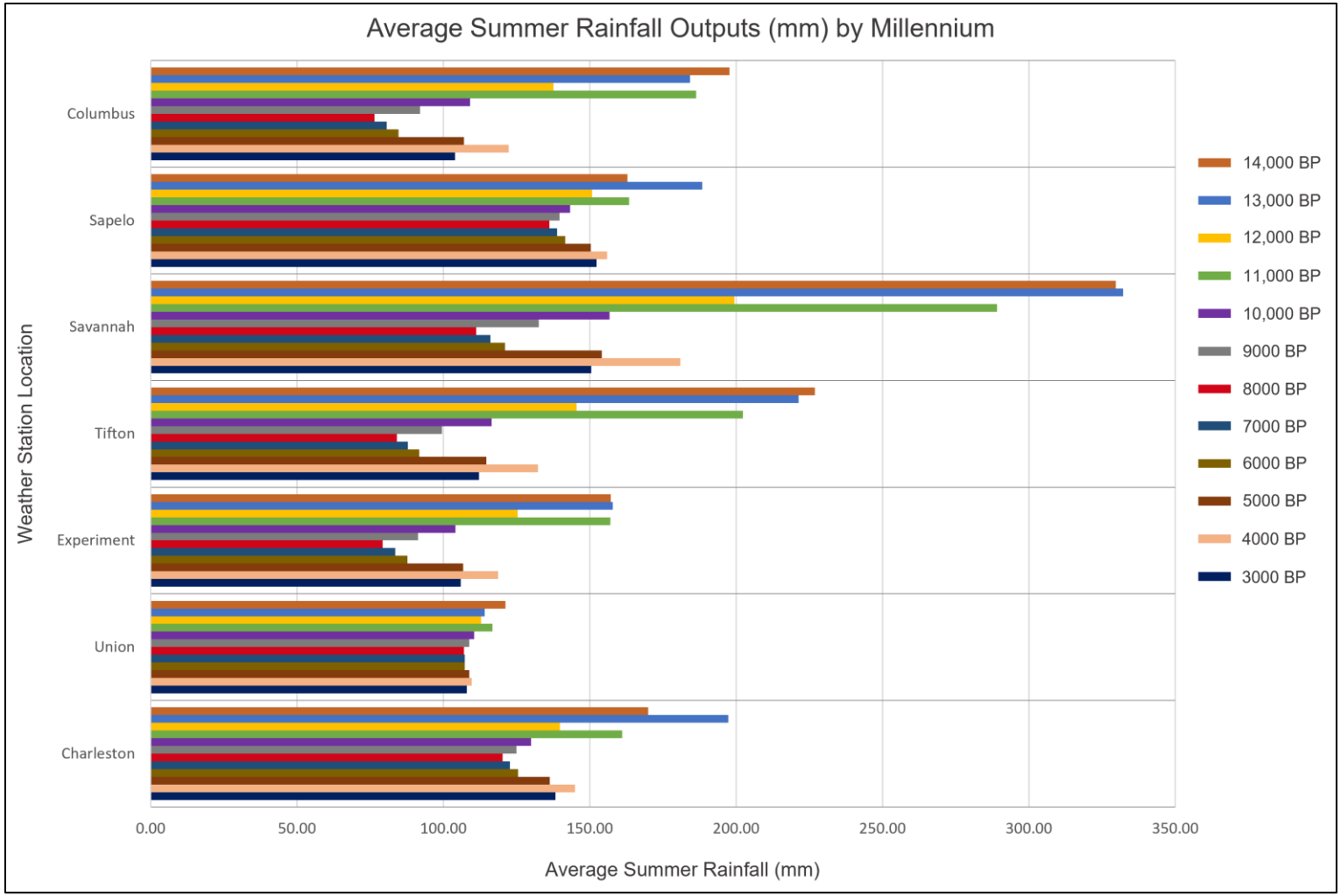

Figure 4.5: Average summer precipitation outputs (mm) for each weather station in the study area. Summer (June, July, August) precipitation was calculated as the average of three summer months, ostensibly the months with the highest average rainfall, for each millennium.

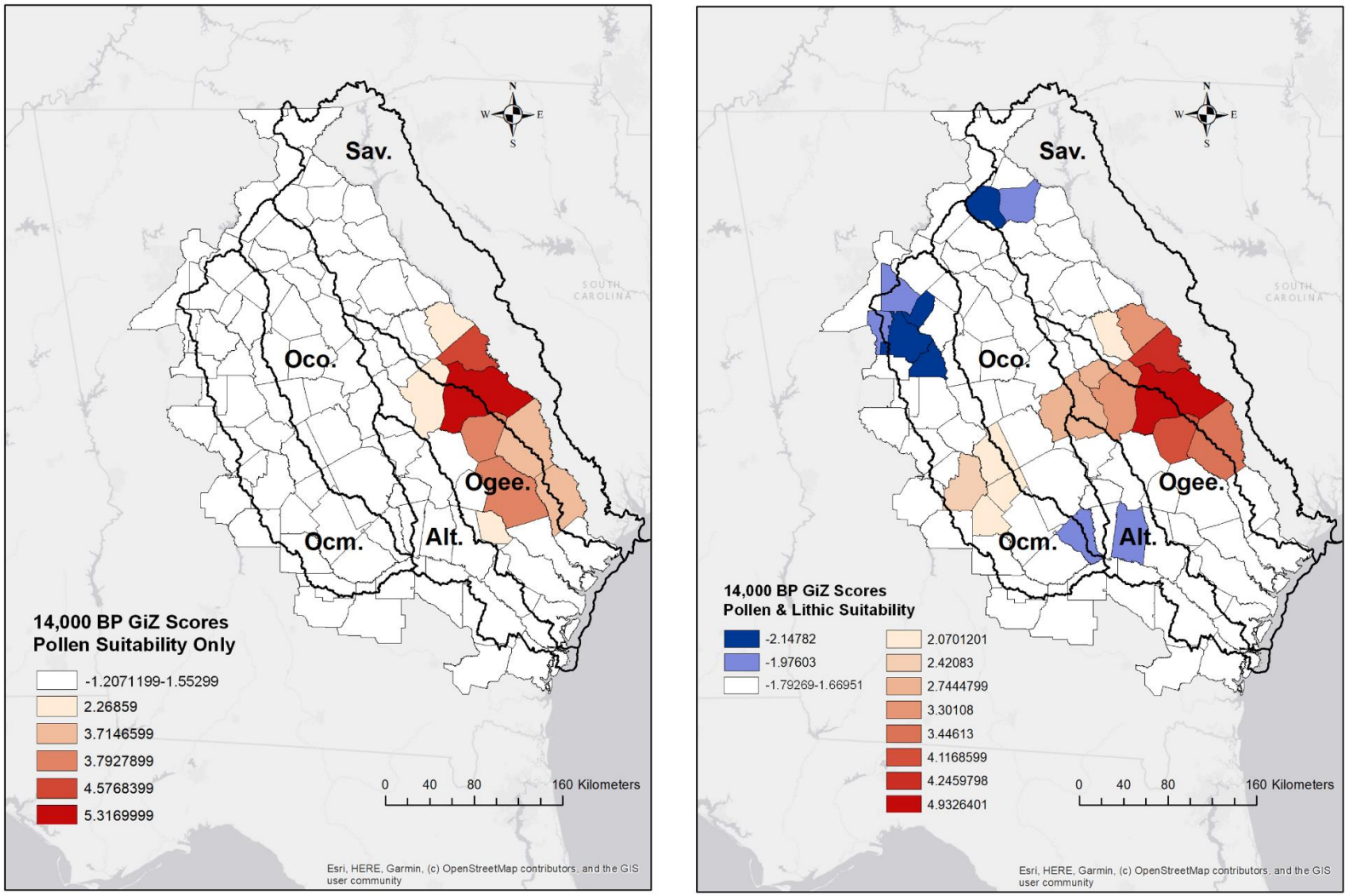

Figure 4.6: Habitat suitability GiZ scores at 14,000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

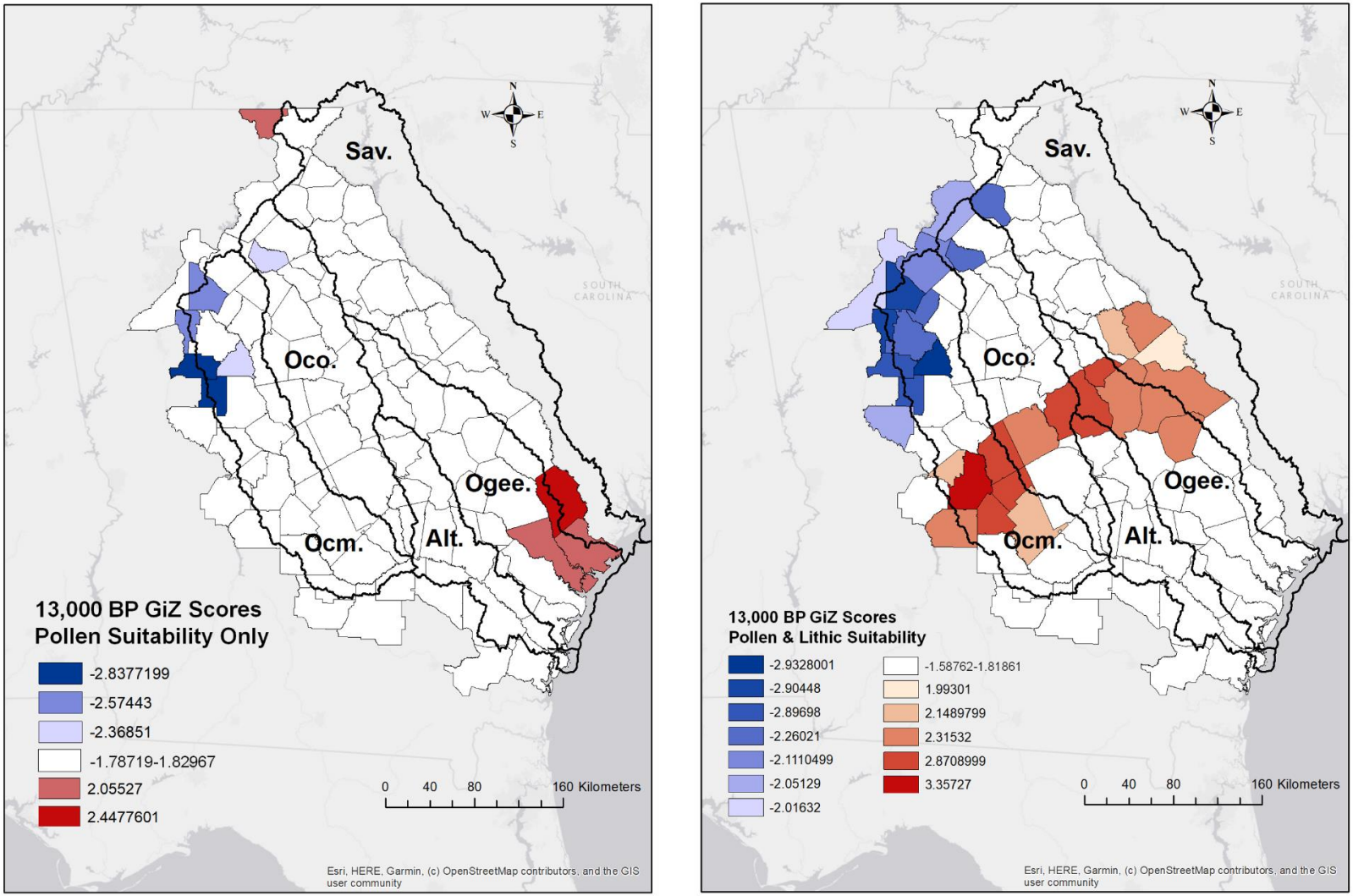

Figure 4.7: Habitat suitability GiZ scores at 13,000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

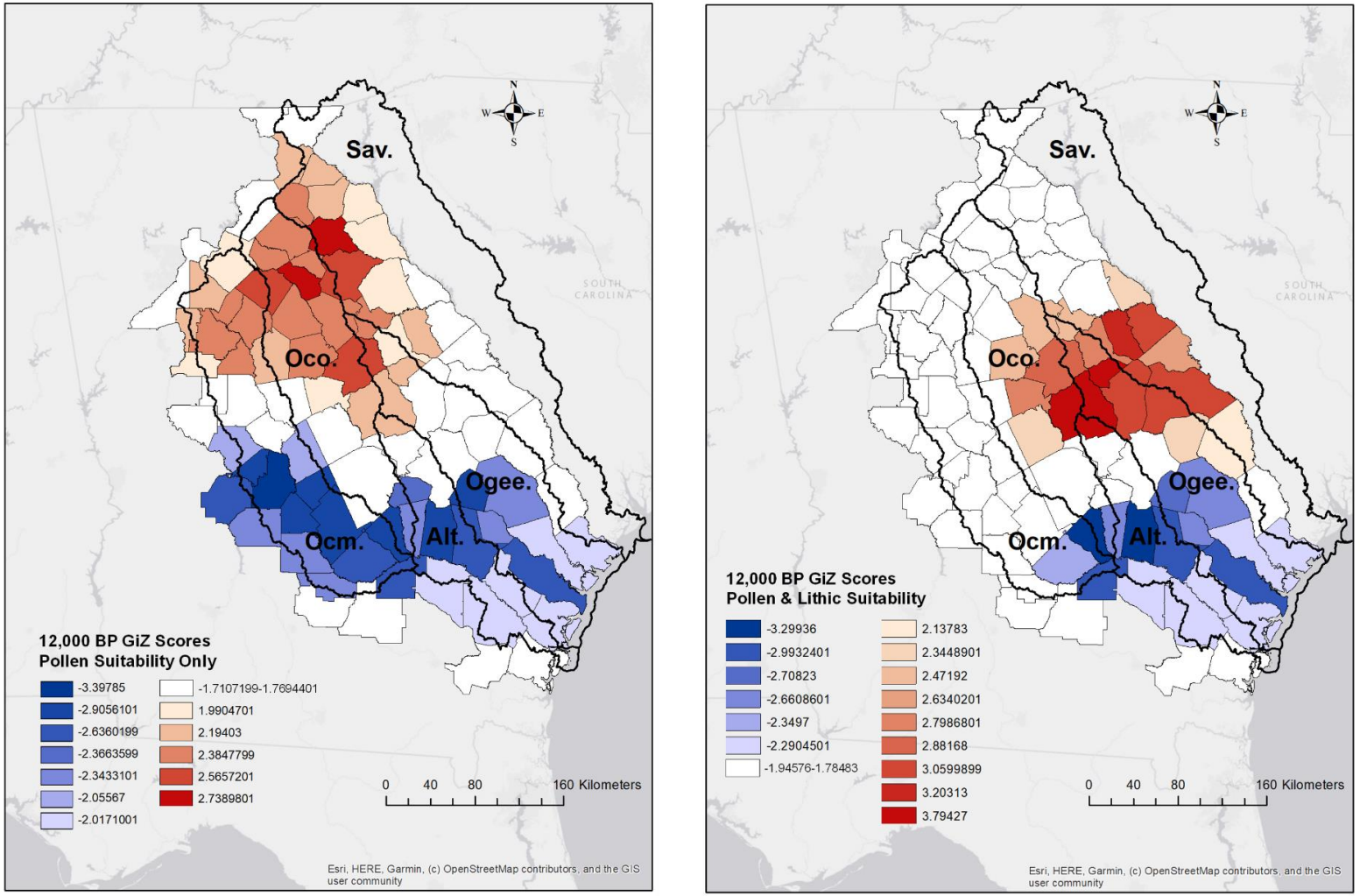

Figure 4.8: Habitat suitability GiZ scores at 12,000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

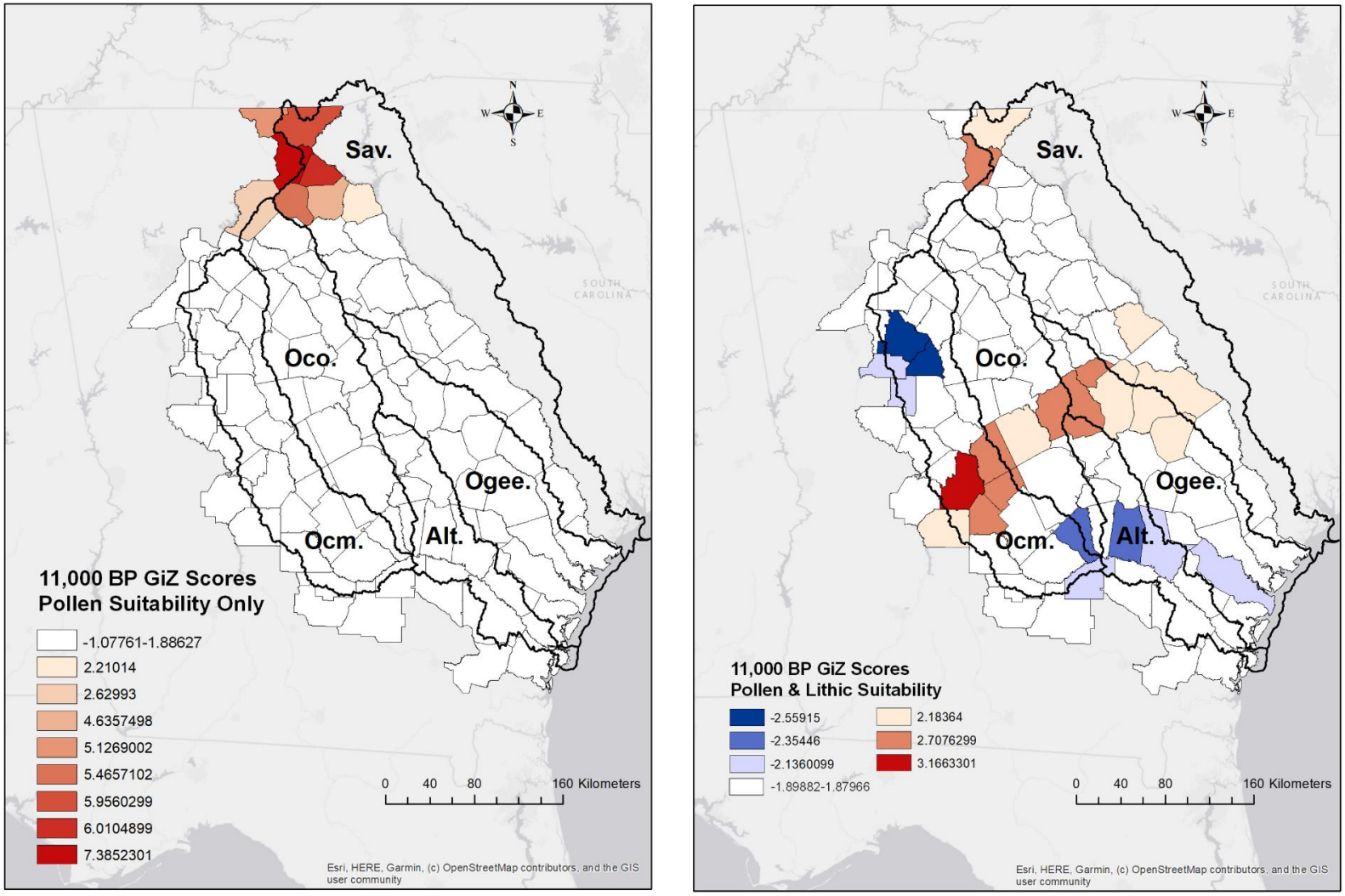

Figure 4.9: Habitat suitability GiZ scores at 11,000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

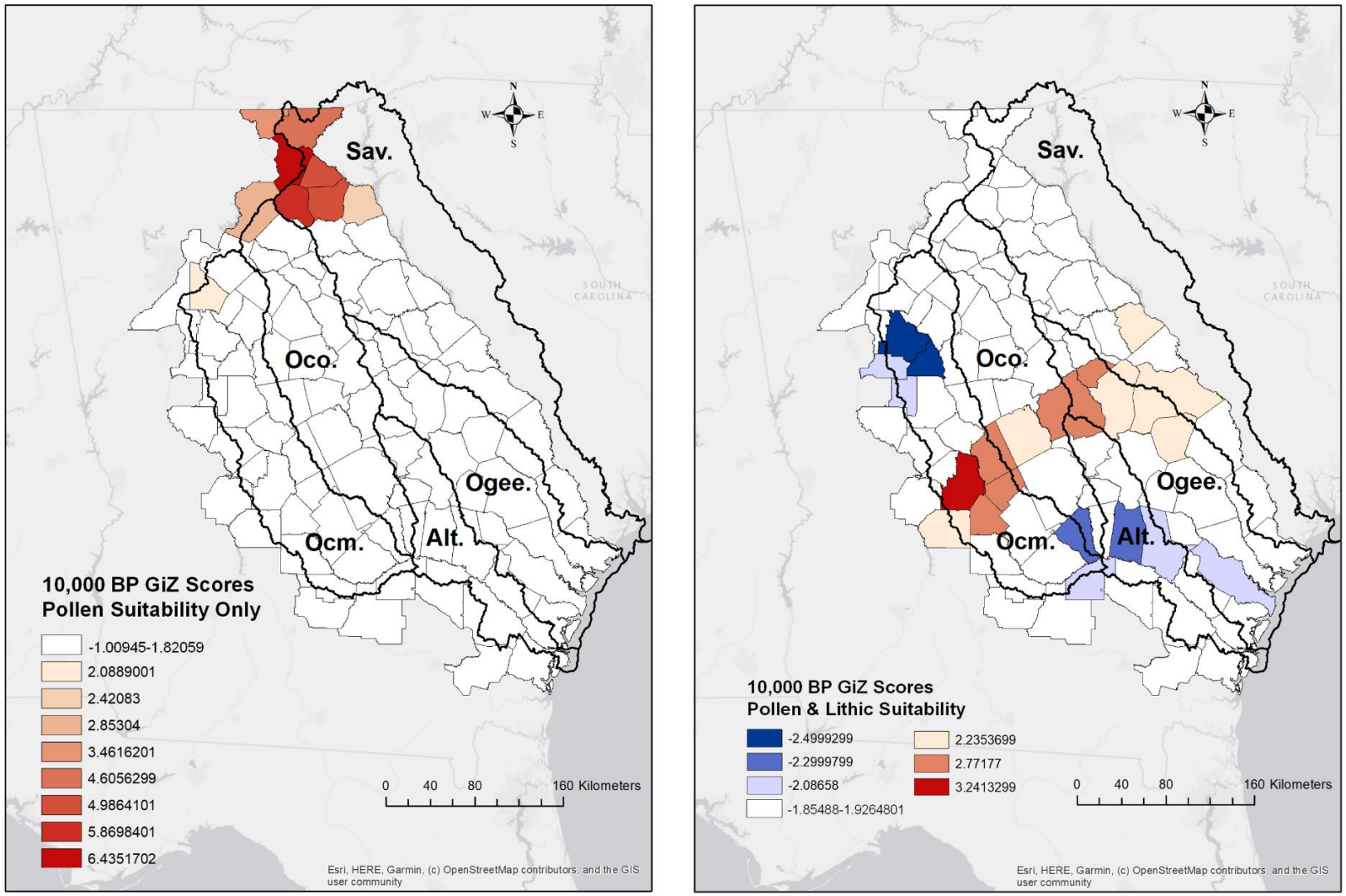

Figure 4.10: Habitat suitability GiZ scores at 10,000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

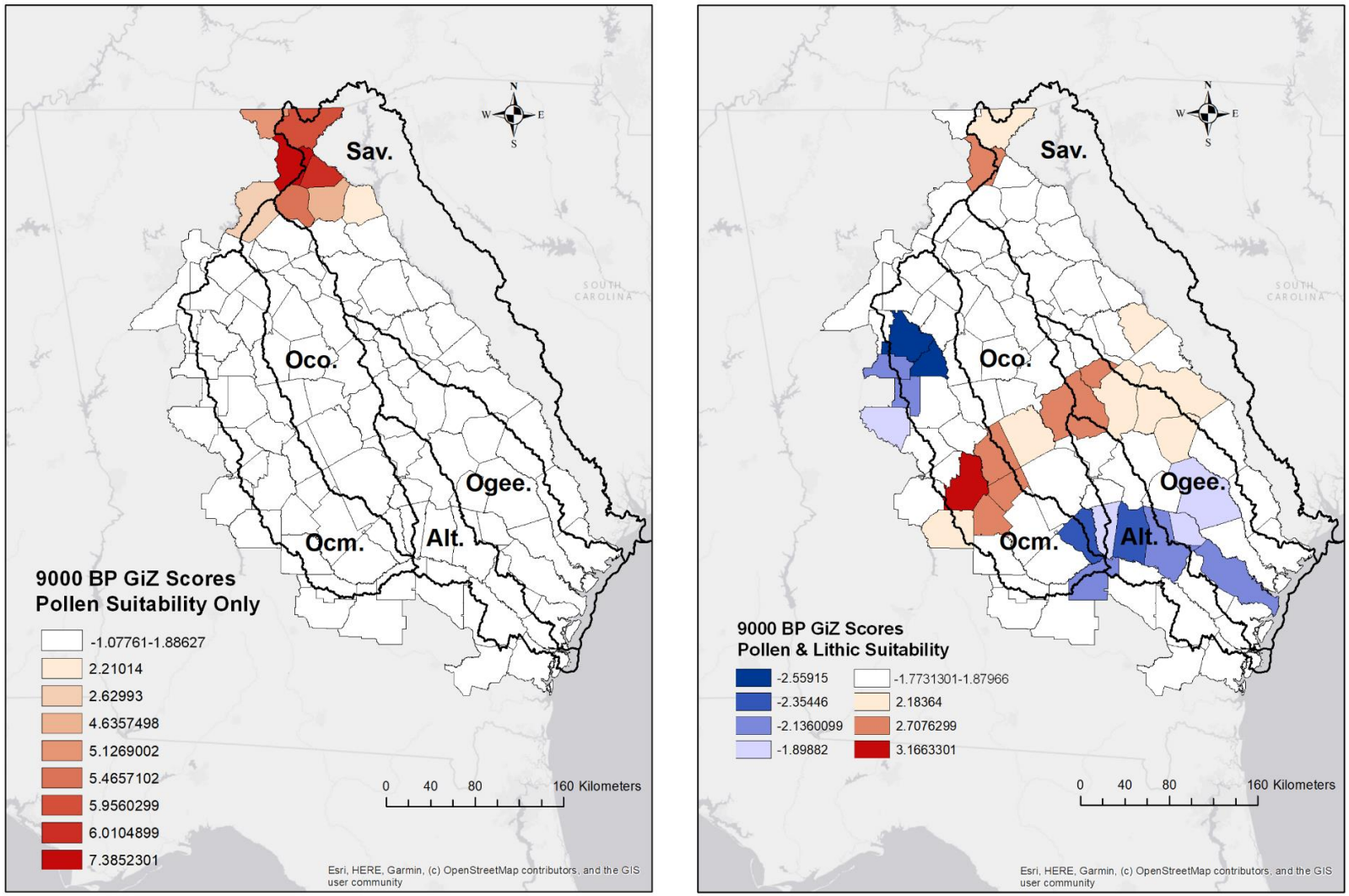

Figure 4.11: Habitat suitability GiZ scores at 9000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

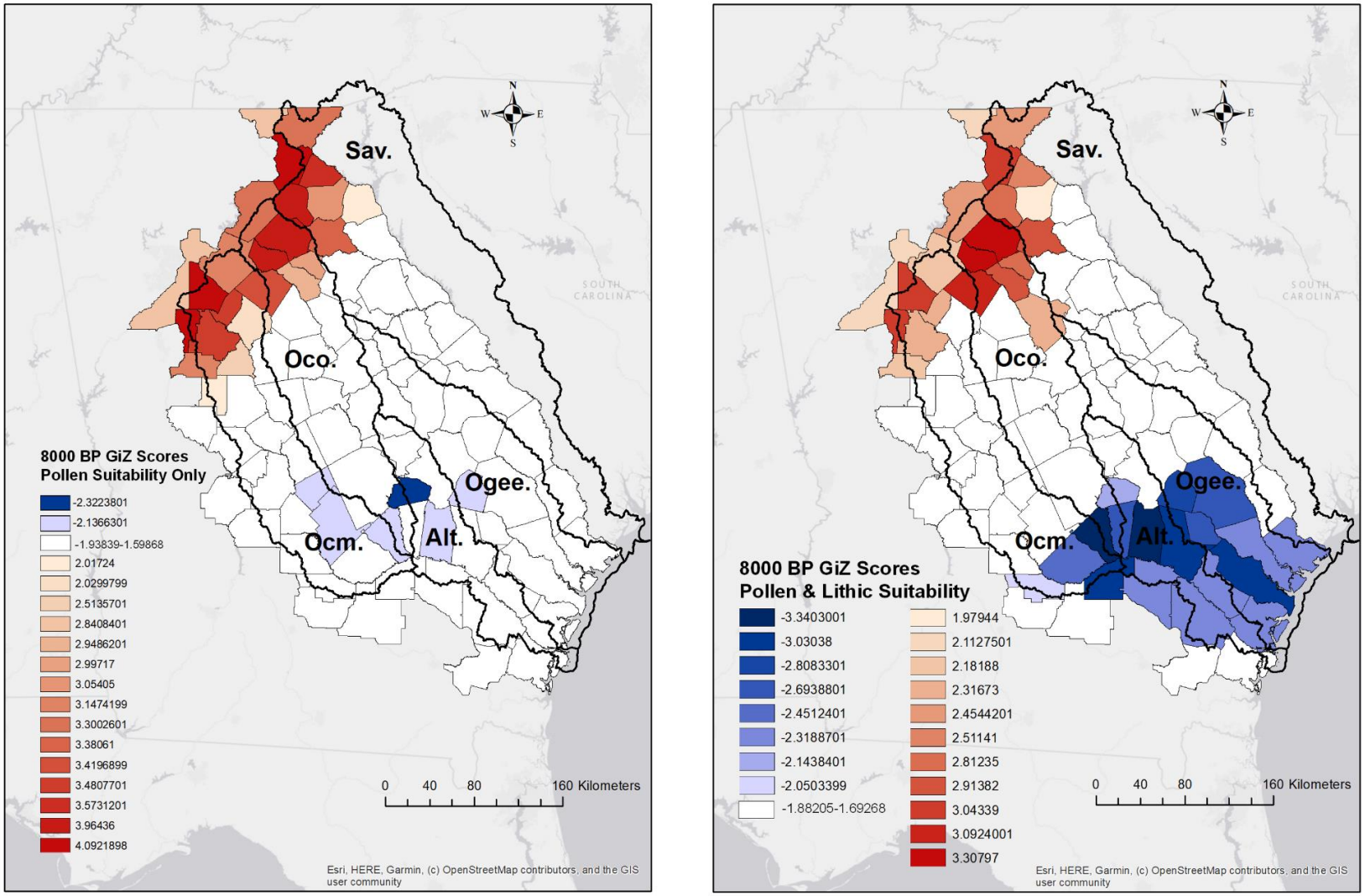

Figure 4.12: Habitat suitability GiZ scores at 8000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

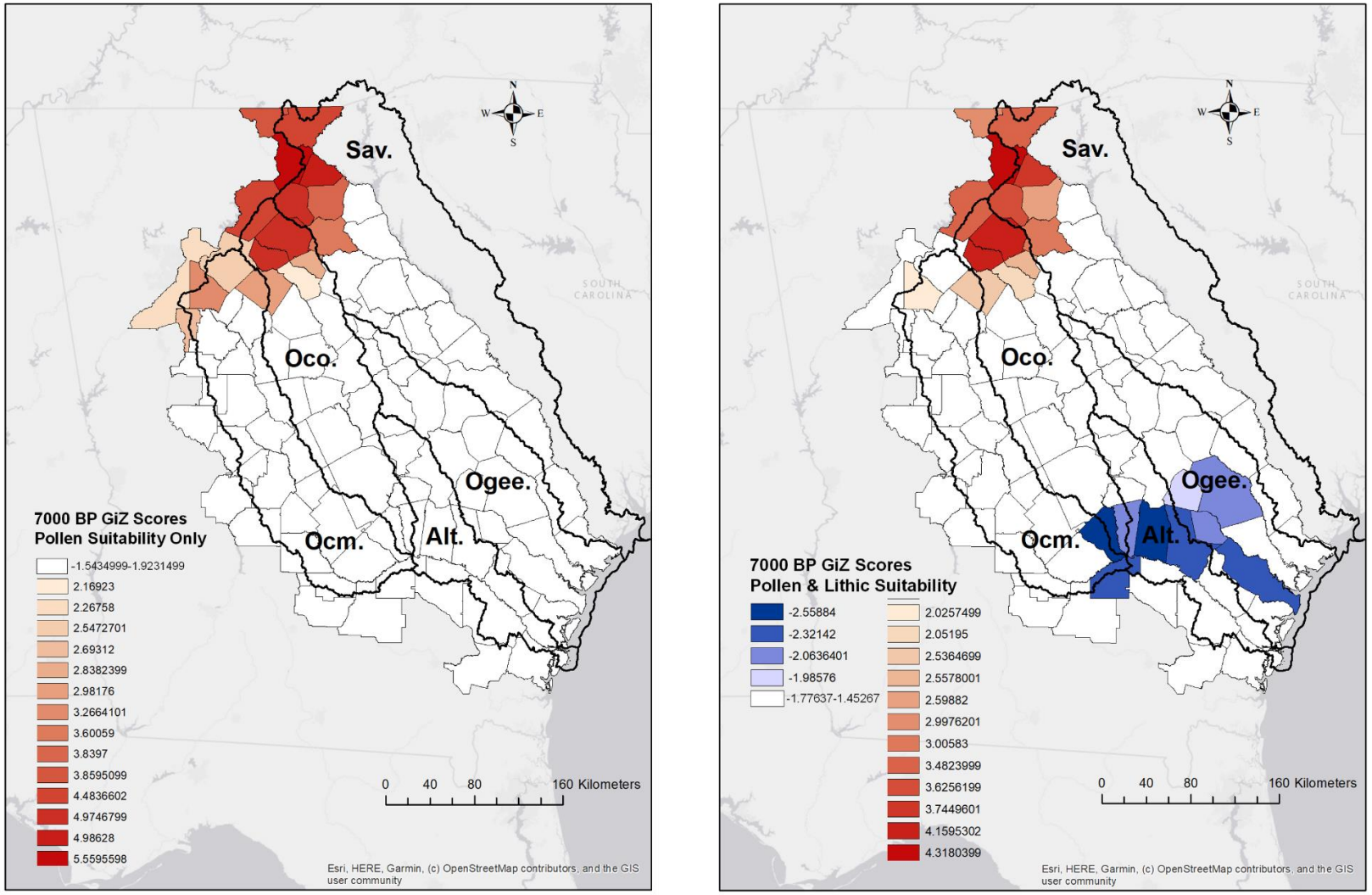

Figure 4.13: Habitat suitability GiZ scores at 7000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

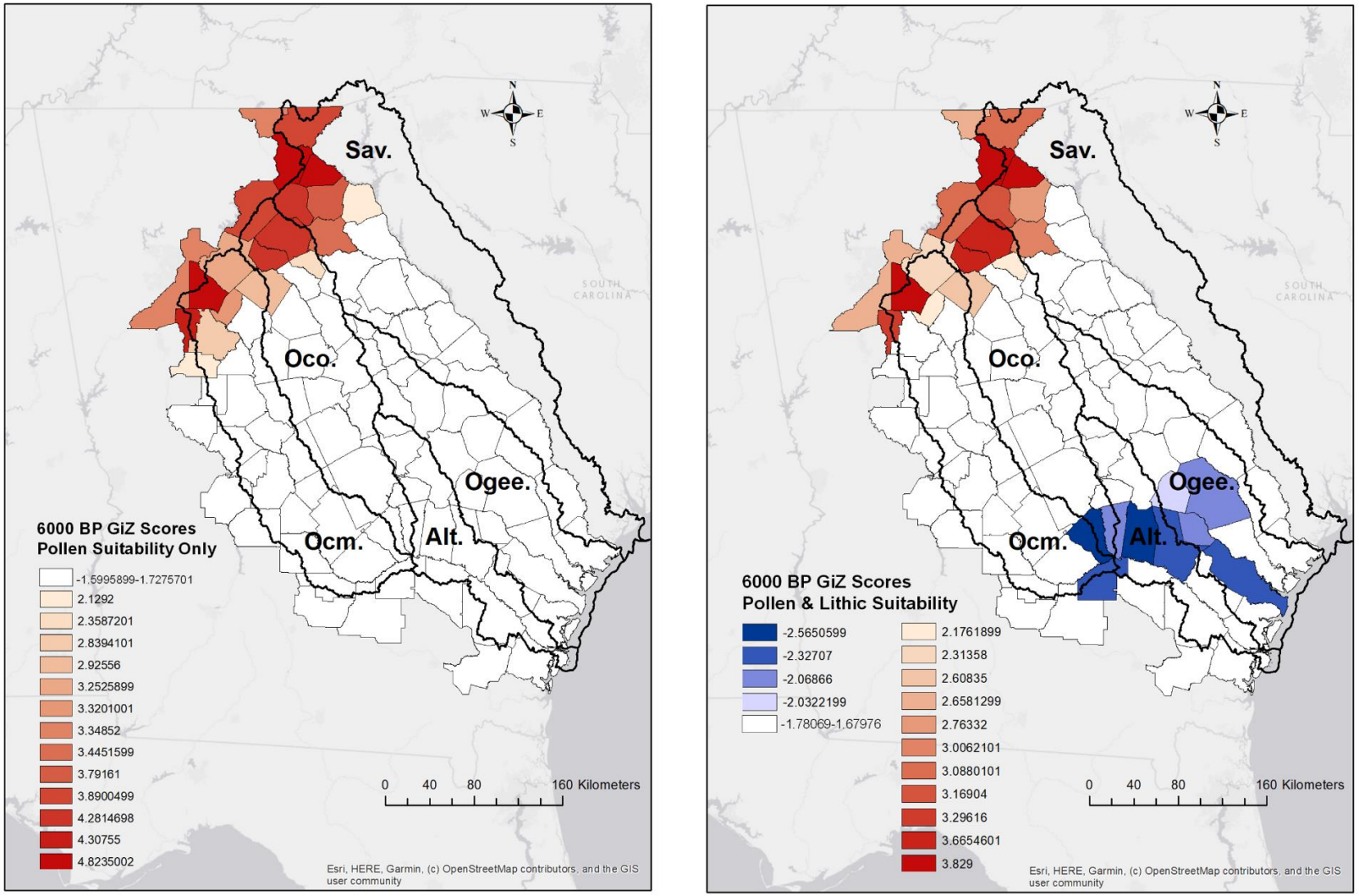

Figure 4.14: Habitat suitability GiZ scores at 6000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

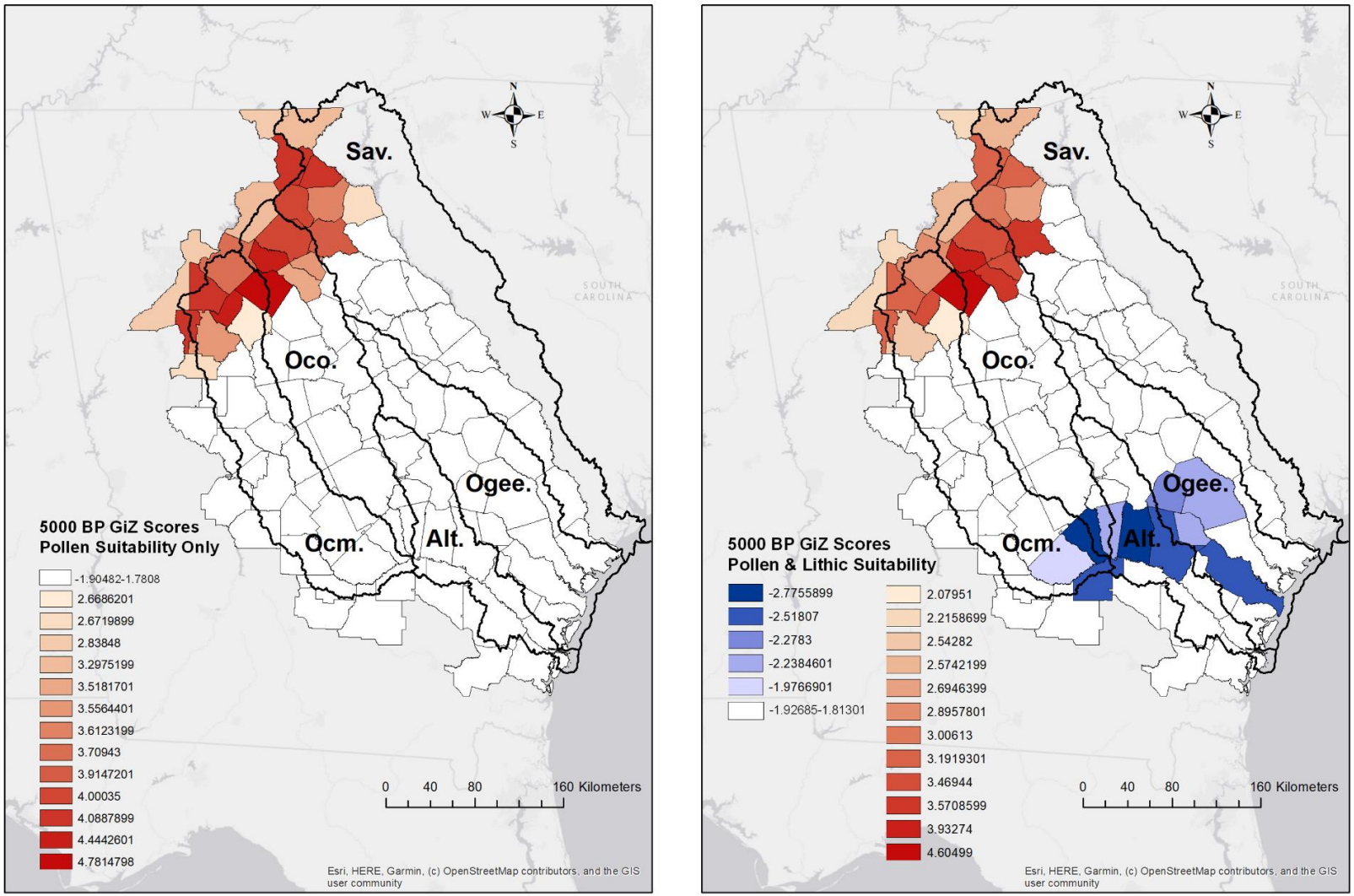

Figure 4.15: Habitat suitability GiZ scores at 5000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

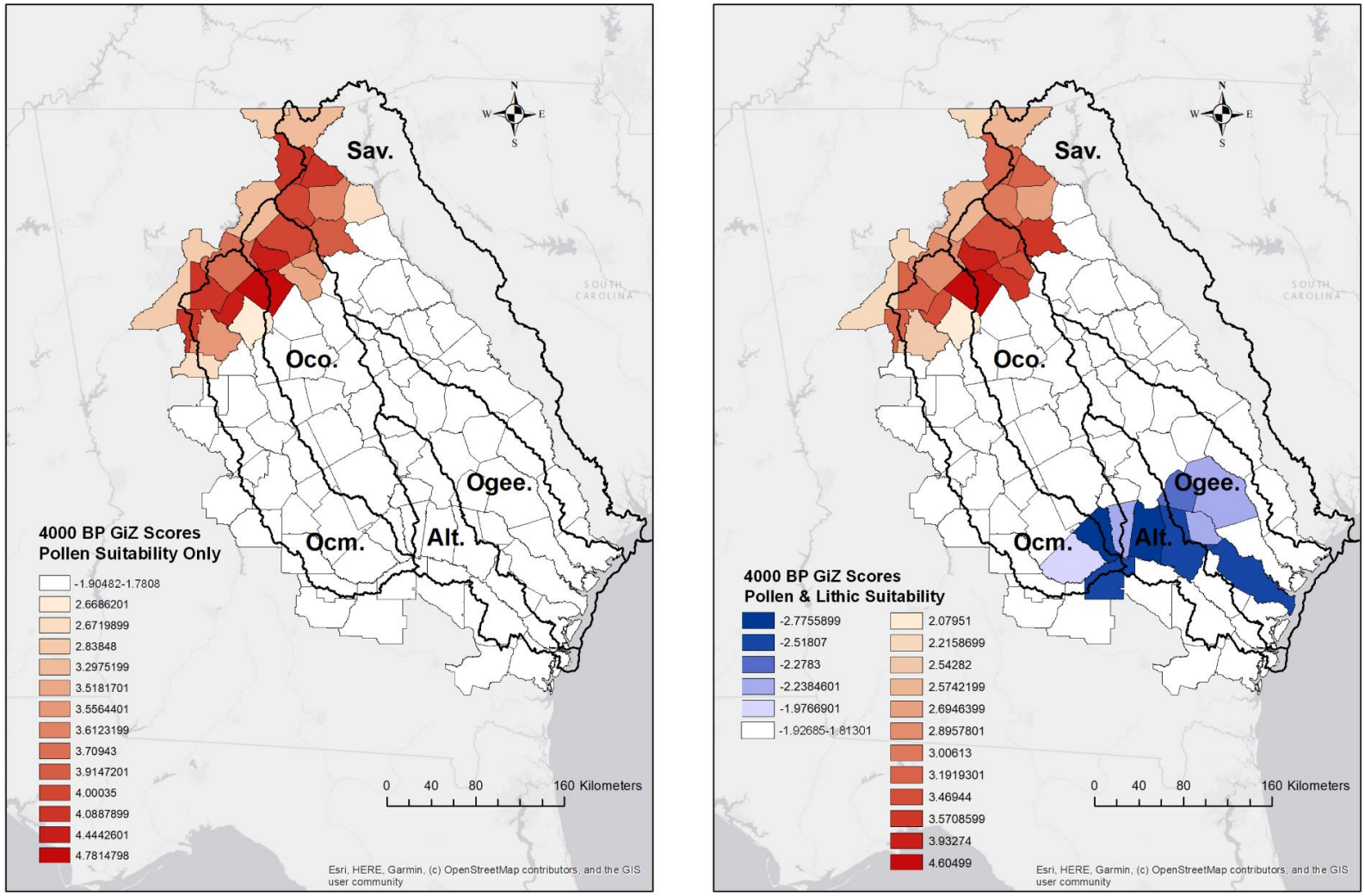

Figure 4.16: Habitat suitability GiZ scores at 4000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

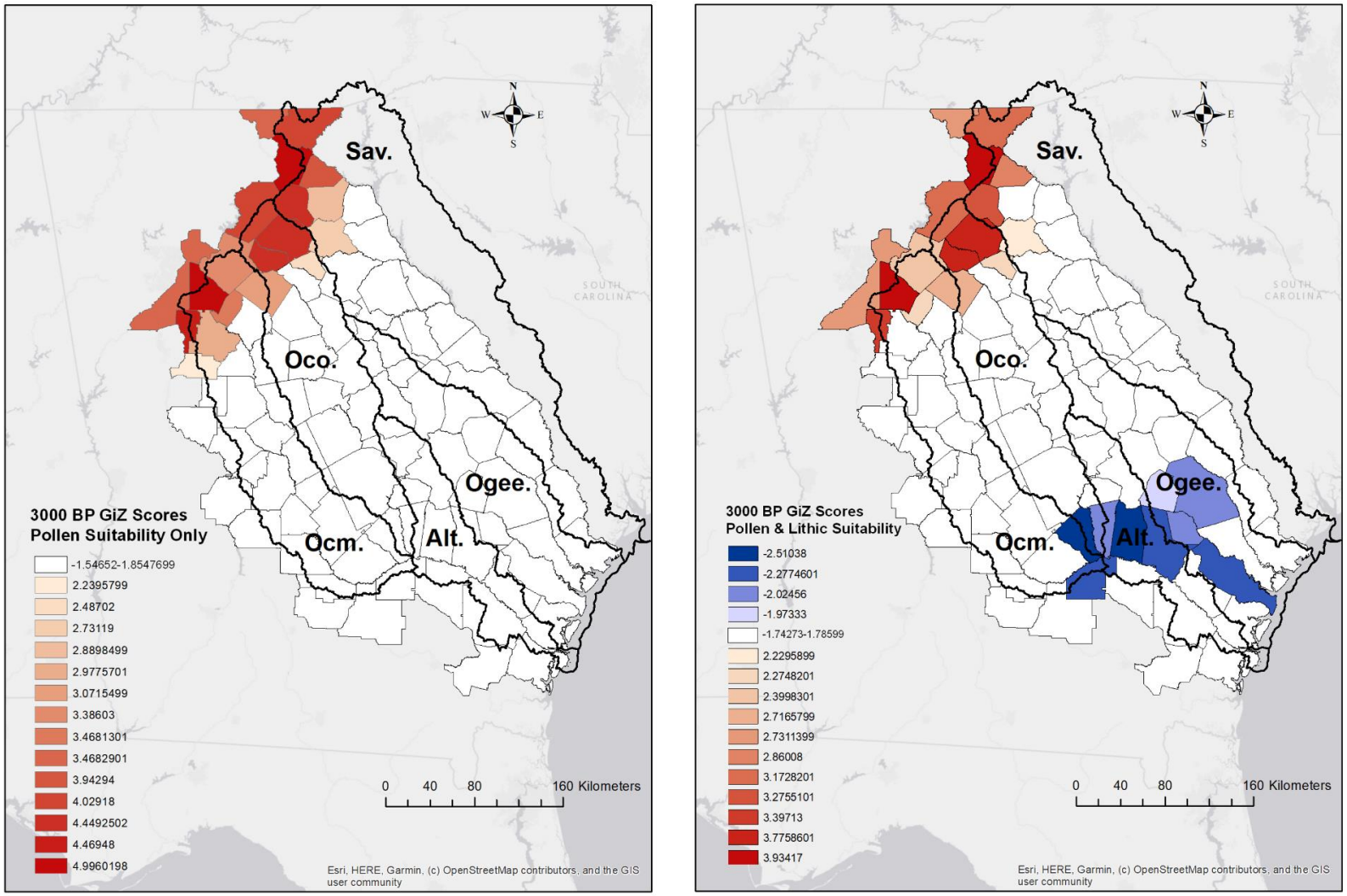

Figure 4.17: Habitat suitability GiZ scores at 3000BP generated for fossil pollen (left) and fossil pollen with added lithologic units (right).

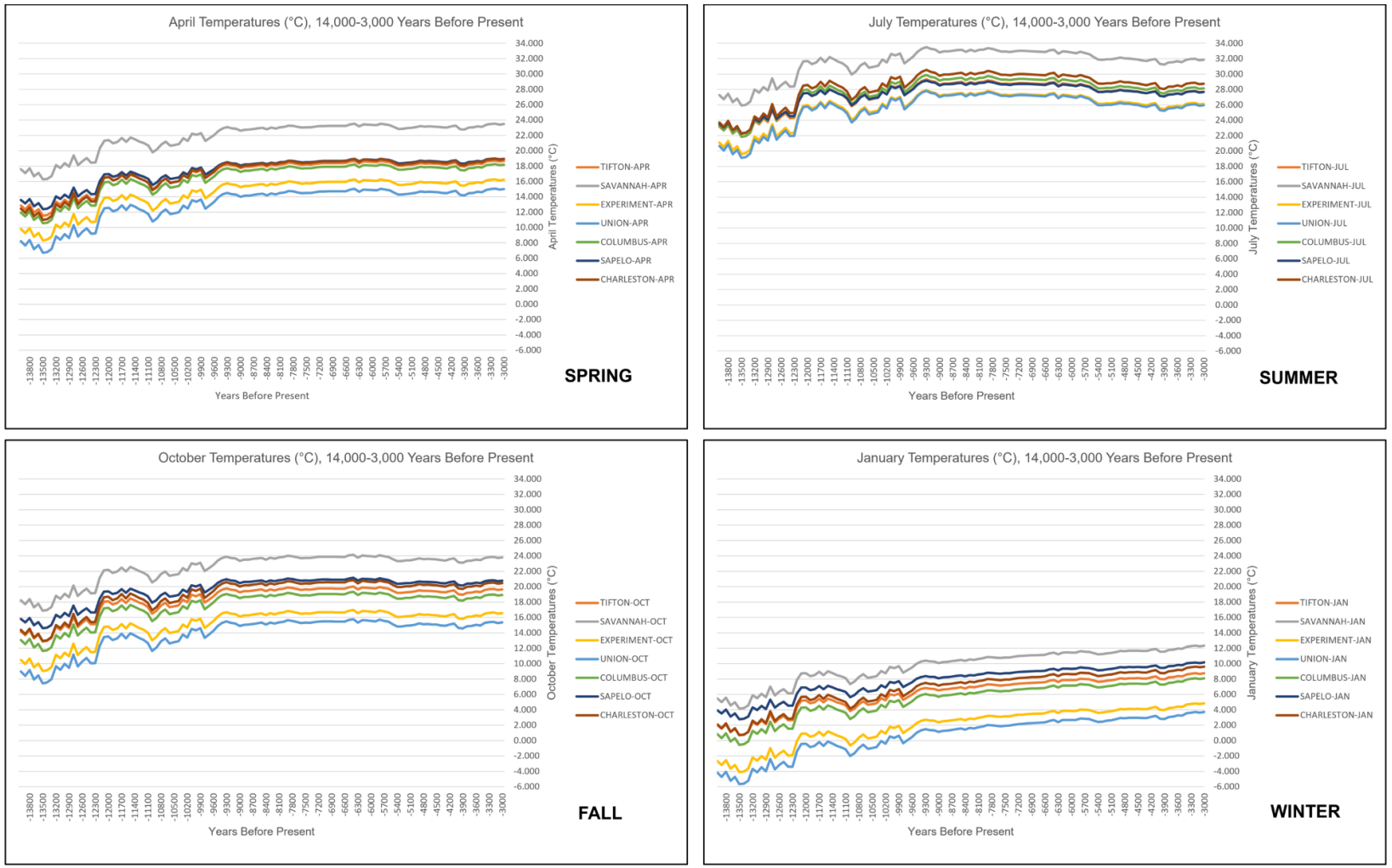

Figure 4.18: MCM outputs for seven weather stations displaying seasonal temperature variations based on annual minimum (January), maximum (July), and intervals between annual temperature minima and maxima (April and October).

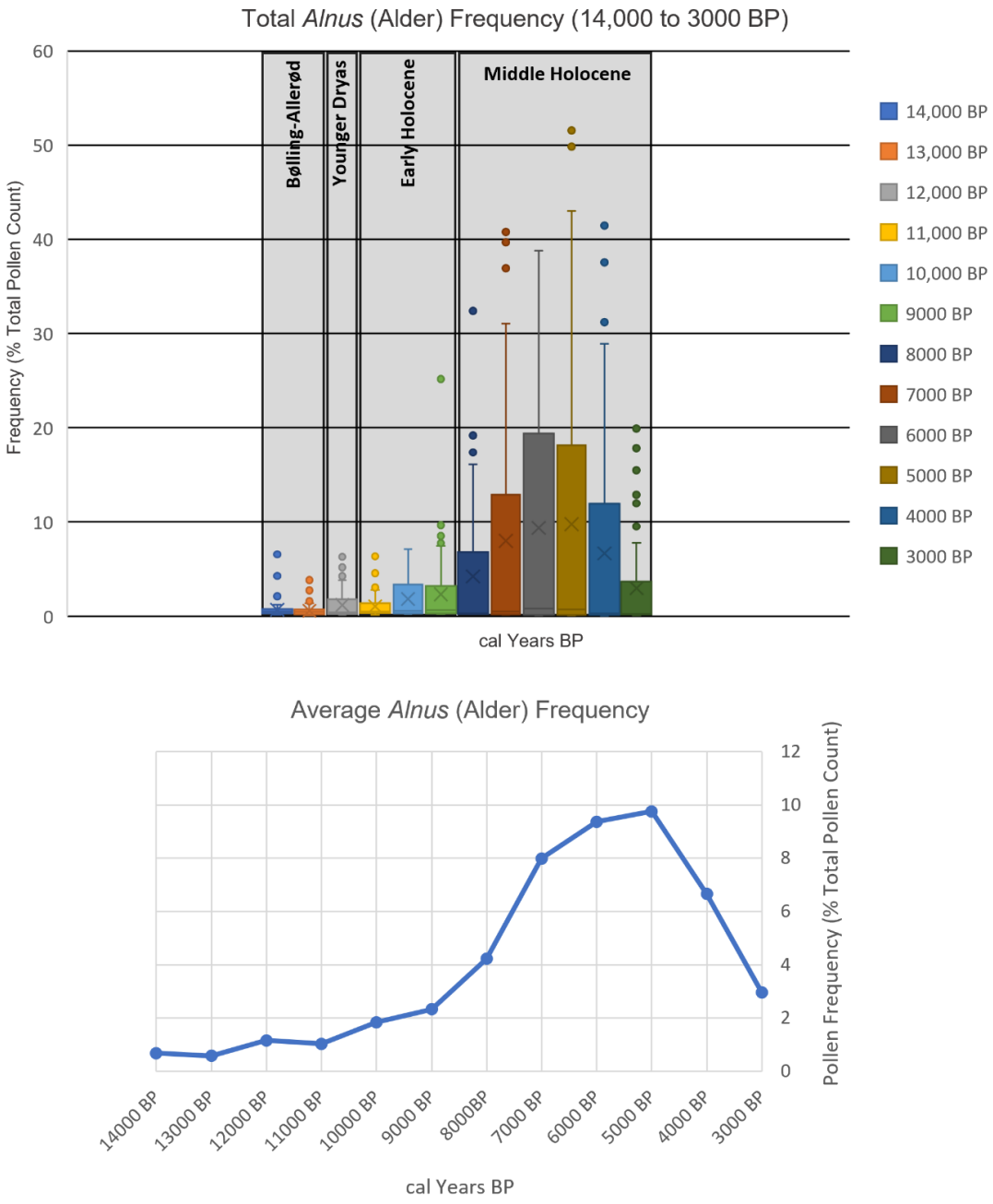

Figure 4.19: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Alnus* (alder) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

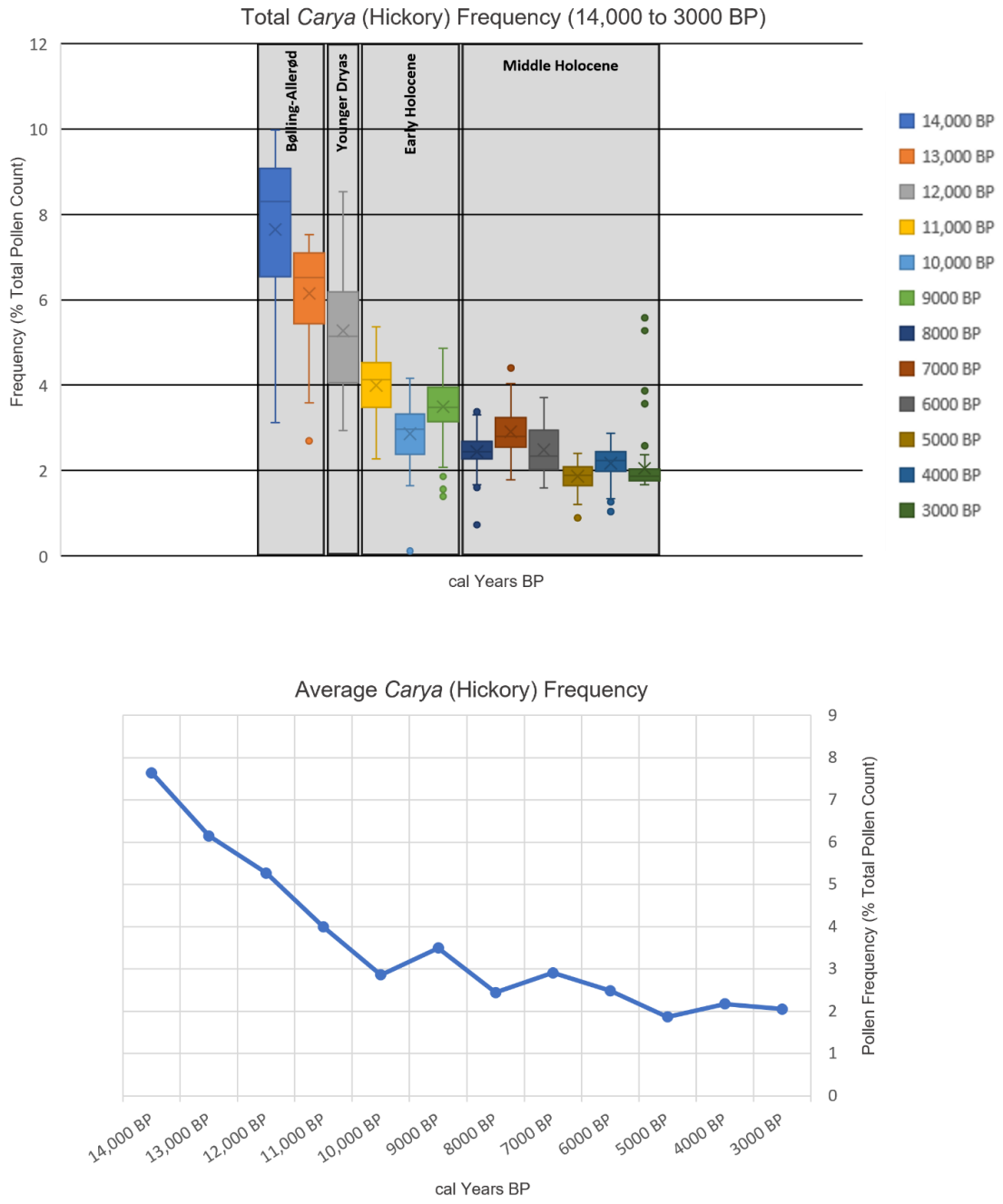

Figure 4.20: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Carya* (hickory) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

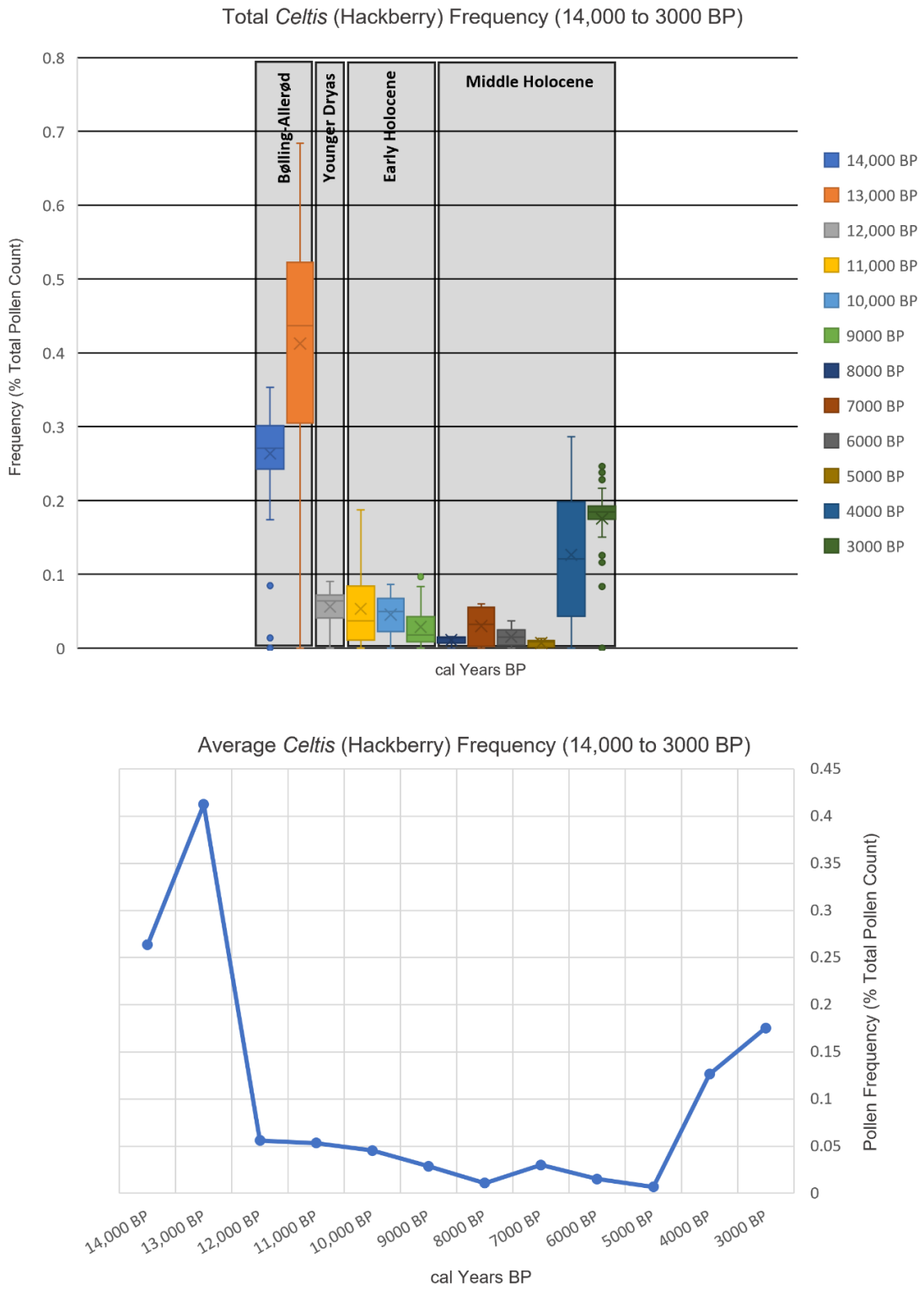

Figure 4.21: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Celtis* (hackberry) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

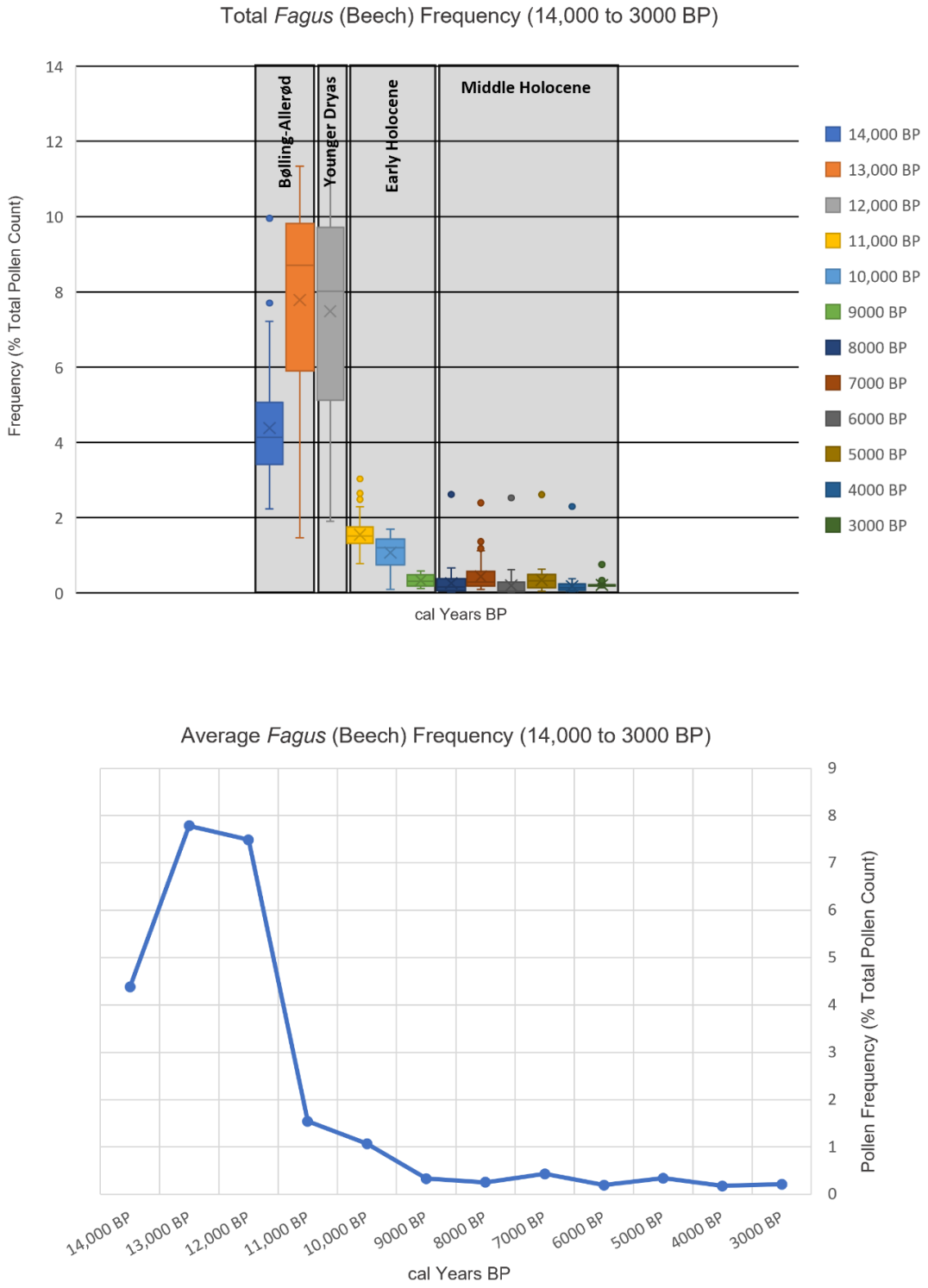

Figure 4.22: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Fagus* (beech) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

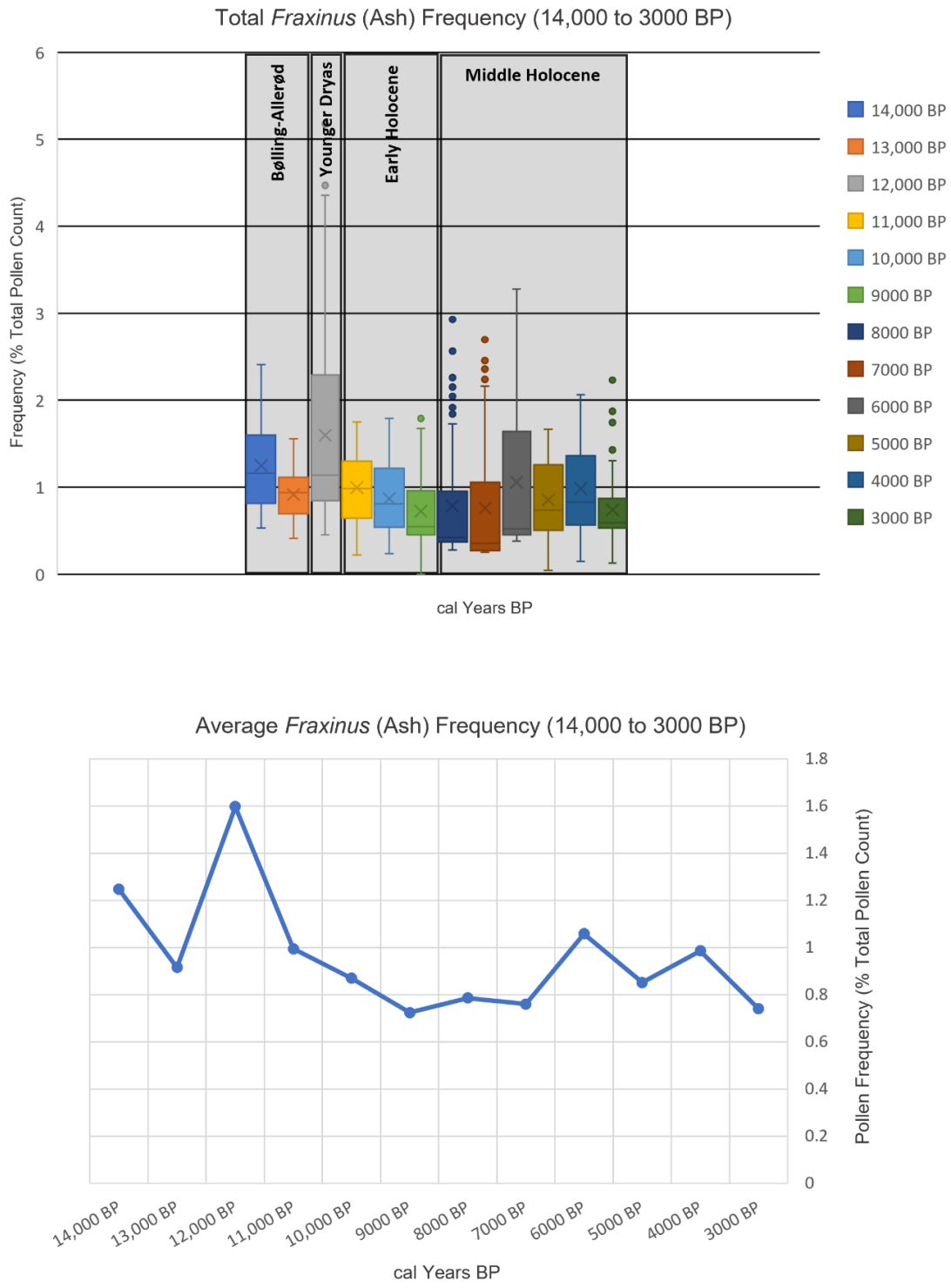

Figure 4.23: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Fraxinus* (ash) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

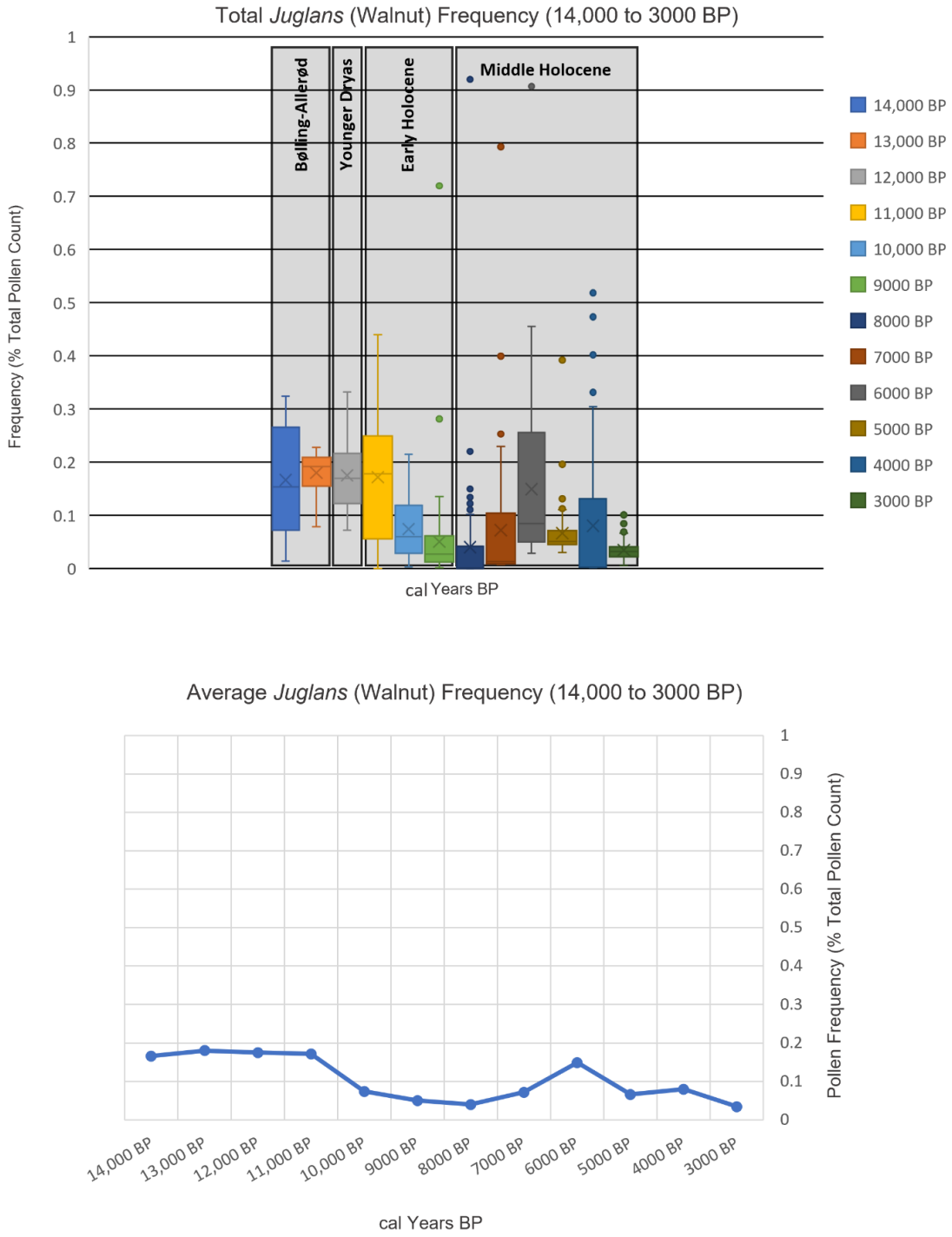

Figure 4.24: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Juglans* (walnut) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

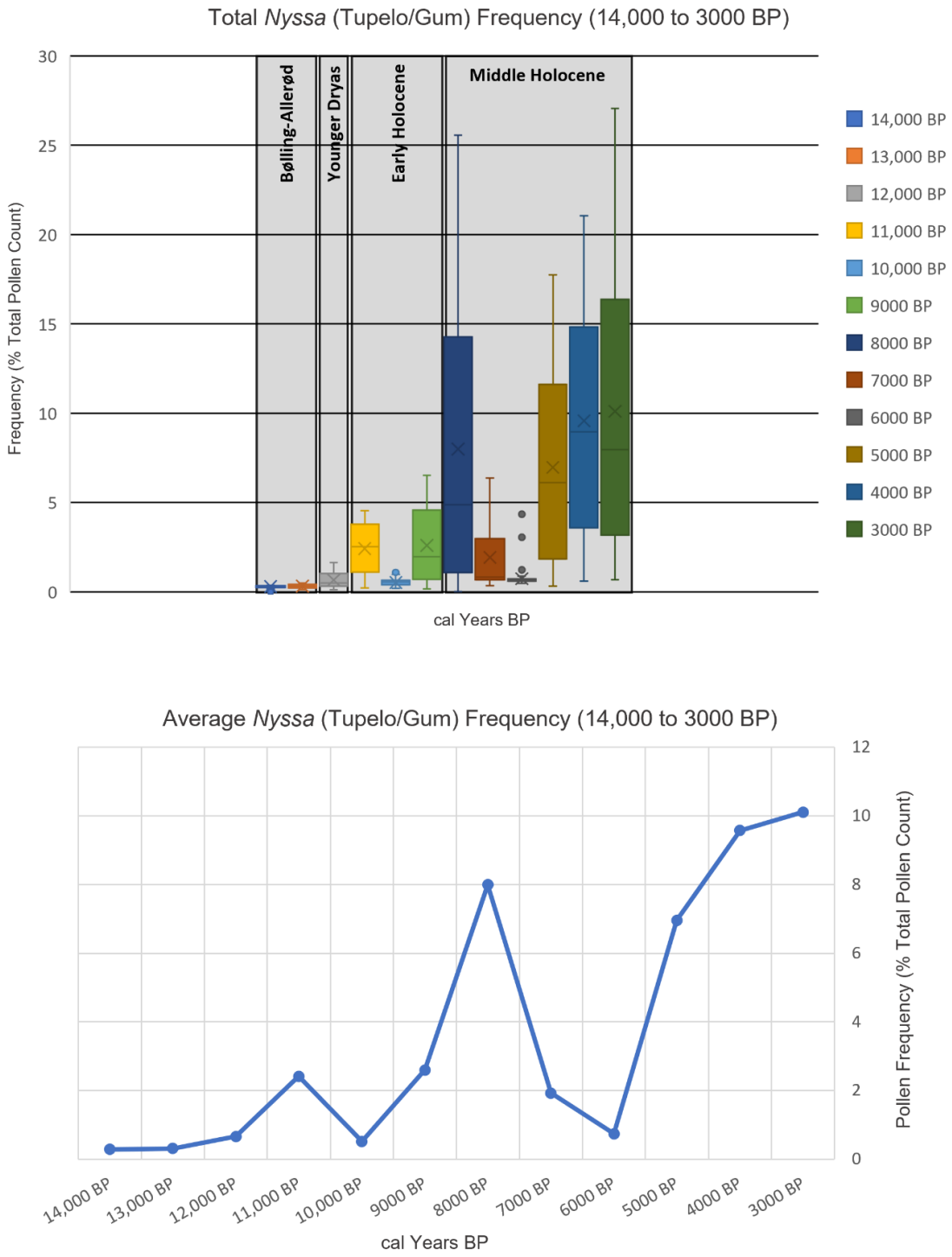

Figure 4.25: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Nyssa* (tupelo/gum) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

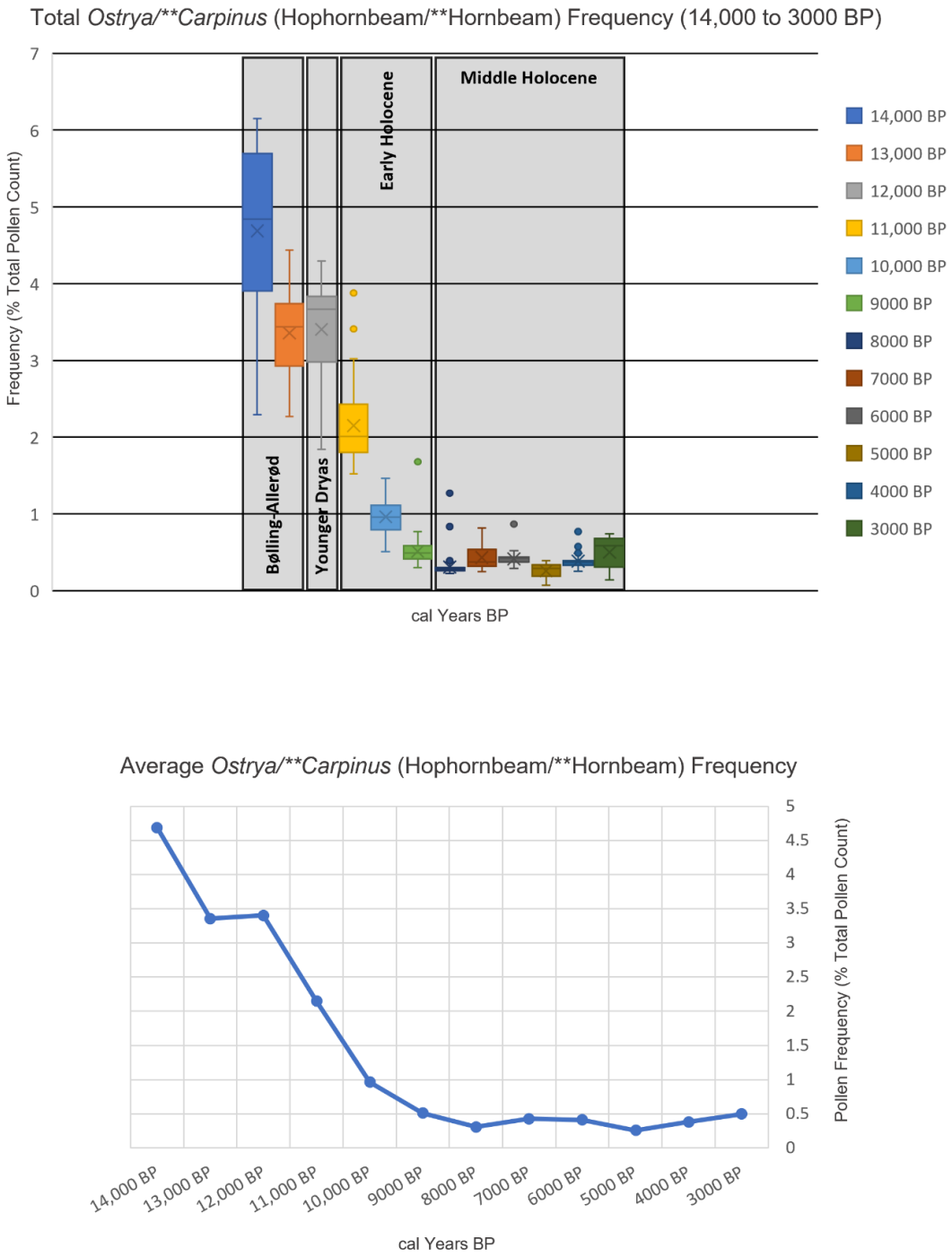

Figure 4.26: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Ostrya/Carpinus* (hophornbeam/hornbeam) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study. **Ostrya* and *Carpinus* are palynologically undifferentiated genera (Kapp 1969; McAndrews et al. 1973) and it is understood that *Ostrya* likely dominates the pollen assemblages in eastern North American isopollen maps (Delcourt and Delcourt 1994:137).

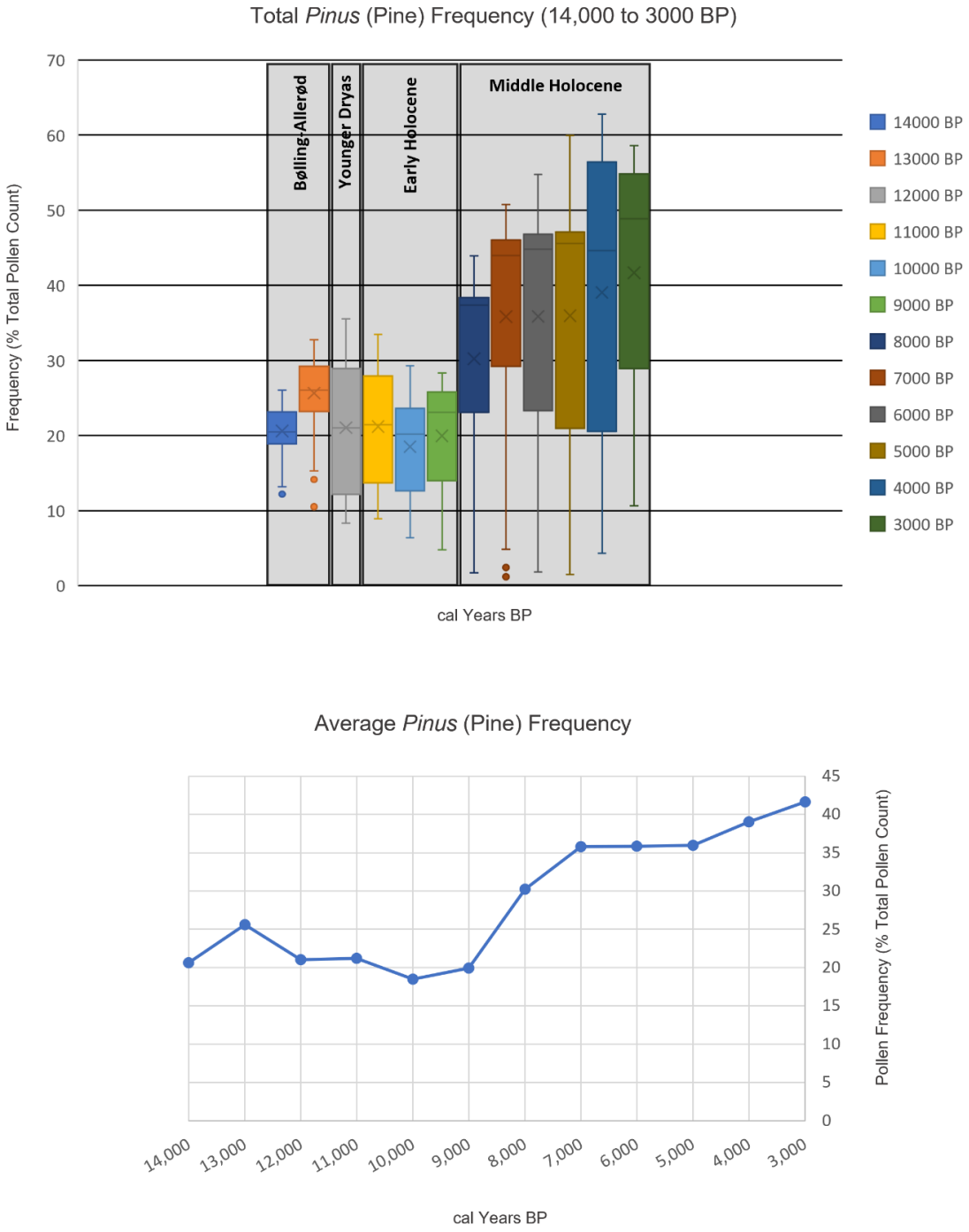

Figure 4.27: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Pinus* (pine) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

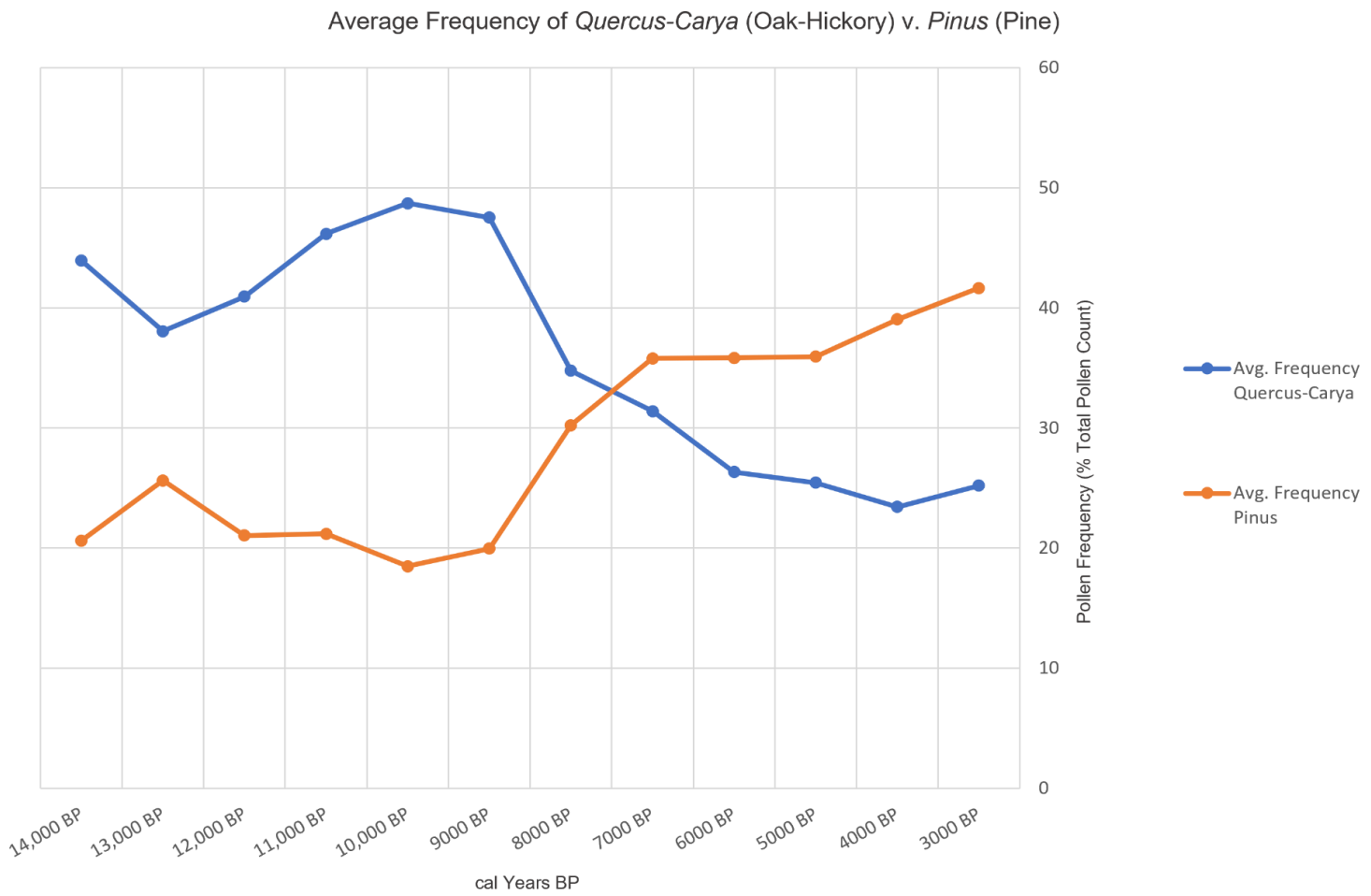

Figure 4.28: Average millennial frequency variation for deciduous-dominant genera *Quercus* (oak) and *Carya* (hickory) versus *Pinus* (pine) across the study area, demonstrating the near-inverse correlation between deciduous and coniferous taxa on the southeastern landscape. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

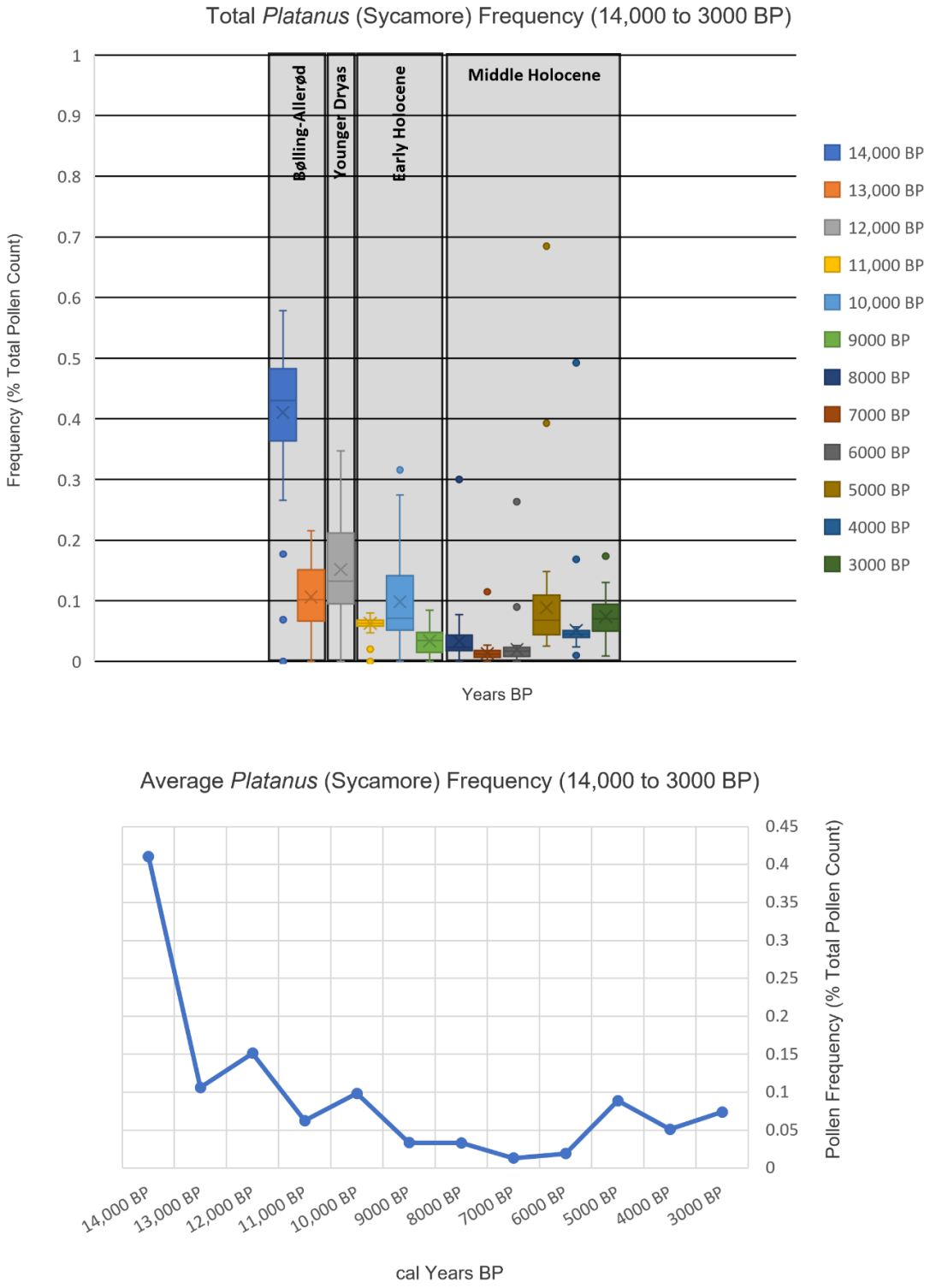

Figure 4.29: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Platanus* (sycamore) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

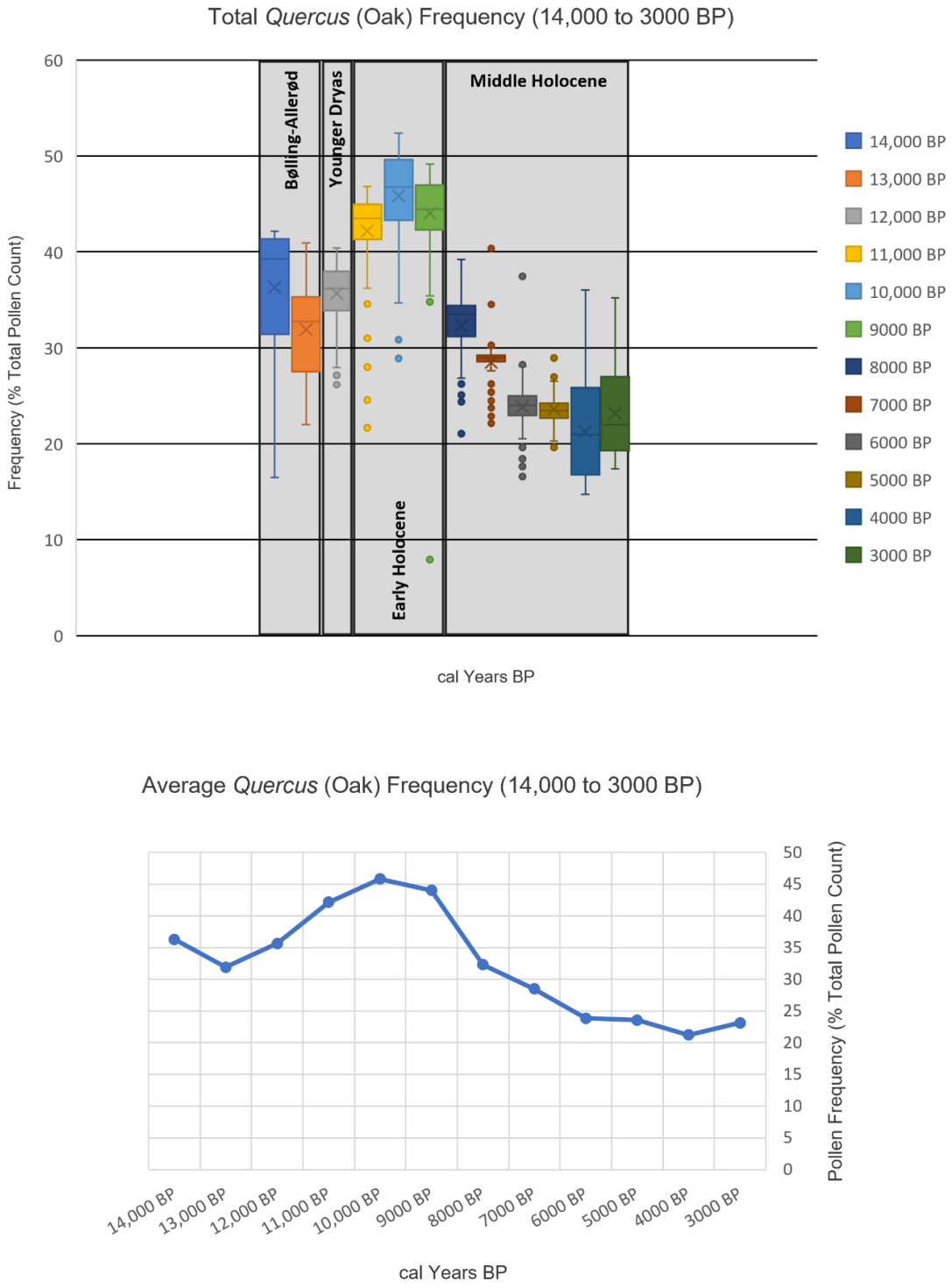

Figure 4.30: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Quercus* (oak) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

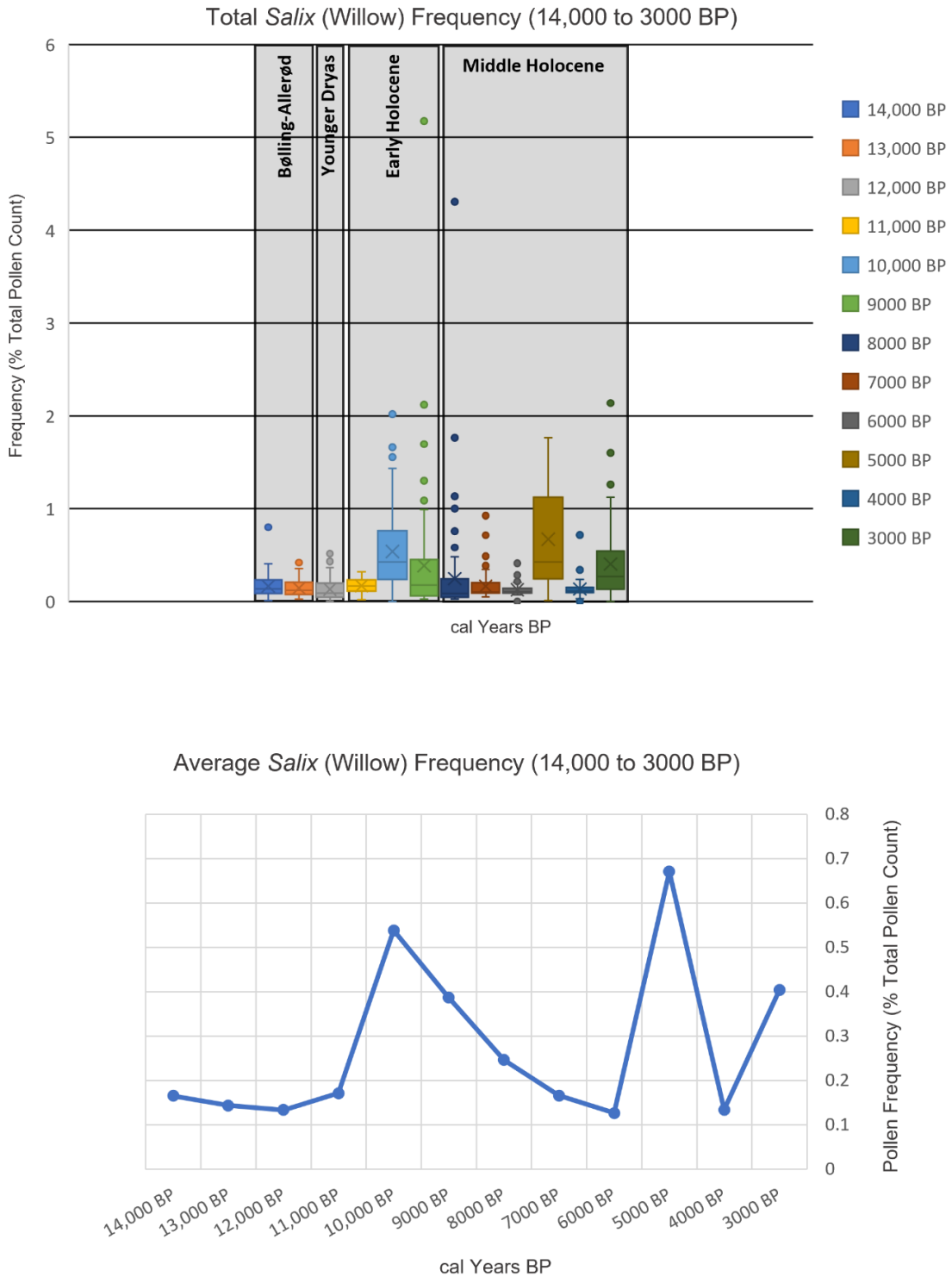

Figure 4.31: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Salix* (willow) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

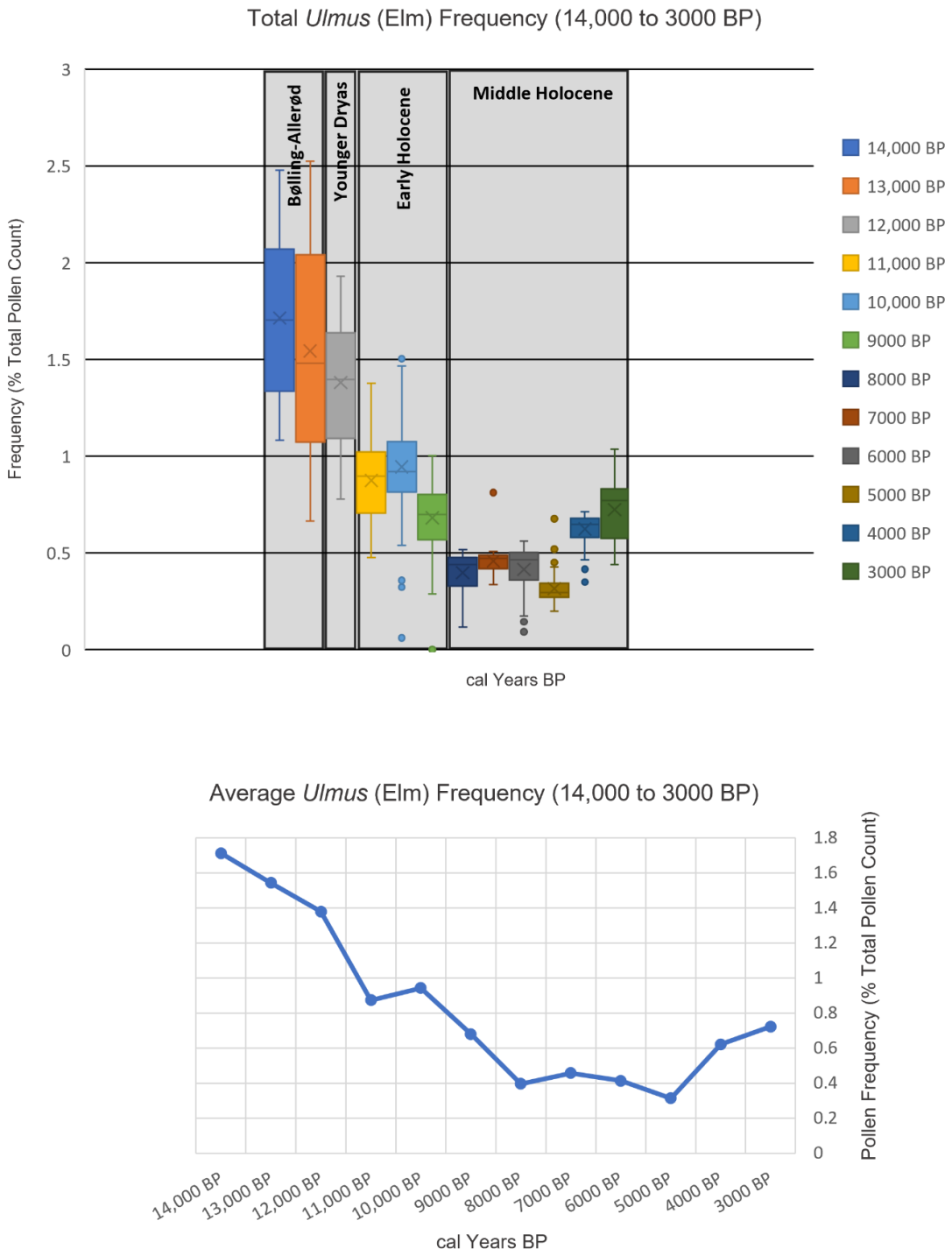

Figure 4.32: Frequency variability with overlapping nearest-millennia climatic events (top) and average millennial frequency (bottom) for *Ulmus* (elm) across the study area. Note: "*cal Years BP*" refers to the interpolated chronostratigraphically-controlled millennial frequencies from the Williams et al. (2004) fossil pollen continental study.

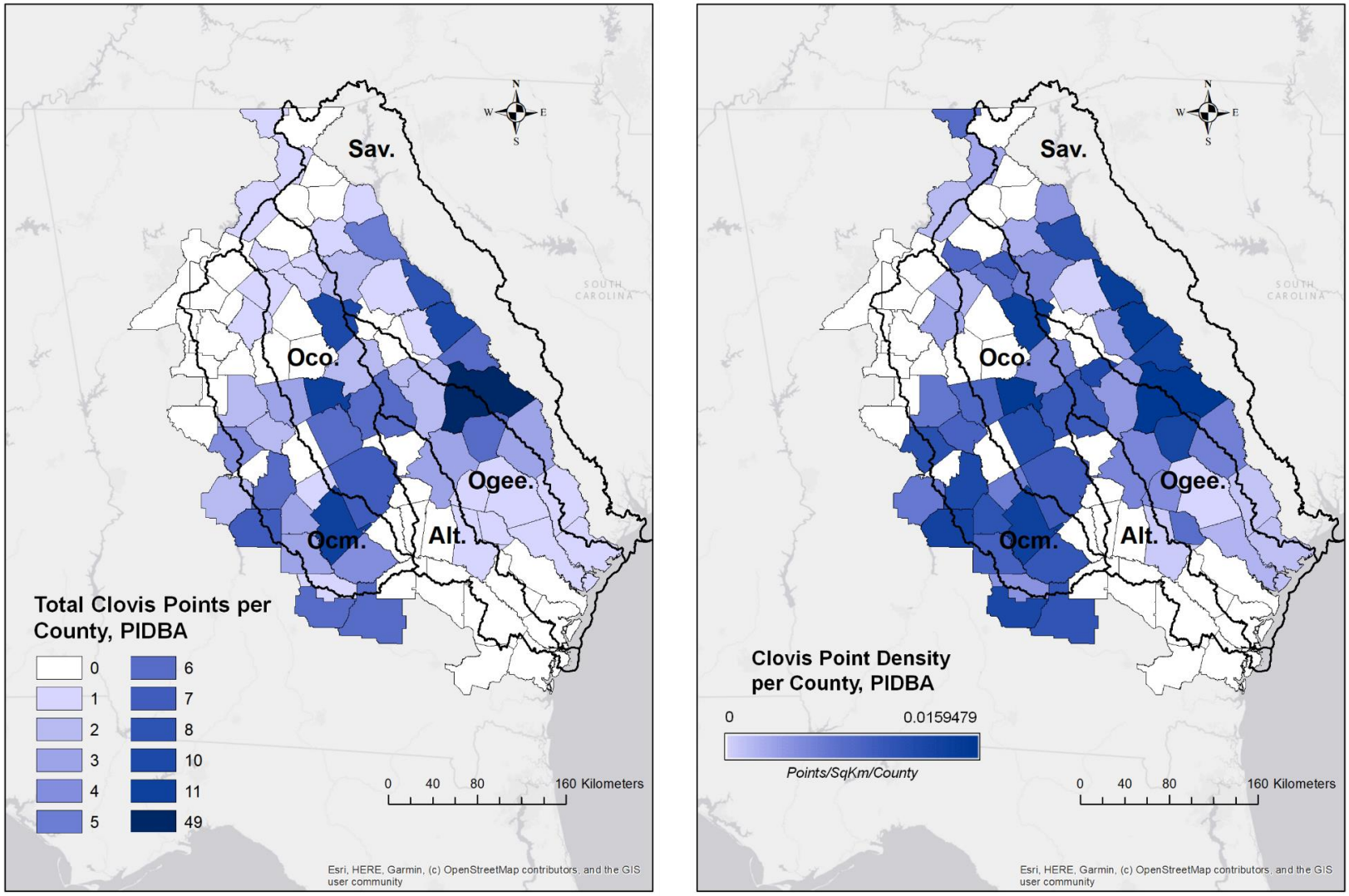

Figure 4.33: Clovis point counts (PIDBA) per county (left) and county densities recorded as points/SqKm/county (right).

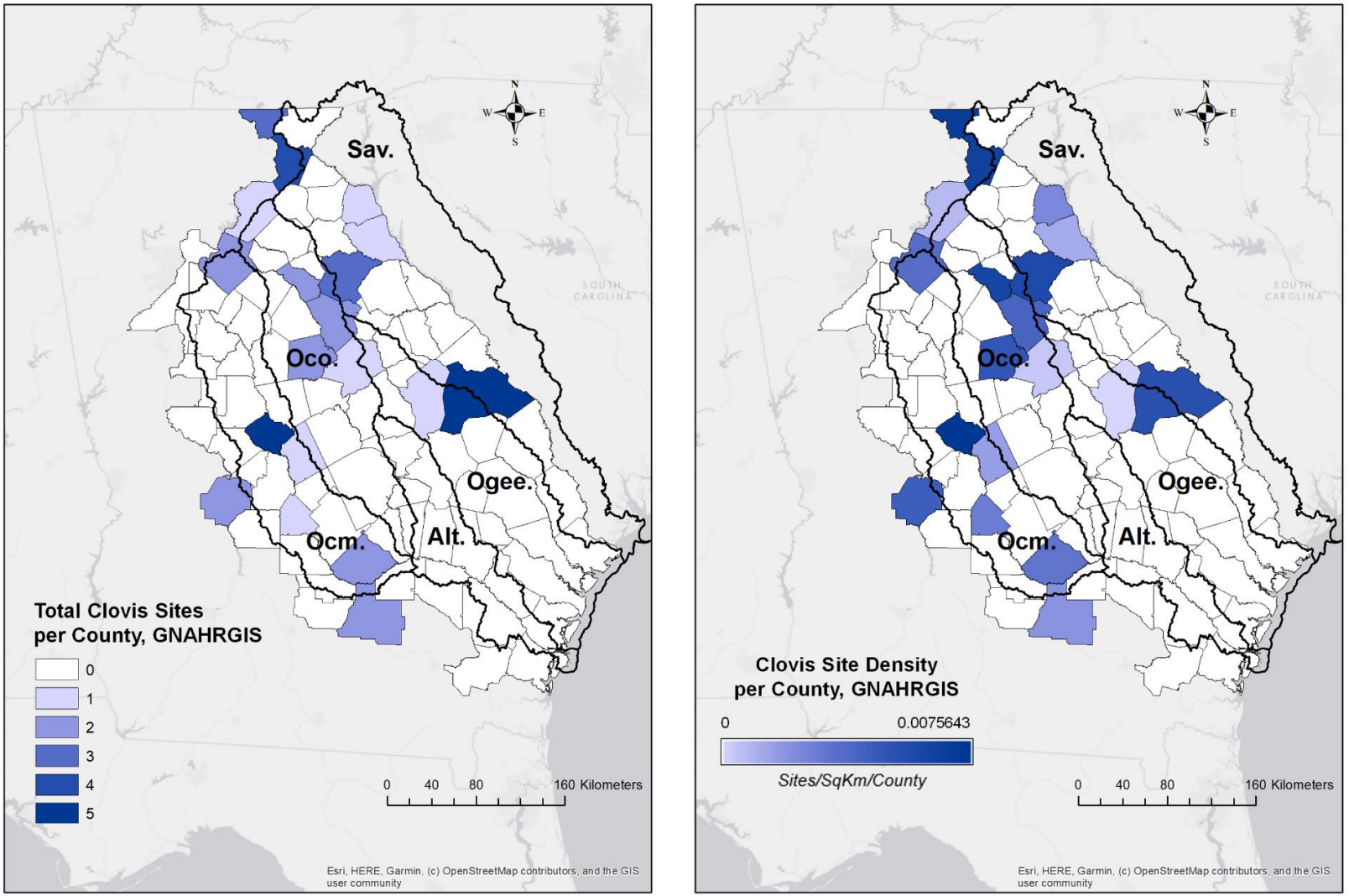

Figure 4.34: Clovis site counts (GNAHRGIS) per county (left) and county densities recorded as sites/SqKm/county (right).

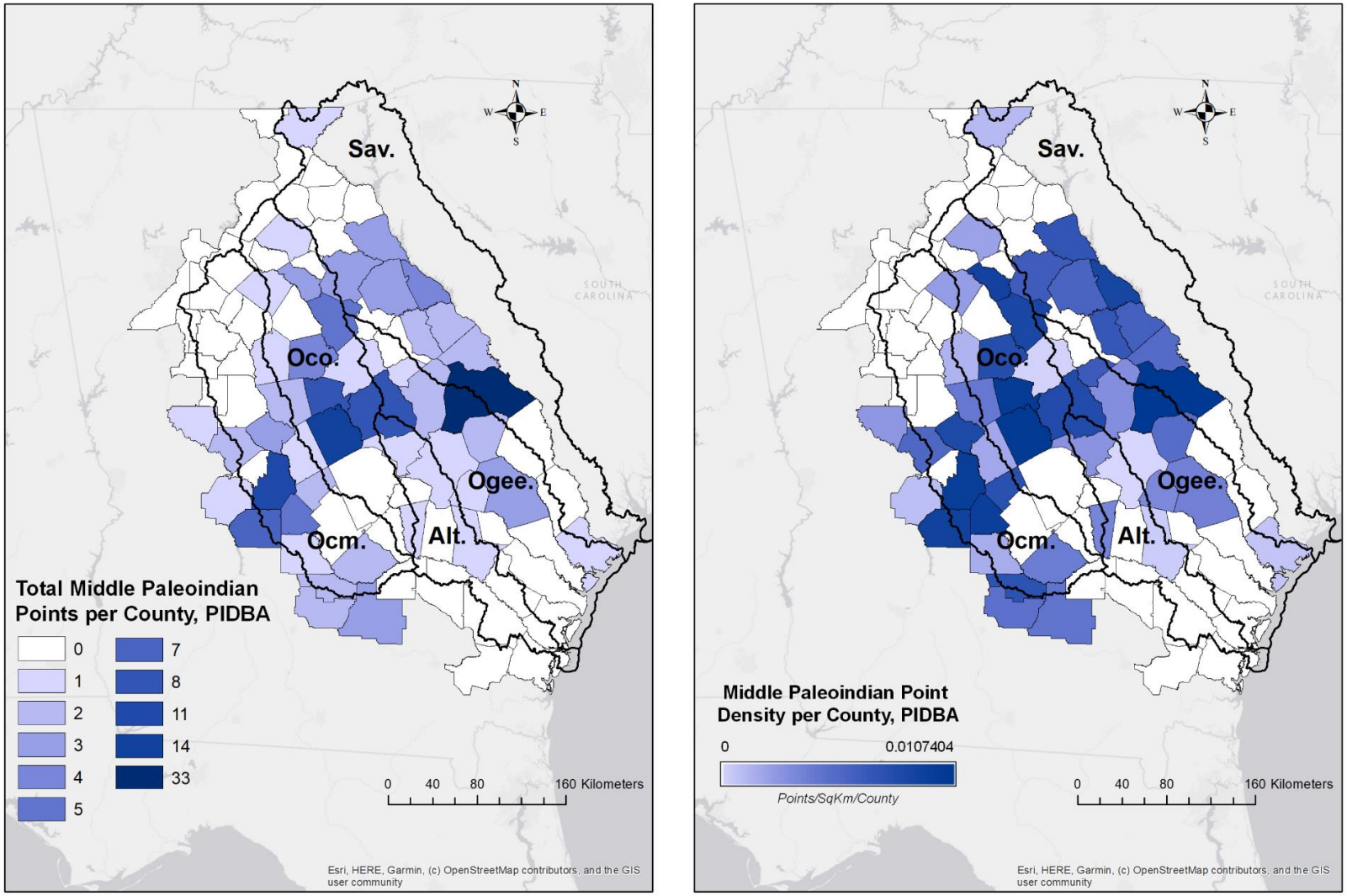

Figure 4.35: Middle Paleoindian point counts (PIDBA) per county (left) and county densities recorded as points/SqKm/county (right).

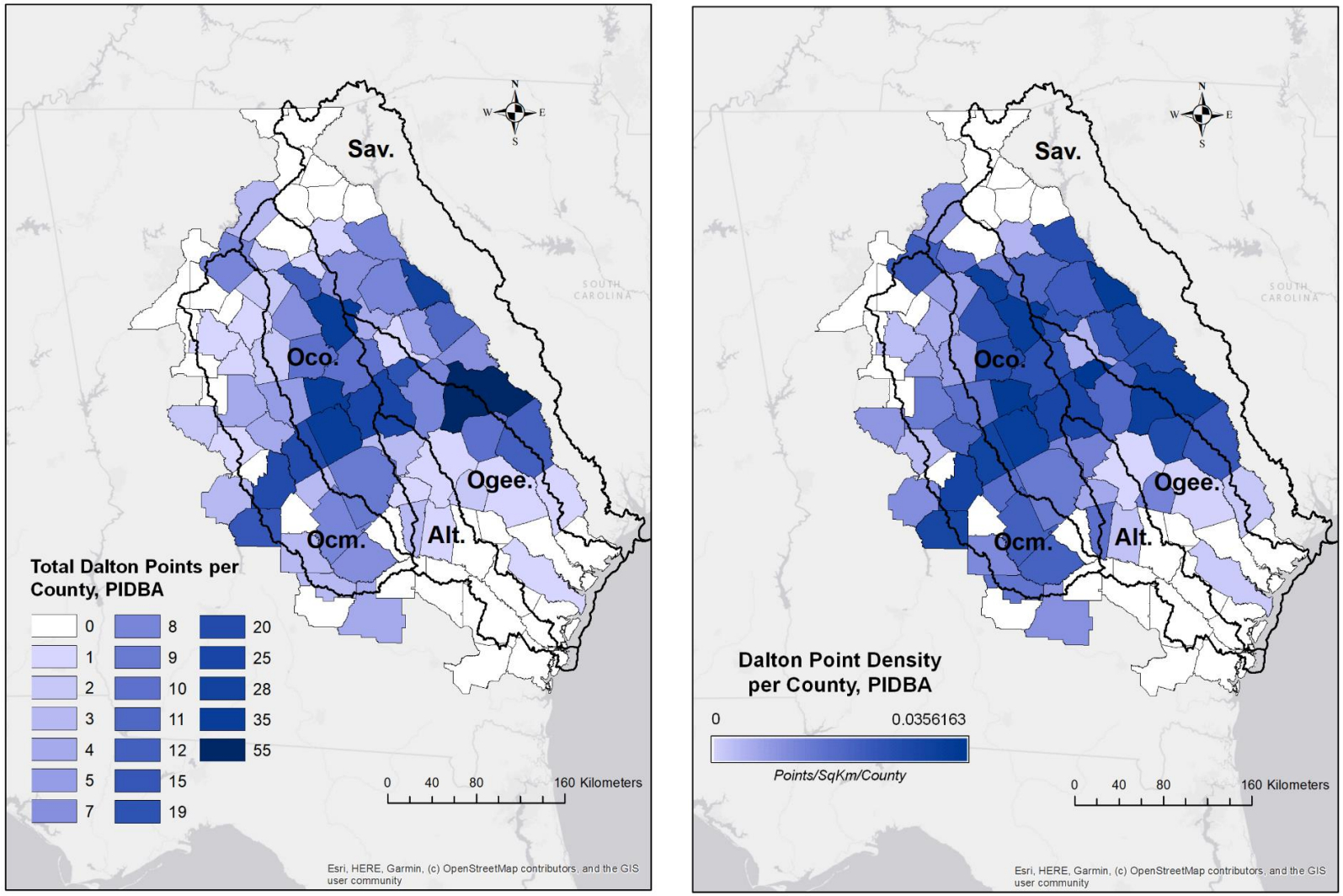

Figure 4.36: Dalton point counts (PIDBA) per county (left) and county densities recorded as points/SqKm/county (right).

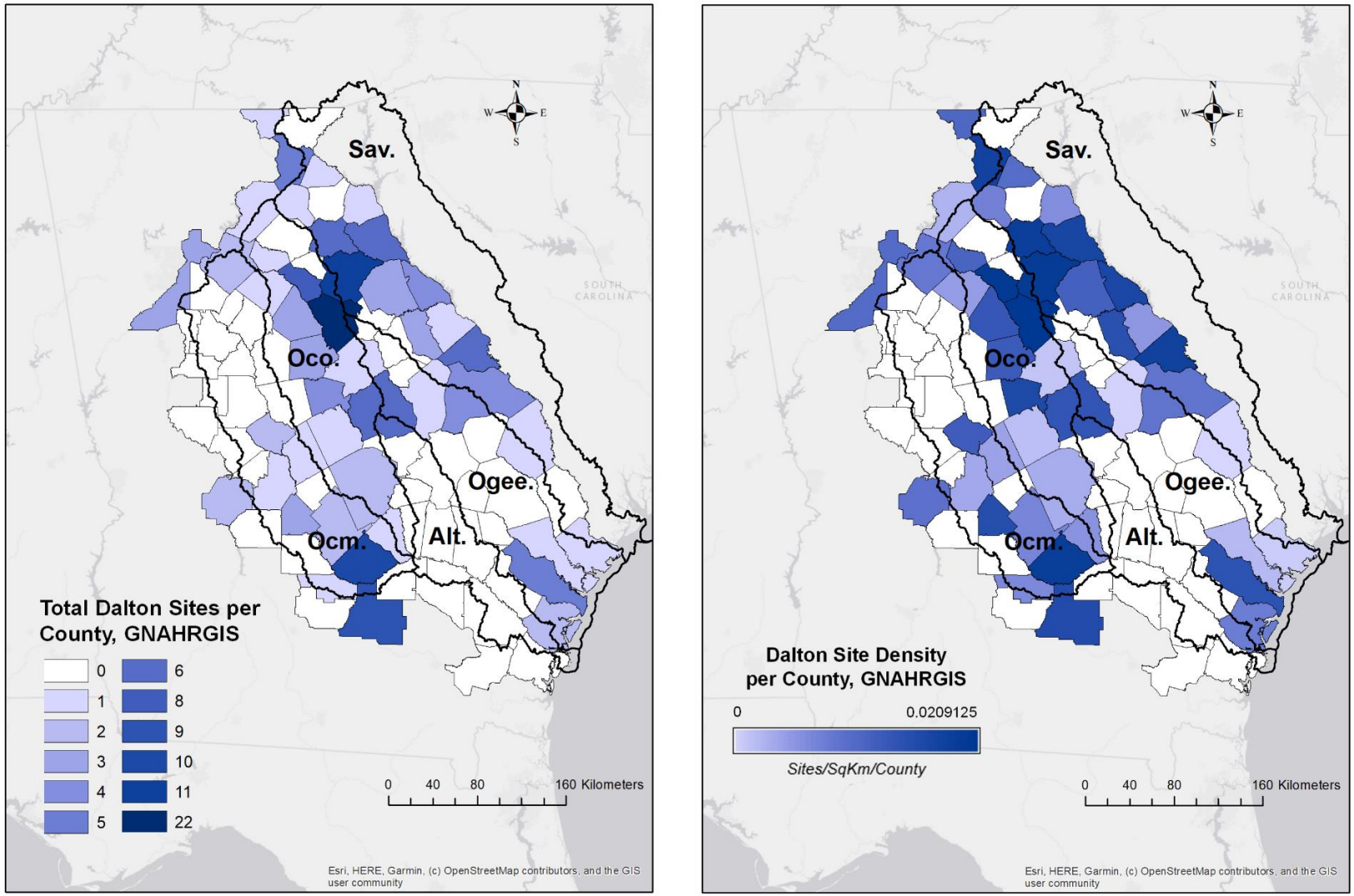

Figure 4.37: Dalton site counts (GNAHRGIS) per county (left) and county densities recorded as sites/SqKm/county (right).

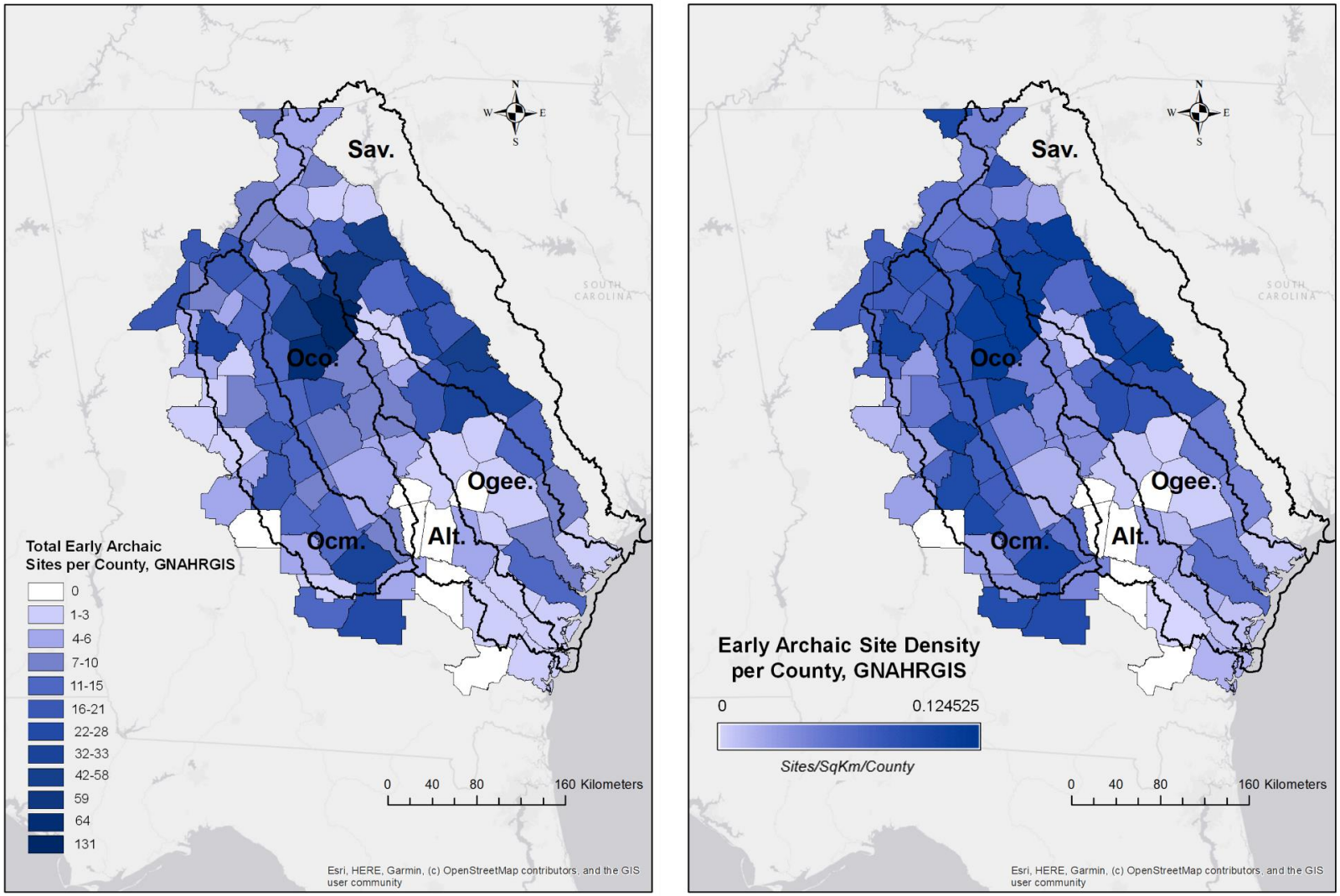

Figure 4.38: Early Archaic site counts (GNAHRGIS) per county (left) and county densities recorded as sites/SqKm/county (right).

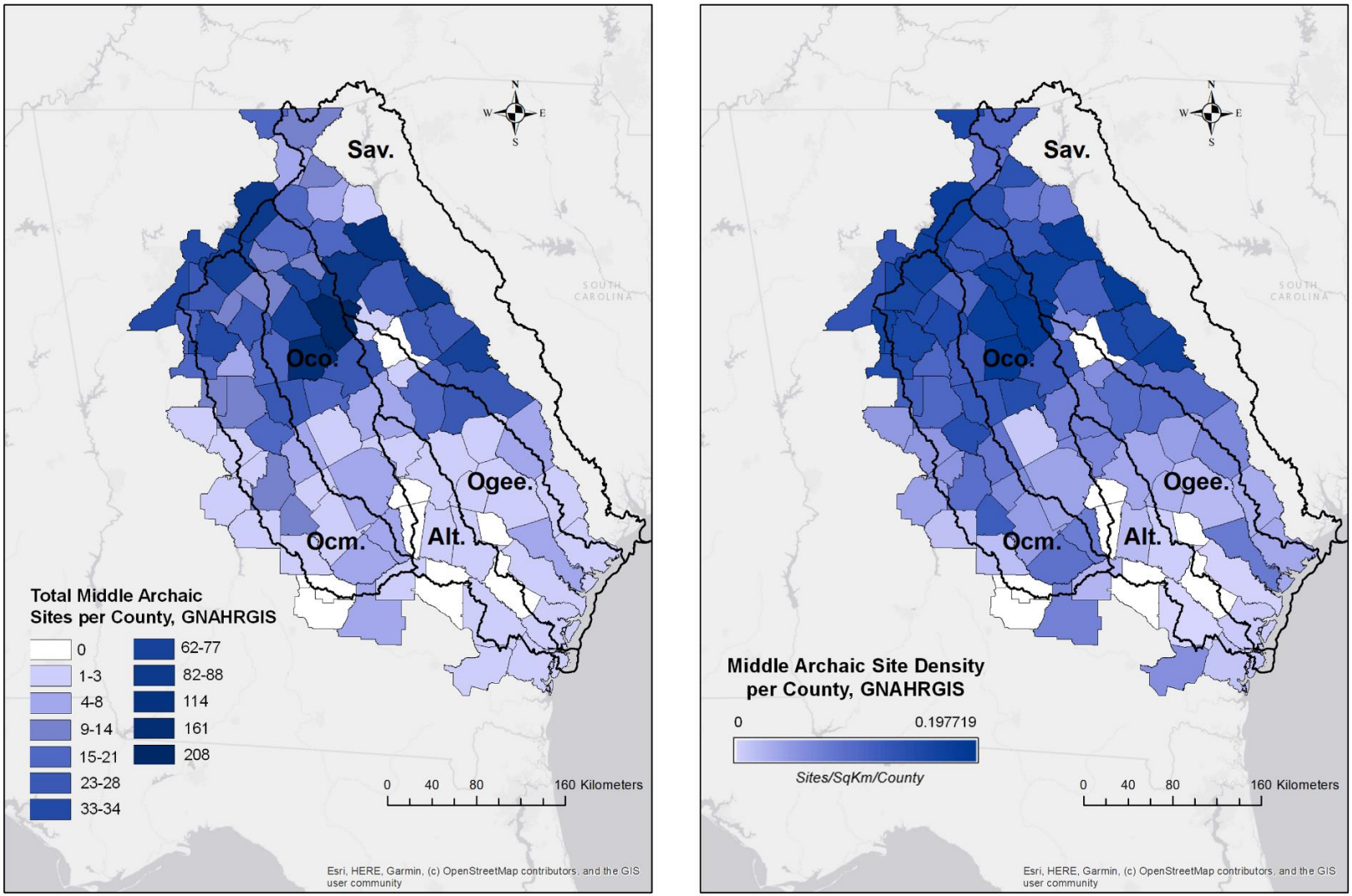

Figure 4.39: Middle Archaic site counts (PIDBA) per county (left) and county densities recorded as sites/SqKm/county (right).

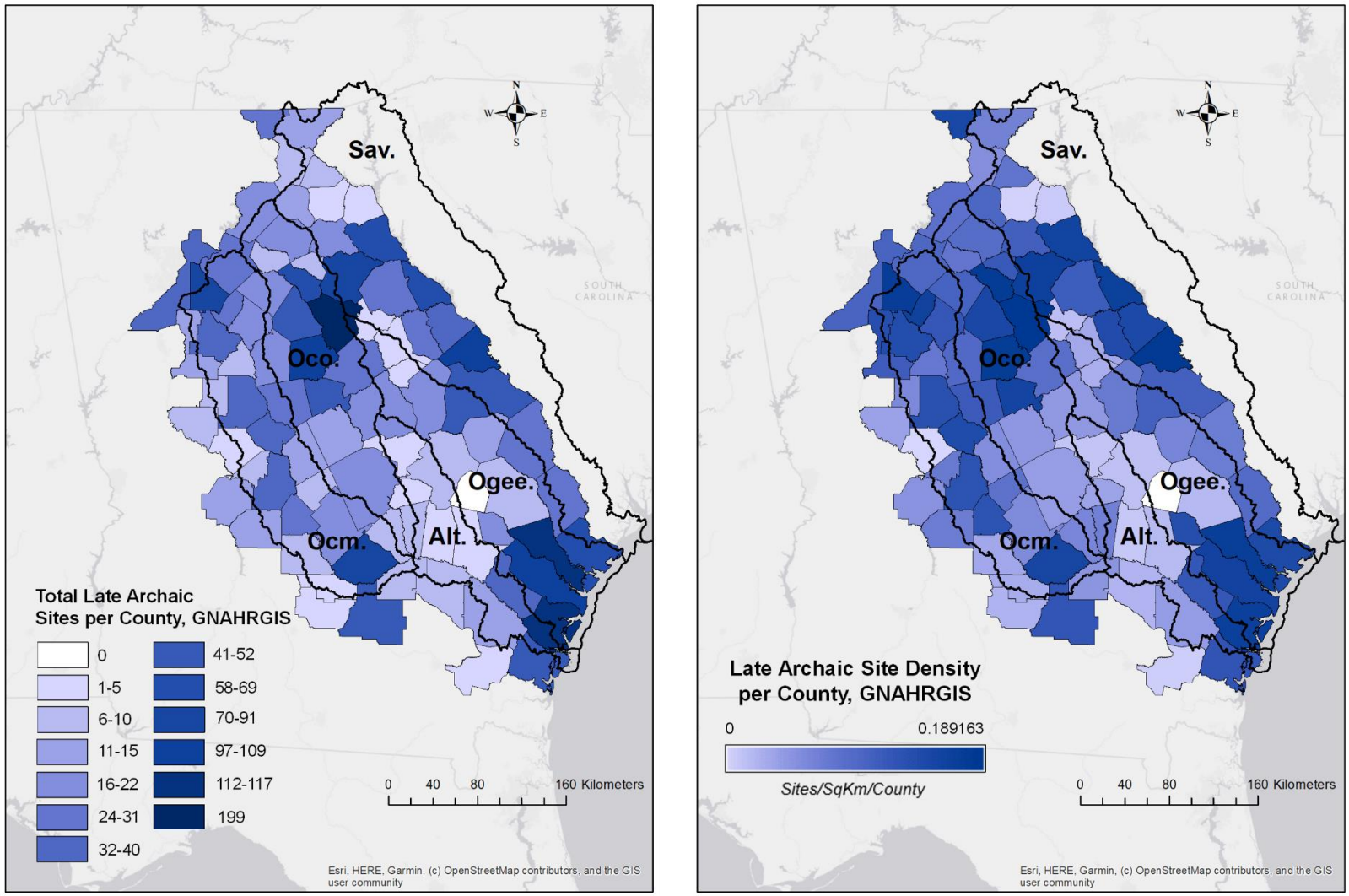

Figure 4.40: Late Archaic site counts (PIDBA) per county (left) and county densities recorded as sites/SqKm/county (right).

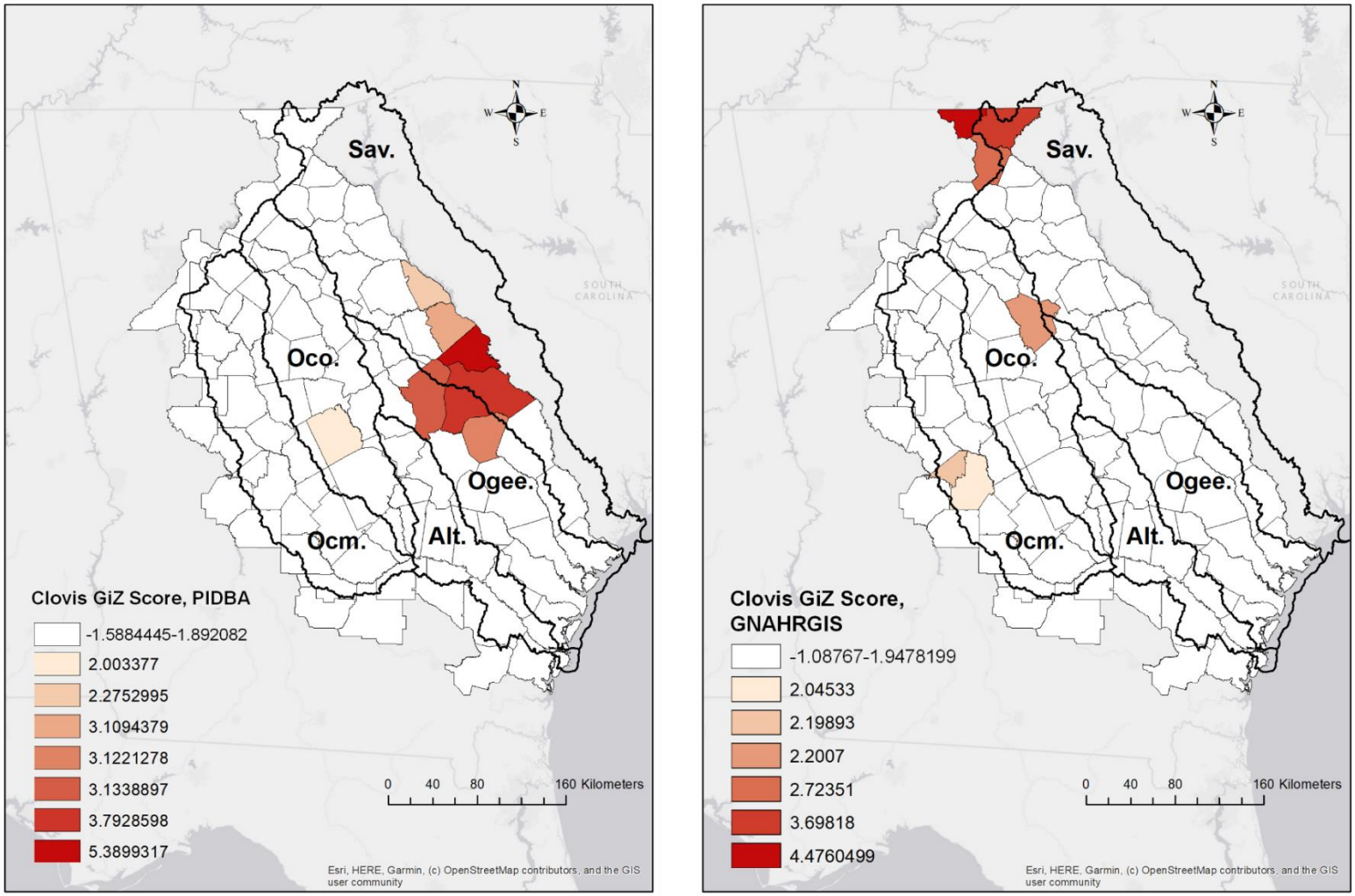

Figure 4.41: Clovis GiZ scores derived from PIDBA point locations (left) and GNAHRGIS site locations (right), normalized to county-level resolution.

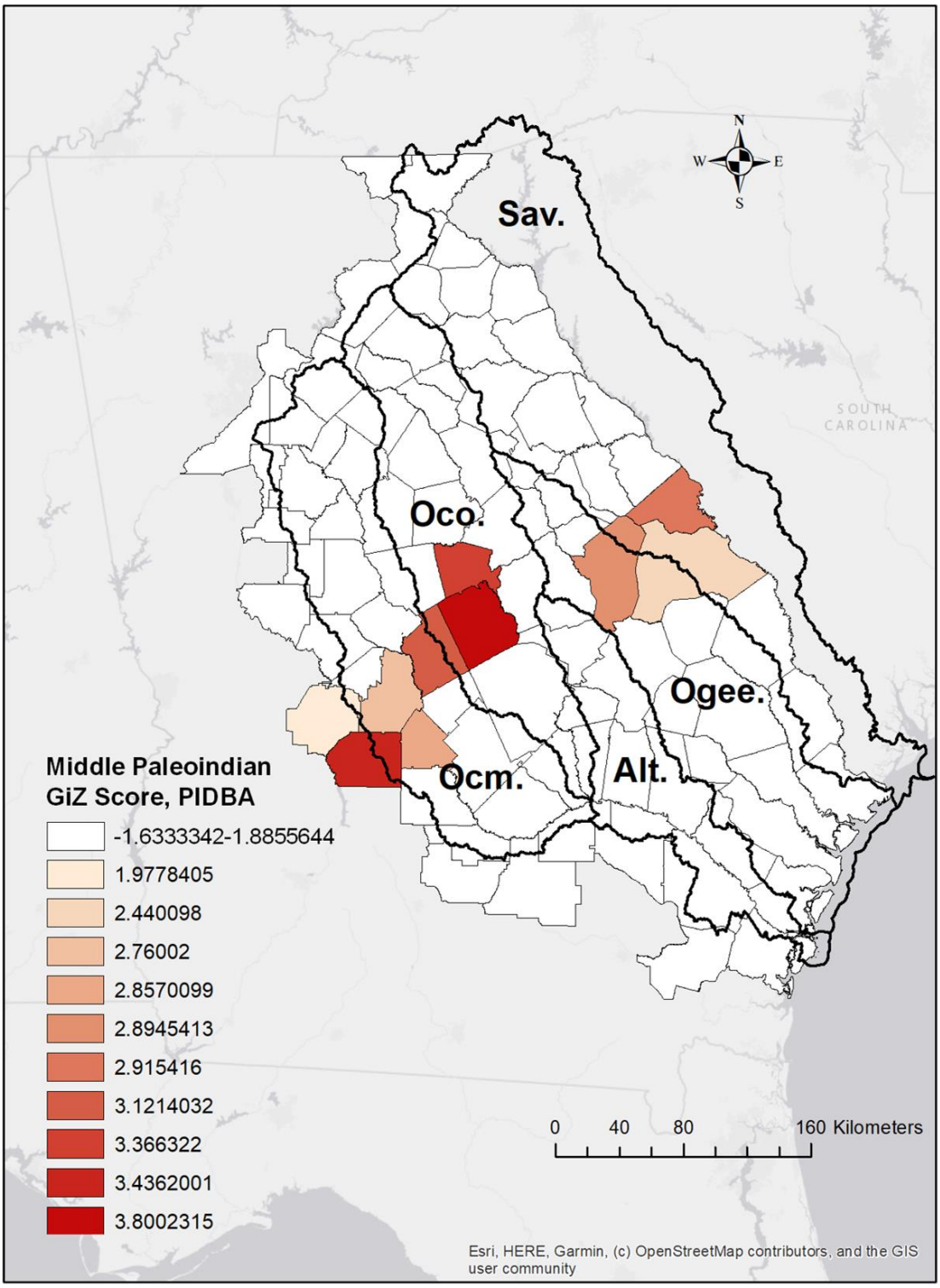

Figure 4.42: Middle Paleoindian GiZ scores derived from PIDBA point locations normalized to county-level resolution.

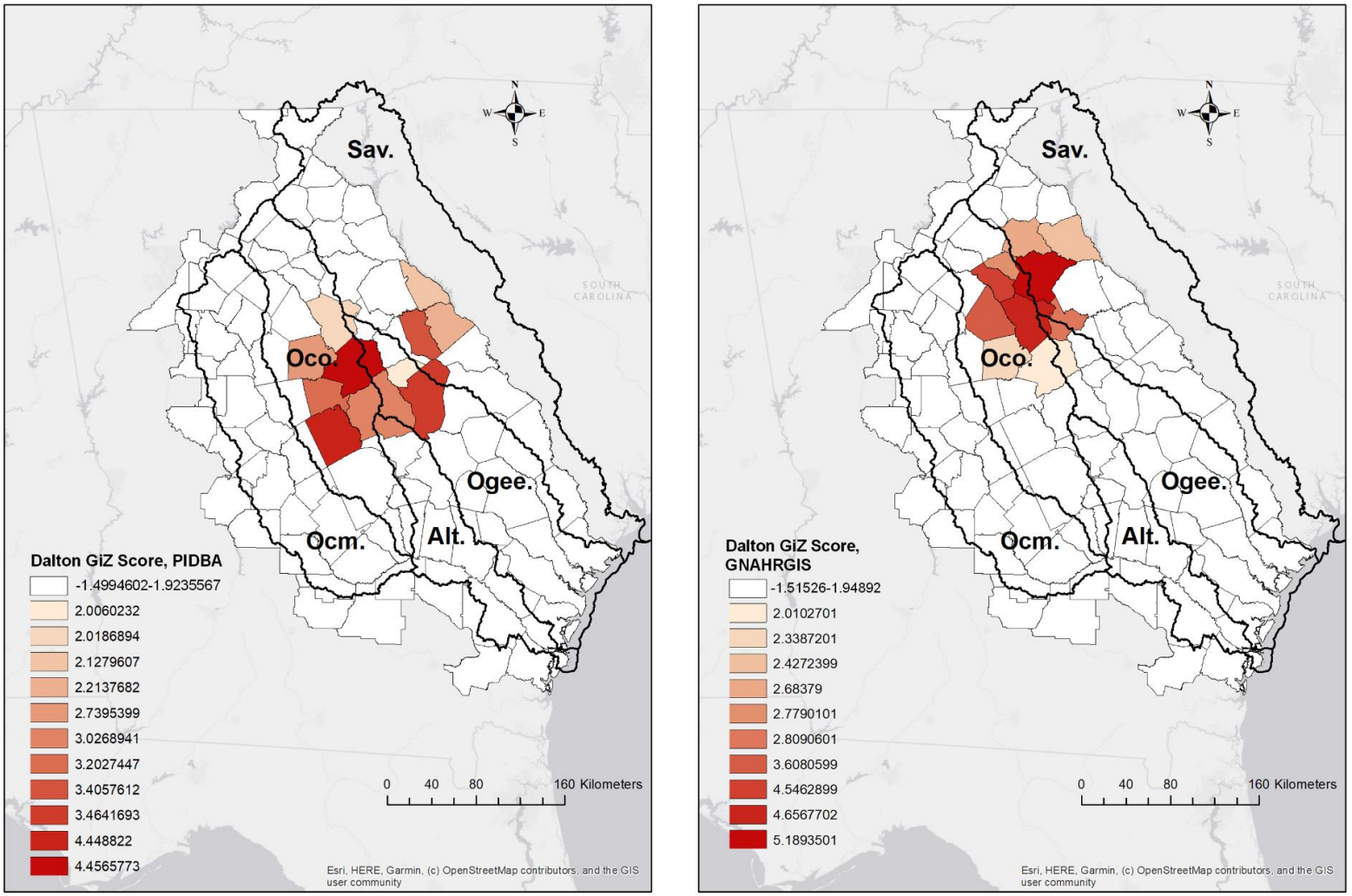

Figure 4.43: Dalton GiZ scores derived from PIDBA point locations (left) and GNAHRGIS site locations (right), normalized to county-level resolution.

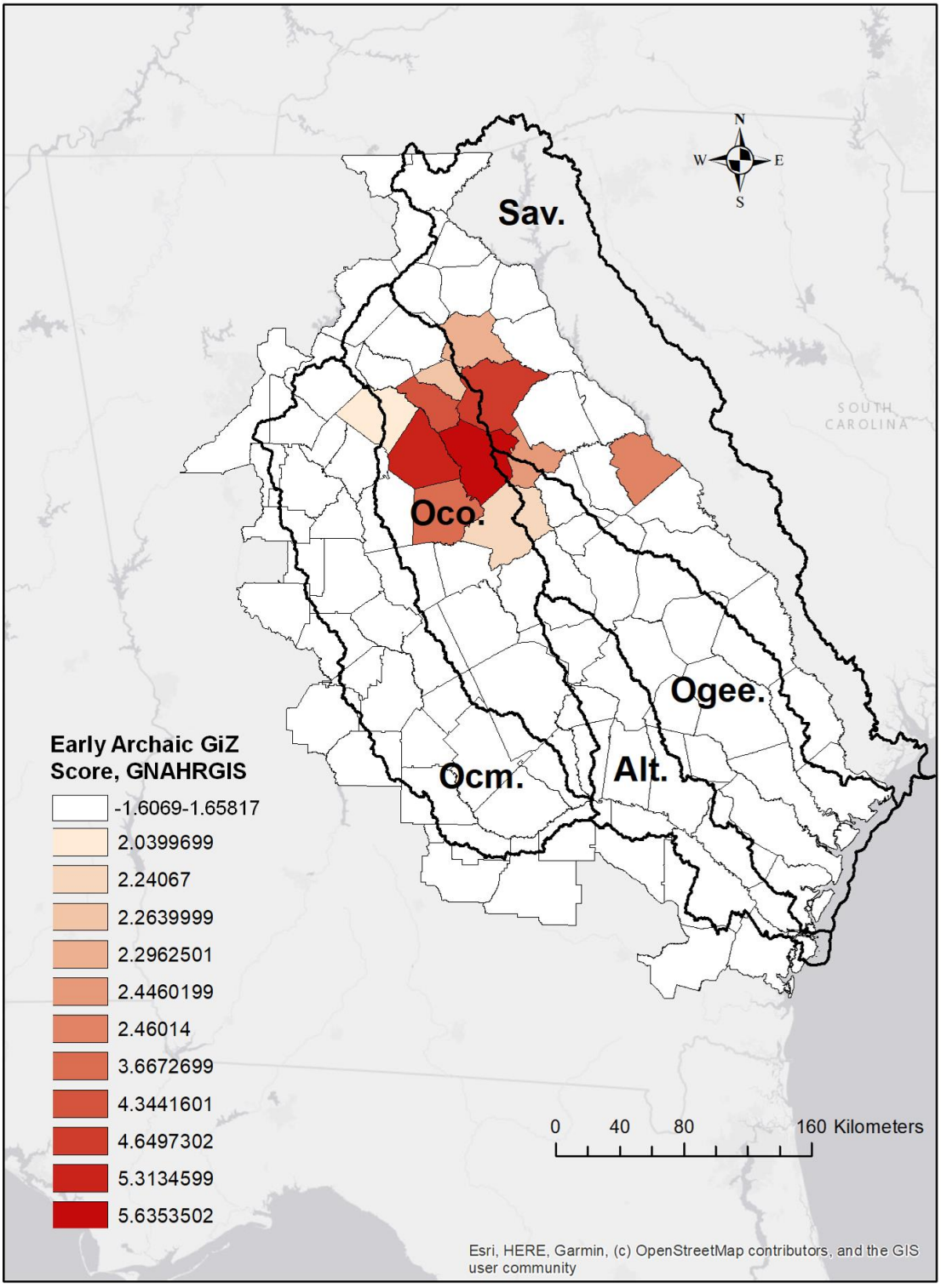

Figure 4.44: Early Archaic GiZ scores derived from GNAHRGIS site locations normalized to county-level resolution.

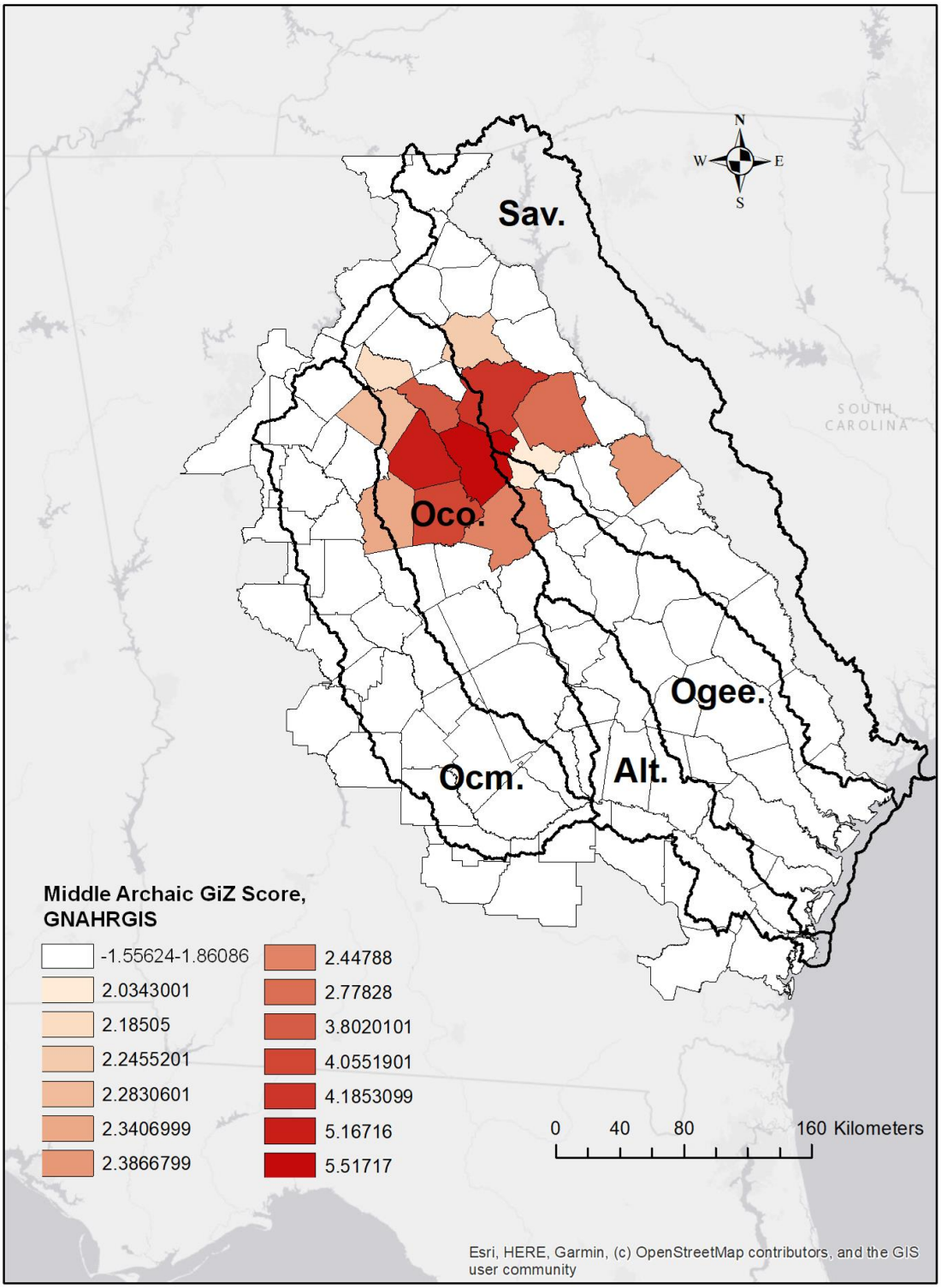

Figure 4.45: Middle Archaic GiZ scores derived from GNAHRGIS site locations normalized to county-level resolution.

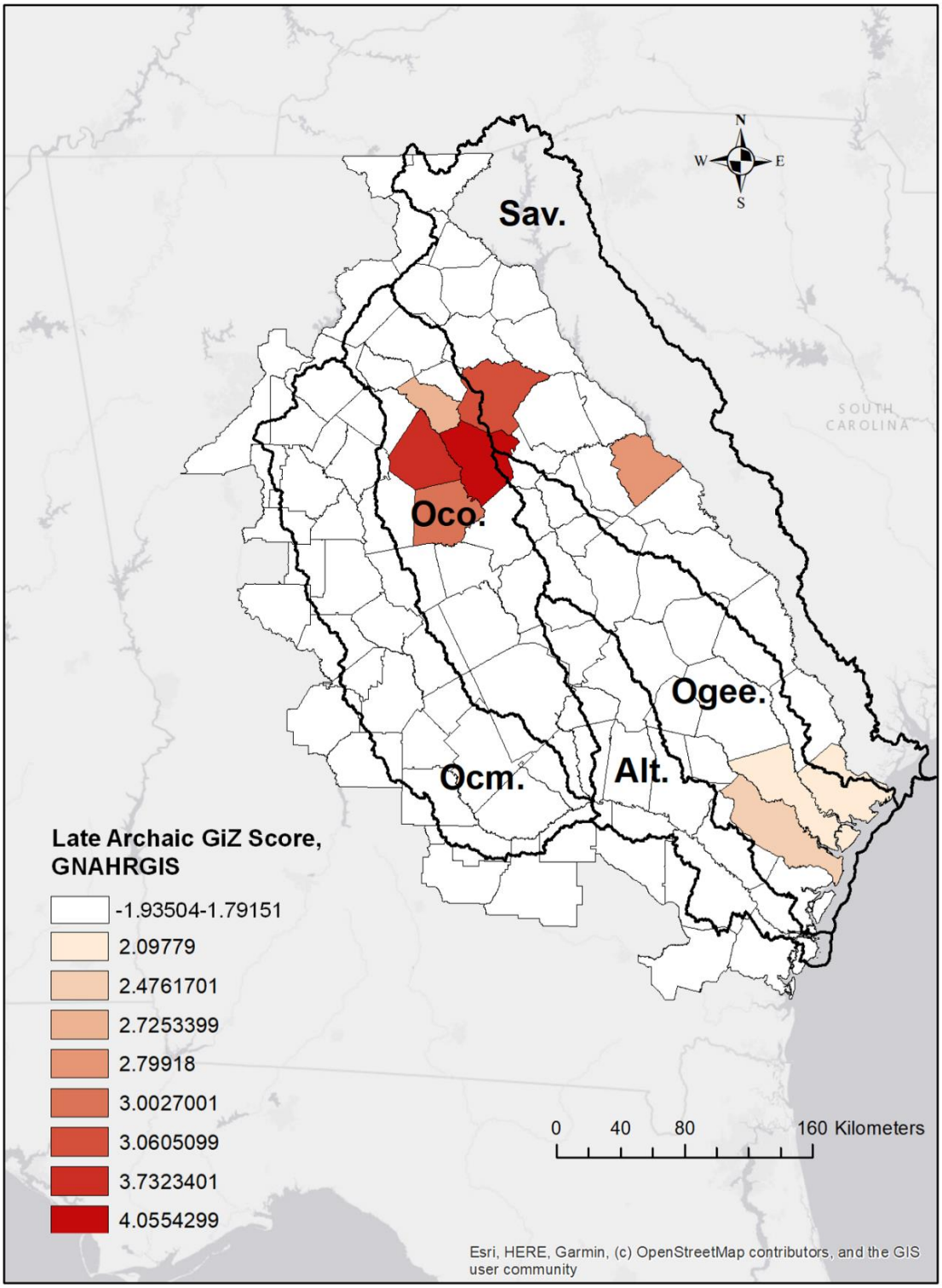

Figure 4.46: Late Archaic GiZ scores derived from GNAHRGIS site locations normalized to county-level resolution.

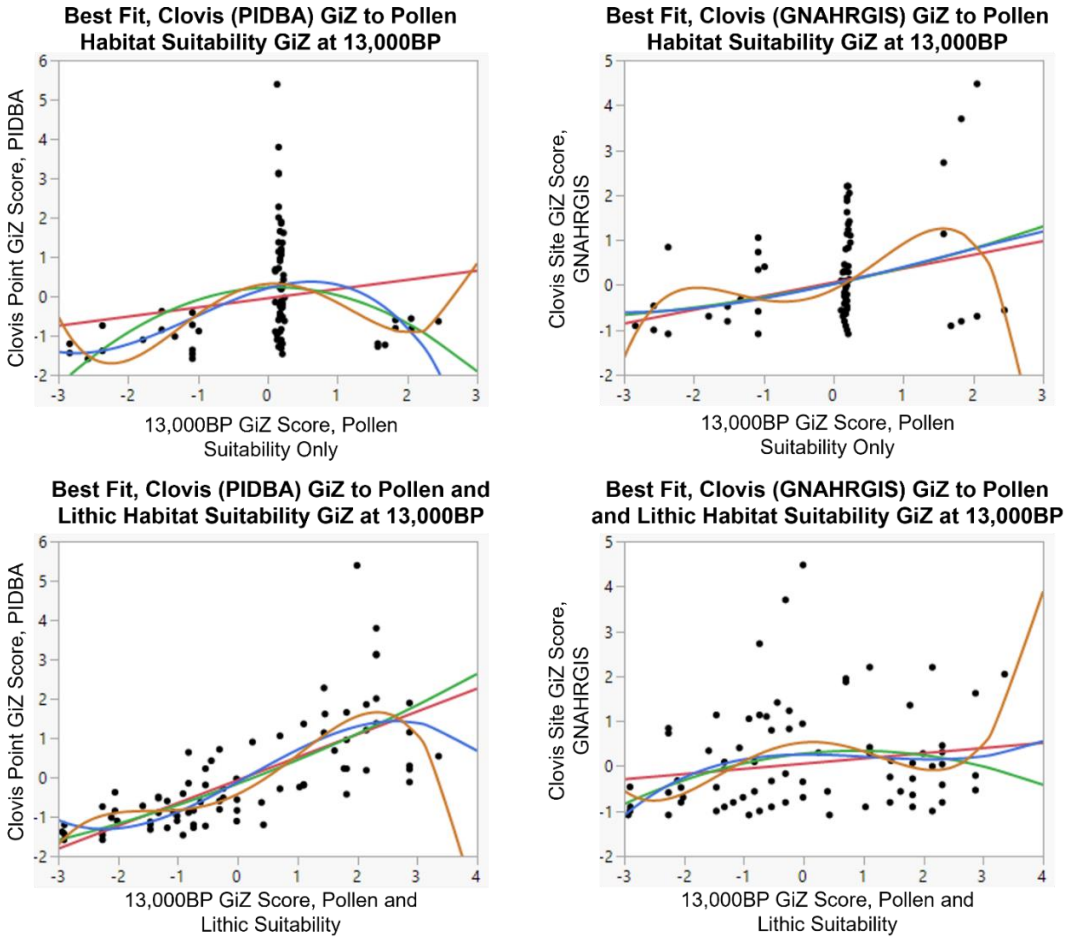

Figure 4.47: Linear and polynomial regression diagrams and fit lines for Clovis (PIDBA) GiZ scores against fossil pollen habitat suitability GiZ scores at 13,000BP (top left), Clovis (GNAHRGIS) GiZ scores against fossil pollen habitat suitability GiZ scores at 13,000BP (top right), Clovis (PIDBA) GiZ scores against fossil pollen and lithic habitat suitbaility GiZ scores at 13,000BP (botttom left) and Clovis (GNAHRGIS) GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 13,000BP (bottom right). The fit lines represent linear, quadratic, cubic, and quartic 'best fit' lines.

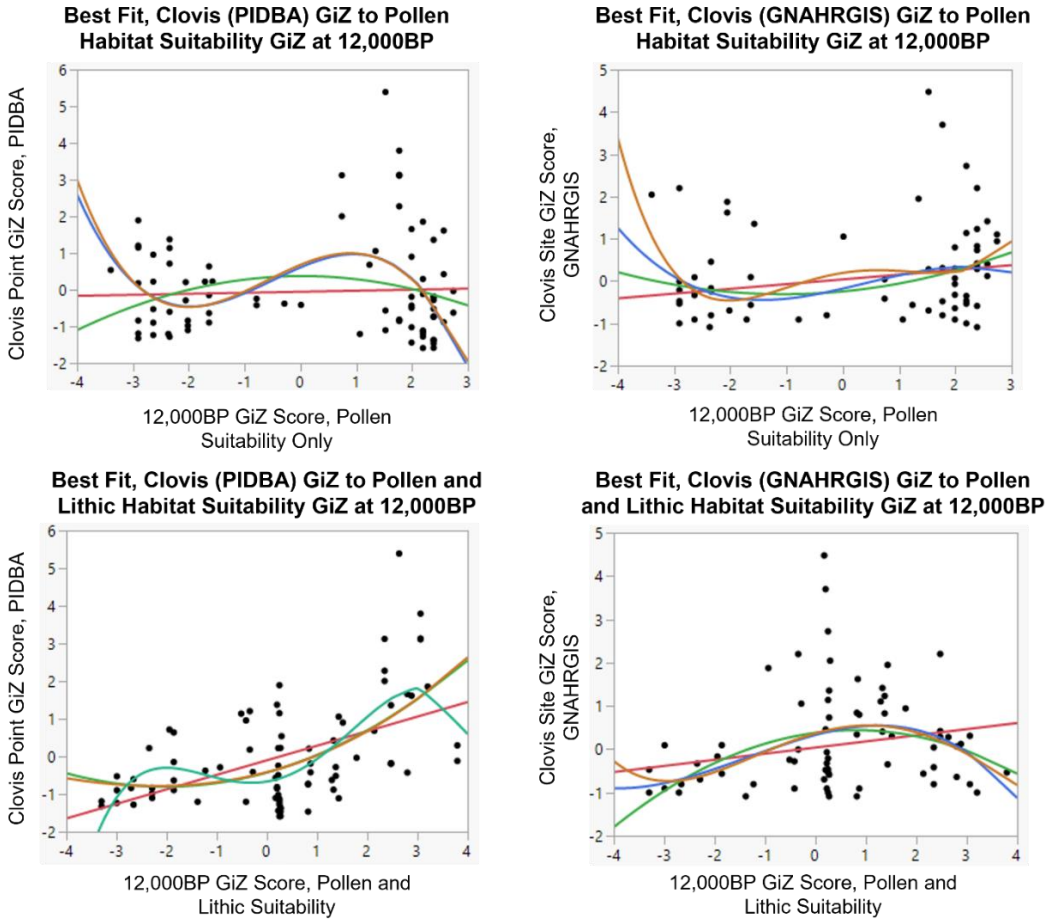

Figure 4.48: Linear and polynomial regression diagrams and fit lines for Clovis (PIDBA) GiZ scores against fossil pollen habitat suitability GiZ scores at 12,000BP (top left), Clovis (GNAHRGIS) GiZ scores against fossil pollen habitat suitability GiZ scores at 12,000BP (top right), Clovis (PIDBA) GiZ scores against fossil pollen and lithic habitat suitbaility GiZ scores at 12,000BP (botttom left) and Clovis (GNAHRGIS) GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 12,000BP (bottom right). The fit lines represent linear, quadratic, cubic, and quartic 'best fit' lines.

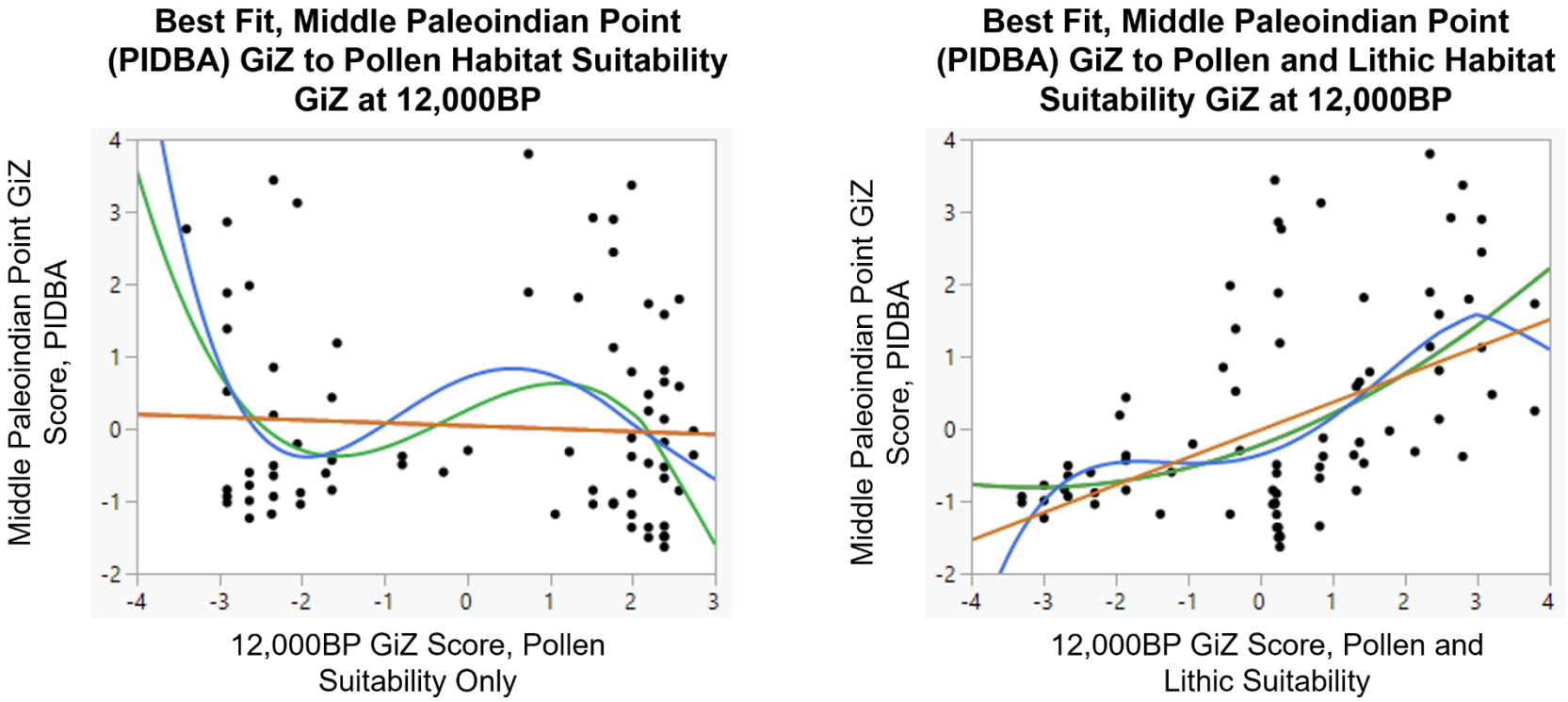

Figure 4.49: Linear and polynomial regression diagrams and fit lines for Middle Paleoindian (PIDBA) GiZ scores against fossil pollen habitat suitability GiZ scores at 12,000BP (left) and fossil pollen habitat and lithologic unit suitability GiZ scores at 12,000BP (right). The fit lines represent linear, quadratic, cubic, and quartic 'best fit' lines.

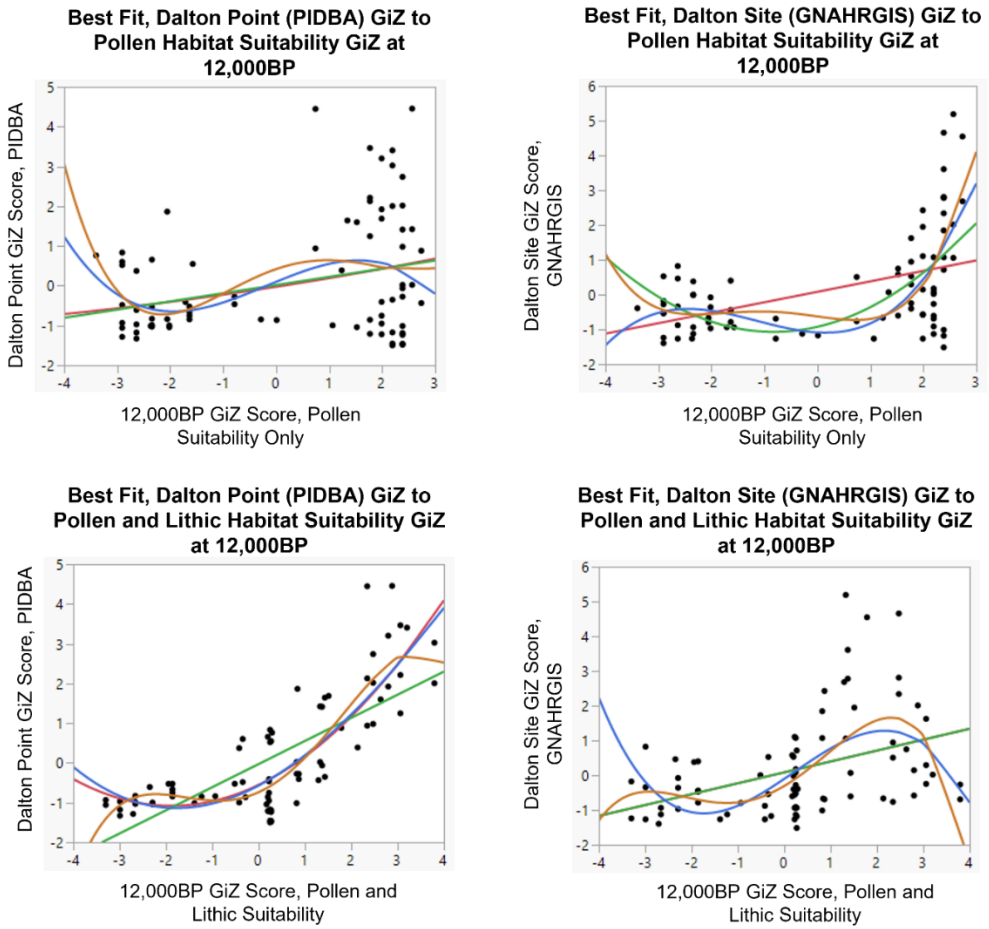

Figure 4.50: Linear and polynomial regression diagrams and fit lines for Dalton (PIDBA) GiZ scores against fossil pollen habitat suitability GiZ scores at 12,000BP (top left), Dalton (GNAHRGIS) GiZ scores against fossil pollen habitat suitability GiZ scores at 12,000BP (top right), Dalton (PIDBA) GiZ scores against fossil pollen and lithic habitat suitbaility GiZ scores at 12,000BP (botttom left) and Dalton (GNAHRGIS) GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 12,000BP (bottom right). The fit lines represent linear, quadratic, cubic, and quartic 'best fit' lines.

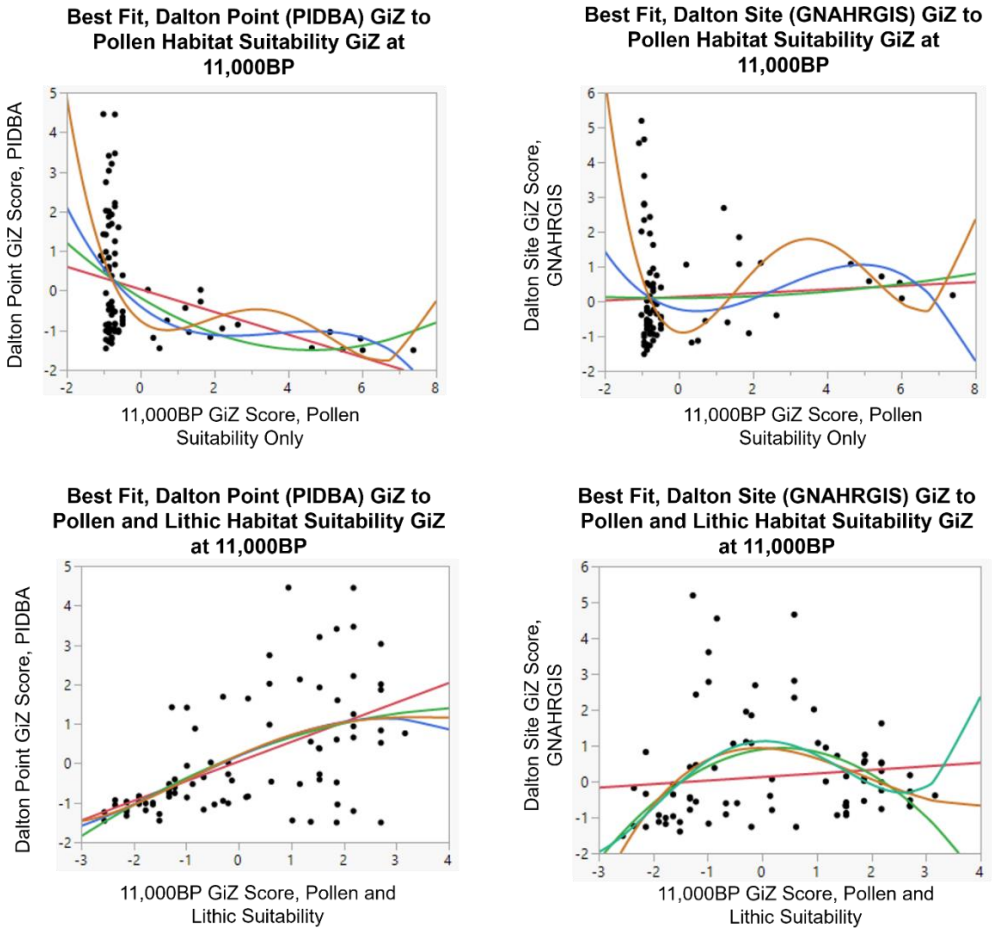

Figure 4.51: Linear and polynomial regression diagrams and fit lines for Dalton (PIDBA) GiZ scores against fossil pollen habitat suitability GiZ scores at 11,000BP (top left), Dalton (GNAHRGIS) GiZ scores against fossil pollen habitat suitability GiZ scores at 11,000BP (top right), Dalton (PIDBA) GiZ scores against fossil pollen and lithic habitat suitbaility GiZ scores at 11,000BP (botttom left) and Dalton (GNAHRGIS) GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 11,000BP (bottom right). The fit lines represent linear, quadratic, cubic, and quartic 'best fit' lines.

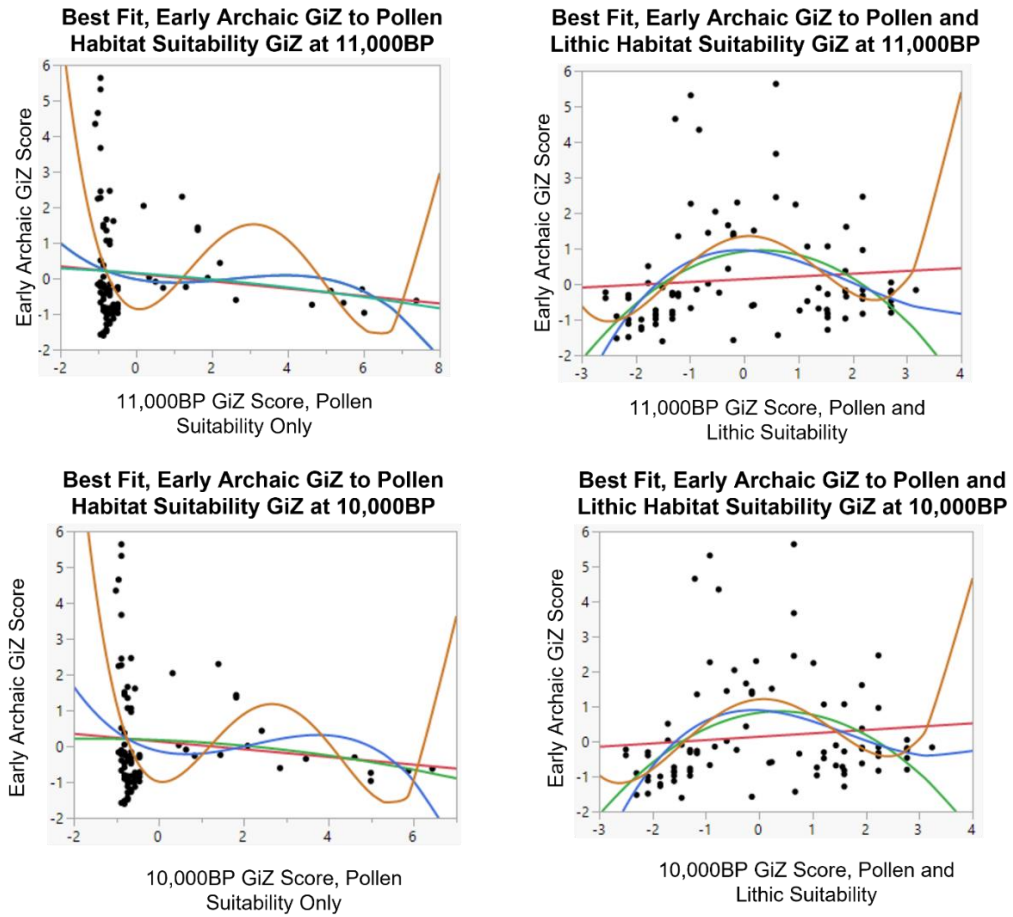

Figure 4.52: Linear and polynomial regression diagrams and fit lines for Early Archaic GiZ scores against fossil pollen habitat suitability GiZ scores at 11,000BP (top left), Early Archaic GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 11,000BP (top right), Early Archaic GiZ scores against fossil pollen habitat suitbaility GiZ scores at 10,000BP (botttom left) and Early Archaic GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 10,000BP (bottom right). The fit lines represent linear, quadratic, cubic, and quartic 'best fit' lines.

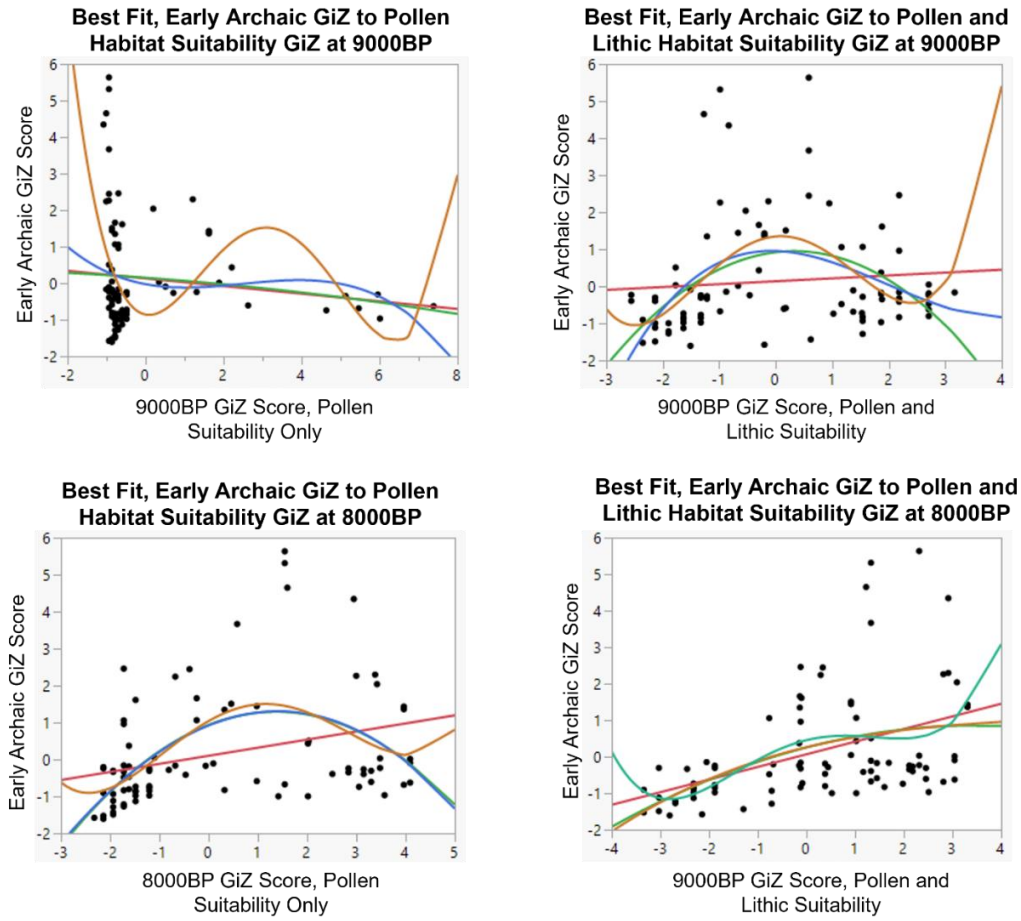

Figure 4.53: Linear and polynomial regression diagrams and fit lines for Early Archaic GiZ scores against fossil pollen habitat suitability GiZ scores at 9000BP (top left), Early Archaic GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 9000BP (top right), Early Archaic GiZ scores against fossil pollen habitat suitbaility GiZ scores at 8000BP (botttom left) and Early Archaic GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 8000BP (bottom right). The fit lines represent linear, quadratic, cubic, and quartic 'best fit' lines.

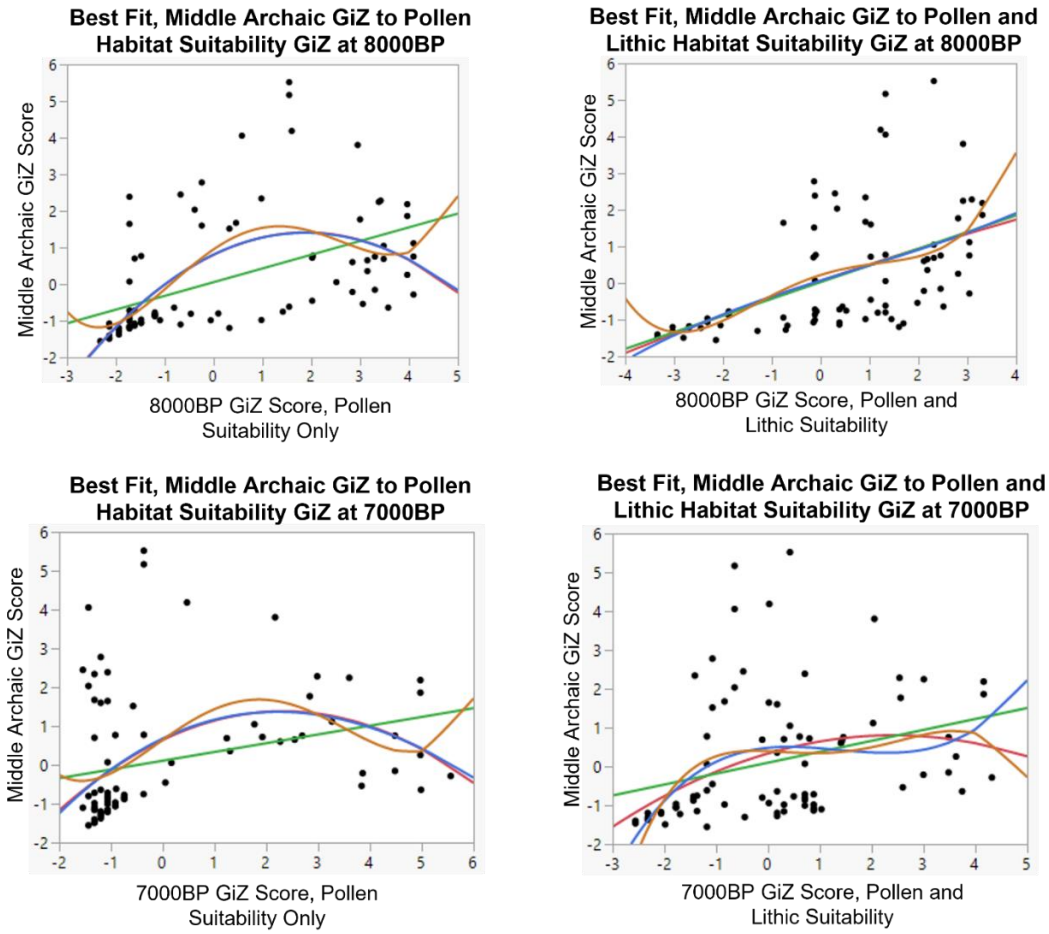

Figure 4.54: Linear and polynomial regression diagrams and fit lines for Middle Archaic GiZ scores against fossil pollen habitat suitability GiZ scores at 8000BP (top left), Middle Archaic GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 8000BP (top right), Middle Archaic GiZ scores against fossil pollen habitat suitbaility GiZ scores at 7000BP (botttom left) and Middle Archaic GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 7000BP (bottom right). The fit lines represent linear, quadratic, cubic, and quartic 'best fit' lines.

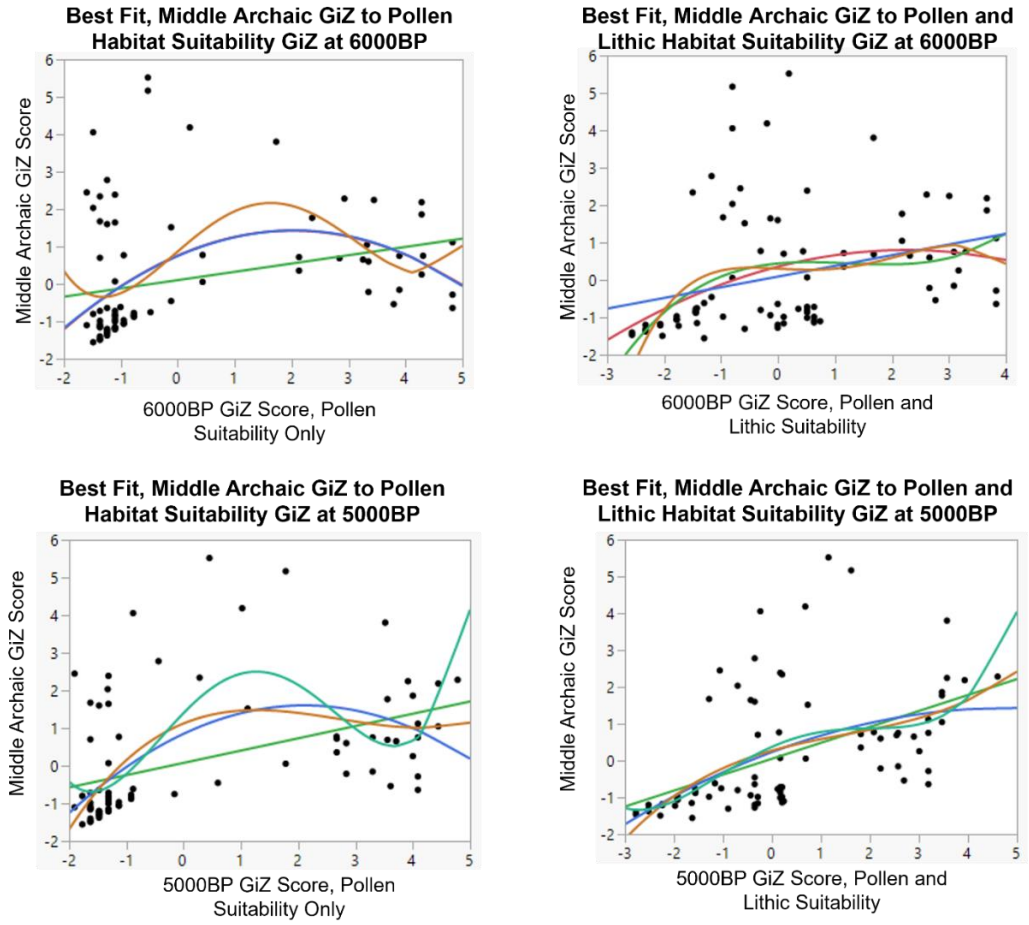

Figure 4.55: Linear and polynomial regression diagrams and fit lines for Middle Archaic GiZ scores against fossil pollen habitat suitability GiZ scores at 6000BP (top left), Middle Archaic GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 6000BP (top right), Middle Archaic GiZ scores against fossil pollen habitat suitbaility GiZ scores at 5000BP (botttom left) and Middle Archaic GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 5000BP (bottom right). The fit lines represent linear, quadratic, cubic, and quartic 'best fit' lines.

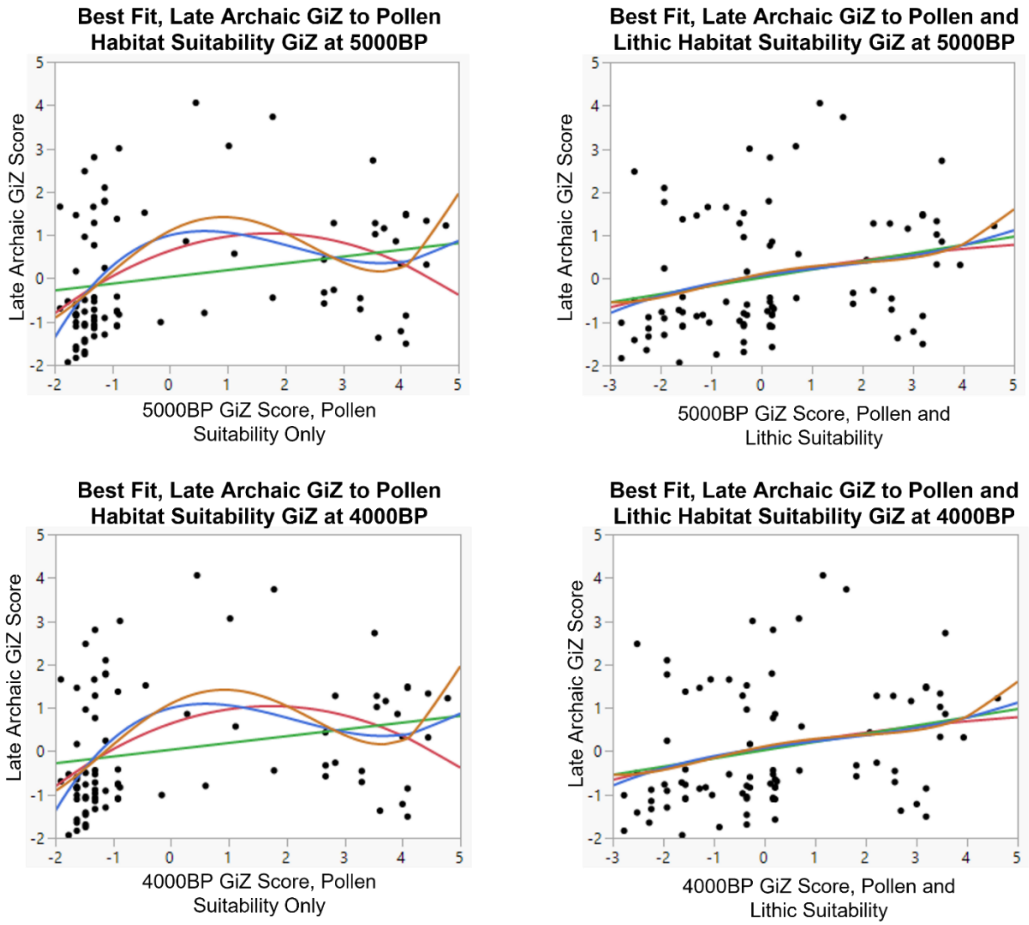

Figure 4.56: Linear and polynomial regression diagrams and fit lines for Late Archaic GiZ scores against fossil pollen habitat suitability GiZ scores at 5000BP (top left), Late Archaic GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 5000BP (top right), Late Archaic GiZ scores against fossil pollen habitat suitbaility GiZ scores at 4000BP (botttom left) and Late Archaic GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 4000BP (bottom right). The fit lines represent linear, quadratic, cubic, and quartic 'best fit' lines.

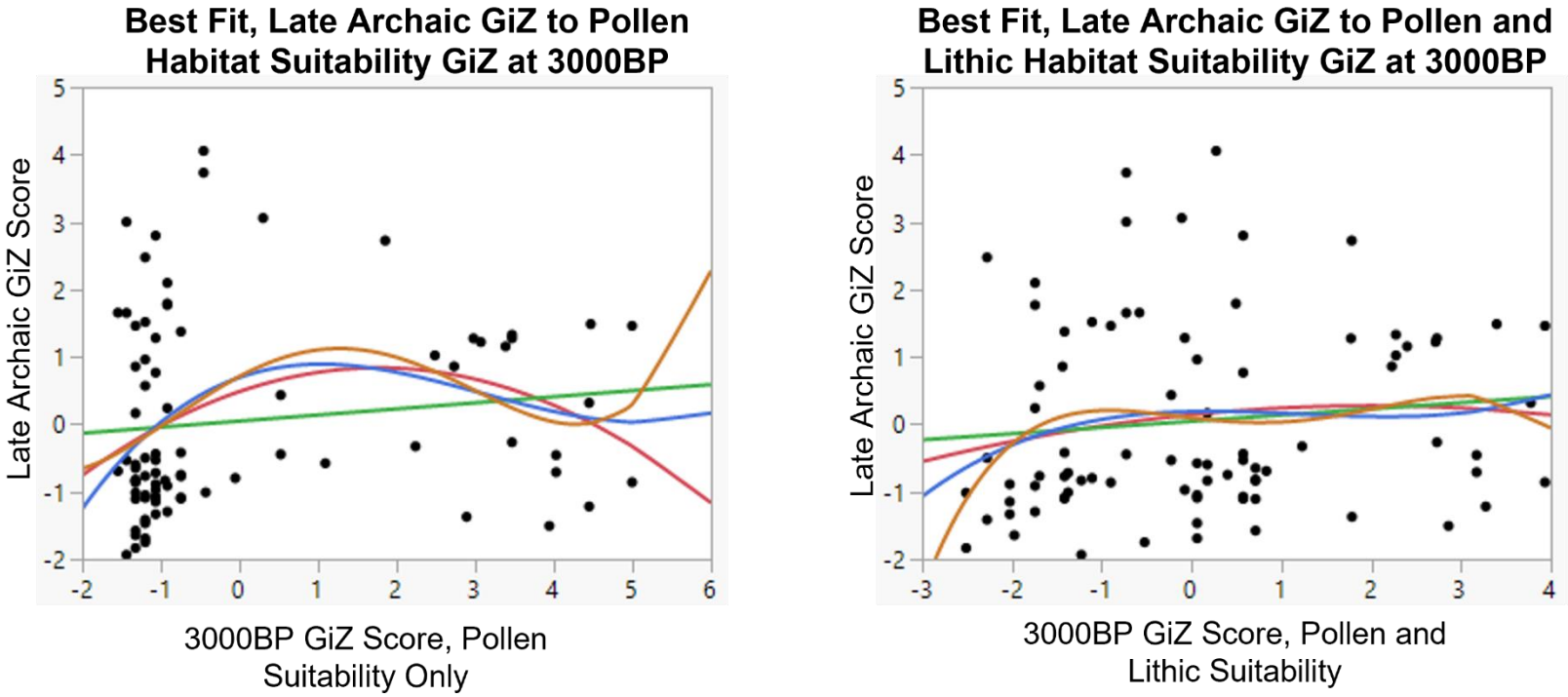

Figure 4.57: Linear and polynomial regression diagrams and fit lines for Late Archaic GiZ scores against fossil pollen habitat suitability GiZ scores at 3000BP (left), and Late Archaic GiZ scores against fossil pollen and lithic habitat suitability GiZ scores at 3000BP (right). The fit lines represent linear, quadratic, cubic, and quartic 'best fit' lines.

Table 4.1: Statistical validation of the MCM weather station outputs for temperature and precipitation centennial averages against the atmospheric inputs of the North American climate module (Agenbroad and Thayer 2019). Correlation coefficient values (r^2) are color coded green if they meet or exceed 0.95, yellow if they are between 0.9 and 0.95, and red if they are below 0.9. *p*-values are color coded green if they are less than 0.05 (low probability of random chance), and red if they exceed 0.05 (high probability of random chance).

Station	Location	Temperature		Precipitation	
		r^2	*p*	r^2	*p*
Charleston	Coastal Plain	0.971939	0.0001	0.921257	0.012208
Columbus	Coastal Plain and Piedmont	0.969559	0.0001	0.934466	0.007868
Experiment	Piedmont	0.971939	0.0001	0.945502	0.005044
Sapelo	Coastal Plain	0.969679	0.0001	0.95991	0.002391
Savannah	Coastal Plain	0.954591	0.0001	0.893116	0.025108
Tifton	Coastal Plain	0.962095	0.0001	0.903484	0.019766
Union	Piedmont	0.977164	0.0001	0.848636	0.05591

Table 4.2: Clovis GiZ score regression analyses. Correlation coefficient values (r^2) are color coded yellow if they are between 0.33 and 0.67 (moderate fit) and red if they are less than 0.33 (weak fit). *p*-values are color coded green if they are less than 0.05 (low probability of random chance), and red if they exceed 0.05 (high probability of random chance).

CLOVIS GiZ REGRESSION ANALYSIS				
Explanatory (X)	**Response (Y)**	**Polynomial Fit Degree**	**R^2**	***p***
13,000BP GiZ, Pollen	Clovis GiZ, PIDBA	Linear	0.03177	0.1006
		Quadratic	0.158256	0.0008
		Cubic	0.178926	0.001
		Quartic	0.200051	0.0011
	Clovis GiZ, GNAHRGIS	Linear	0.081366	0.0078
		Quadratic	0.084444	0.0257
		Cubic	0.084572	0.0632
		Quartic	0.124652	0.0275
13,000BP GiZ, Pollen and Lithic	Clovis GiZ, PIDBA	Linear	0.529692	0.0001
		Quadratic	0.533788	0.0001
		Cubic	0.560465	0.0001
		Quartic	0.599395	0.0001
	Clovis GiZ, GNAHRGIS	Linear	0.031097	0.1043
		Quadratic	0.068892	0.0517
		Cubic	0.078704	0.0799
		Quartic	0.123137	0.0292
12,000BP GiZ, Pollen	Clovis GiZ, PIDBA	Linear	0.001959	0.6857
		Quadratic	0.022708	0.3855
		Cubic	0.133422	0.0081
		Quartic	0.133798	0.0191
	Clovis GiZ, GNAHRGIS	Linear	0.047646	0.0435
		Quadratic	0.061321	0.0724
		Cubic	0.074538	0.0941
		Quartic	0.090171	0.1013
12,000BP GiZ, Pollen and Lithic	Clovis GiZ, PIDBA	Linear	0.284621	0.0001
		Quadratic	0.348486	0.0001
		Cubic	0.348673	0.0001
		Quartic	0.433121	0.0001
	Clovis GiZ, GNAHRGIS	Linear	0.056954	0.0269
		Quadratic	0.163404	0.0006
		Cubic	0.176218	0.0011
		Quartic	0.178897	0.0028

Table 4.3: Middle Paleoindian GiZ score regression analyses. Correlation coefficient values (r^2) are color red if they are less than 0.33 (weak fit). *p*-values are color coded green if they are less than 0.05 (low probability of random chance), and red if they exceed 0.05 (high probability of random chance).

MIDDLE PALEOINDIAN GiZ REGRESSION ANALYSIS				
Explanatory (X)	**Response (Y)**	**Polynomial Fit Degree**	**R^2**	***p***
12,000BP GiZ, Pollen	Middle Paleoindian GiZ, PIDBA	Linear	0.003717	0.5771
		Quadratic	0.003717	0.8568
		Cubic	0.089616	0.0516
		Quartic	0.104301	0.0603
12,000BP GiZ, Pollen and Lithic		Linear	0.258088	0.0001
		Quadratic	0.282578	0.0001
		Cubic	0.282579	0.0001
		Quartic	0.306163	0.0001

Table 4.4: Dalton GiZ score regression analyses. Correlation coefficient values (r^2) are color coded green if they exceed 0.67 (strong fit), yellow if they are between 0.33 and 0.67 (moderate fit) and red if they are less than 0.33 (weak fit). *p*-values are color coded green if they are less than 0.05 (low probability of random chance), and red if they exceed 0.05 (high probability of random chance).

DALTON GiZ REGRESSION ANALYSIS				
Explanatory (X)	**Response (Y)**	**Polynomial Fit Degree**	**R^2**	***p***
12,000BP GiZ, Pollen	Dalton GiZ, PIDBA	Linear	0.091542	0.0046
		Quadratic	0.091721	0.0185
		Cubic	0.117941	0.0158
		Quartic	0.124586	0.0276
	Dalton GiZ, GNAHRGIS	Linear	0.204945	0.0001
		Quadratic	0.307613	0.0001
		Cubic	0.354096	0.0001
		Quartic	0.36852	0.0001
12,000BP GiZ, Pollen and Lithic	Dalton GiZ, PIDBA	Linear	0.549582	0.0001
		Quadratic	0.692788	0.0001
		Cubic	0.693641	0.0001
		Quartic	0.726457	0.0001
	Dalton GiZ, GNAHRGIS	Linear	0.167374	0.0001
		Quadratic	0.167374	0.0005
		Cubic	0.27737	0.0001
		Quartic	0.328291	0.0001
11,000BP GiZ, Pollen	Dalton GiZ, PIDBA	Linear	0.119398	0.0011
		Quadratic	0.140527	0.0019
		Cubic	0.151955	0.0035
		Quartic	0.17078	0.004
	Dalton GiZ, GNAHRGIS	Linear	0.004349	0.5463
		Quadratic	0.004977	0.813
		Cubic	0.030672	0.4628
		Quartic	0.094824	0.0856
11,000BP GiZ, Pollen and Lithic	Dalton GiZ, PIDBA	Linear	0.323177	0.0001
		Quadratic	0.329555	0.0001
		Cubic	0.330623	0.0001
		Quartic	0.330711	0.0001
	Dalton GiZ, GNAHRGIS	Linear	0.013355	0.2893
		Quadratic	0.182941	0.0002
		Cubic	0.199288	0.0004
		Quartic	0.208947	0.0007

Table 4.5: Early Archaic GiZ score regression analyses. Correlation coefficient values (r^2) are color coded red if they are less than 0.33 (weak fit). *p*-values are color coded green if they are less than 0.05 (low probability of random chance), and red if they exceed 0.05 (high probability of random chance).

EARLY ARCHAIC GiZ REGRESSION ANALYSIS				
Explanatory (X)	**Response (Y)**	**Polynomial Fit Degree**	**R^2**	***p***
11,000BP GiZ, Pollen	Early Archaic GiZ	Linear	0.014719	0.2658
		Quadratic	0.014889	0.5366
		Cubic	0.021547	0.6156
		Quartic	0.112019	0.045
11,000BP GiZ, Pollen and Lithic		Linear	0.007284	0.4346
		Quadratic	0.160361	0.0007
		Cubic	0.174034	0.0013
		Quartic	0.209871	0.0007
10,000BP GiZ, Pollen		Linear	0.013043	0.2951
		Quadratic	0.01384	0.5608
		Cubic	0.028093	0.5029
		Quartic	0.133291	0.0195
10,000BP GiZ, Pollen and Lithic		Linear	0.010502	0.3478
		Quadratic	0.141762	0.0018
		Cubic	0.16167	0.0022
		Quartic	0.188515	0.0018
9000BP GiZ, Pollen		Linear	0.014719	0.2658
		Quadratic	0.014889	0.5366
		Cubic	0.021547	0.6156
		Quartic	0.112019	0.045
9000BP GiZ, Pollen and Lithic		Linear	0.007284	0.4346
		Quadratic	0.160361	0.0007
		Cubic	0.174034	0.0013
		Quartic	0.209871	0.0007
8000BP GiZ, Pollen		Linear	0.094794	0.0039
		Quadratic	0.233804	0.0001
		Cubic	0.233879	0.0001
		Quartic	0.242486	0.0001
8000BP GiZ, Pollen and Lithic		Linear	0.192802	0.0001
		Quadratic	0.204992	0.0001
		Cubic	0.205128	0.0003
		Quartic	0.221363	0.0004

Table 4.6: Middle Archaic GiZ score regression analyses. Correlation coefficient values (r^2) are color coded yellow if they are between 0.33 and 0.67 (moderate fit) and red if they are less than 0.33 (weak fit). *p*-values are color coded green if they are less than 0.05 (low probability of random chance).

MIDDLE ARCHAIC GiZ REGRESSION ANALYSIS				
Explanatory (X)	**Response (Y)**	**Polynomial Fit Degree**	**R^2**	***p***
8000BP GiZ, Pollen	Middle Archaic GiZ	Linear	0.246322	0.0001
		Quadratic	0.344937	0.0001
		Cubic	0.344964	0.0001
		Quartic	0.355959	0.0001
8000BP GiZ, Pollen and Lithic		Linear	0.296909	0.0001
		Quadratic	0.297292	0.0001
		Cubic	0.297598	0.0001
		Quartic	0.306276	0.0001
7000BP GiZ, Pollen		Linear	0.079084	0.0087
		Quadratic	0.142776	0.0017
		Cubic	0.142918	0.0053
		Quartic	0.154343	0.0082
7000BP GiZ, Pollen and Lithic		Linear	0.091843	0.0046
		Quadratic	0.121904	0.0045
		Cubic	0.146203	0.0046
		Quartic	0.160499	0.0063
6000BP GiZ, Pollen		Linear	0.07855	0.009
		Quadratic	0.138279	0.0021
		Cubic	0.138301	0.0065
		Quartic	0.163771	0.0055
6000BP GiZ, Pollen and Lithic		Linear	0.097988	0.0033
		Quadratic	0.126993	0.0036
		Cubic	0.144913	0.0048
		Quartic	0.16475	0.0052
5000BP GiZ, Pollen		Linear	0.19539	0.0001
		Quadratic	0.267388	0.0001
		Cubic	0.280165	0.0001
		Quartic	0.352975	0.0001
5000BP GiZ, Pollen and Lithic		Linear	0.261503	0.0001
		Quadratic	0.274612	0.0001
		Cubic	0.280293	0.0001
		Quartic	0.291978	0.0001

Table 4.7: Late Archaic GiZ score regression analyses. Correlation coefficient values (r^2) are color coded red if they are less than 0.33 (weak fit). *p*-values are color coded green if they are less than 0.05 (low probability of random chance), and red if they exceed 0.05 (high probability of random chance).

LATE ARCHAIC GiZ REGRESSION ANALYSIS				
Explanatory (X)	**Response (Y)**	**Polynomial Fit Degree**	**R^2**	***p***
5000BP GiZ, Pollen	Late Archaic GiZ	Linear	0.05885	0.0244
		Quadratic	0.117059	0.0057
		Cubic	0.145459	0.0047
		Quartic	0.158101	0.007
5000BP GiZ, Pollen and Lithic		Linear	0.066154	0.0168
		Quadratic	0.067126	0.0559
		Cubic	0.067972	0.1214
		Quartic	0.069337	0.2074
4000BP GiZ, Pollen		Linear	0.05885	0.0244
		Quadratic	0.117059	0.0057
		Cubic	0.145459	0.0047
		Quartic	0.158101	0.007
4000BP GiZ, Pollen and Lithic		Linear	0.066154	0.0168
		Quadratic	0.067126	0.0559
		Cubic	0.067972	0.1214
		Quartic	0.069337	0.2074
3000BP GiZ, Pollen		Linear	0.016748	0.235
		Quadratic	0.054686	0.0969
		Cubic	0.061687	0.1542
		Quartic	0.065723	0.2333
3000BP GiZ, Pollen and Lithic		Linear	0.012949	0.2968
		Quadratic	0.018331	0.464
		Cubic	0.023061	0.5882
		Quartic	0.03753	0.5353

CHAPTER 5

DISCUSSION

In the opening chapter, I introduced the research question guiding this study of hunter-gatherer Coastal Plains settlement. That is, can an ideal free distribution (IFD) model of human population establishment and expansion explain the settlement dynamics seen in the interior Coastal Plain of Georgia from the Late Pleistocene through Mid-Holocene (ca. 13,400 to 3200 cal BP)? I situated the culture history of the interior Coastal Plain within the broader narrative of hunter-gatherer behavioral ecological modeling, and generated a multivariate research design using IFD as the 'null hypothesis' for settlement pattern distributions. I compiled and ran the macrophysical climate model (MCM), using net primary productivity (NPP) estimates and biodiversity indices as quality control measures for the outputs. I used chronostratigraphically controlled isometric fossil pollen data (*sensu* Williams et al. 2004) to track the expansion and retraction of target arboreal taxa across the interior Coastal Plain landscape, and generated habitat suitability metrics (*sensu* Miller and Carmody 2020) to rank these arboreal taxa as both climate proxies and their relative utility to hunter-gatherers. I incorporated lithologic units into the habitat suitability metrics to identify if high quality tool stone locations correlate meaningfully to hunter-gatherer settlement patterns through time (Goodyear 2018; Smallwood et al. 2015). I then normalized both the environmental and archaeological data to run linear and polynomial regression statistics and investigate the degree of correlation habitat suitability locations have on archaeological site locations.

In this chapter, I discuss how IFD and IFD-variant settlement dynamics may have manifested in the interior Coastal Plain, and offer explanations for settlement pattern

shifts that deviate from expectations of IFD settlement. I revisit the four predictions of habitat variability and hunter-gatherer decision-making from Chapter 1, and assess the accuracy of the MCM and settlement modeling. I explore not only the impacts of, but also the *process* of variation and its impact on hunter-gatherer mobility, resource availability, and shifts in settlement patterns in the interior Coastal Plain.

Using IFD as the null model to investigate the distributions of diagnostic bifaces and archaeological sites, I contextualized the settlement histories of the interior Coastal Plain within the larger ecological and environmental histories of the lower southeastern United States. Based on the results of climate modeling, isometric fossil pollen mapping, and archaeological settlement pattern visualization, I suggest that the hunter-gatherer settlement dynamics of the interior Coastal Plain generally conform to the assumptions of IFD through the Late Pleistocene, through the duration of the Paleoindian period. The high amplitude climatic shifts from the Bølling-Allerød through the Younger Dryas (ca. 14,690-11,700 cal BP) provided the environmental backdrop for nearly 3,000 years of hunter-gatherer settlement strategies targeted around high quality arboreal and lithologic resources.

By the onset of the Holocene epoch and transition to the Early Archaic period (ca. 11,500 cal BP), archaeological settlement patterns contraindicate the optimality predictions of IFD. Instead, I believe the archaeological site clustering hotspots are more indicative of palimpsest occupations around common pool resources (*sensu* Ostrom et al. 2004) concentrated in the Piedmont. This ‘sub-optimal’ settlement pattern is consistent with IFD with Allee effect (Allee 1931), which hypothesizes that “socially obligate” societies (Winterhalder et al. 2010:473) work cooperatively to enhance the suitability of an environment.

By the onset of the Middle Archaic (ca. 8900 cal BP), this trend toward sub-optimal settlement clustering continues. The Middle Archaic period coincides with the

Holocene Climatic Optimum, a period of global warming during which time sea levels rose, monodominant pine overtook deciduous habitats across the lower latitudes of the Southeast, and hunter-gatherers of the interior Coastal Plain generally preferred higher latitude habitats with their varied resource bases and stable ecosystems. I argue that, similar to the preceding Early Archaic period, Middle Archaic sites continue to cluster in the Piedmont in areas where common pool resources (like hickory nuts) could be collected and stored, consistent with the positive density dependence assumptions of IFD with Allee effect.

Late Archaic (5800-3200 cal BP) settlement patterns deviate from preceding periods, with additional settlement hotspots in coastal counties. I argue that, while hotspots do not conform to IFD assumptions, they do suggest a shift toward ideal despotic distribution (IDD) and increasingly territorially circumscribed communities as population increased and residential mobility decreased. I discuss the IFD assumptions of each archaeological period in the following sections, contextualized within and expanding on the prevailing narratives for each period.

Late Pleistocene Settlement Dynamics

The cool and dry conditions of the Late Pleistocene throughout the interior Coastal Plain were the environmental backdrop for the in-migration of humans pushing east across North America. Much of the continent's potable freshwater was trapped in the Cordilleran and Laurentide ice sheets, which slowly ablated during the Bølling-Allerød interstadial, causing a global meltwater pulse (Fiedel 2022; Sowers and Bender 1995). The comparatively low water table necessitated the prioritization of settlement near sources of reliable freshwater (Anderson 1990, 1996a; Miller 2016). Humans moved rapidly across the continent, likely committed to hunting migrating herds of big game common to the Siberian tundra from which they came (Kelly and Todd 1988). In under a millennium, hunter-gatherers trekked across an unknown landscape, settling

every major biome within the continent and reached the Atlantic seaboard (Meltzer 2009:213). Prevailing theories of Late Pleistocene hunter-gatherer settlement suggest the high amplitude climatic fluctuations subsumed under the Bølling-Allerød and Younger Dryas destabilized Coastal Plain habitats to such an extent that populations were reliant on settling around the predictable locations of high quality tool stone (Anderson 1990, 1996a; Gardner 1974, 1977; Goodyear 1979; Daniel 1998, 2001). In the following sections, I examine the intersection of these theories with an IFD model of settlement and subsistence, and summarize the results into a ”behavioral ecology of lithic technology” (*sensu* Surovell 2009).

A Behavioral Ecology of Lithic Technology

I used the ideal free distribution (*sensu* Fretwell and Lucas 1969) as a null model to investigate the distributions of previously recorded diagnostic bifaces and archaeological sites across five watersheds with significant basin extents in the interior Coastal Plain of Georgia. Similar to previous investigations of Late Pleistocene settlement dynamics in other regions of the Southeast (Miller 2018; Miller and Carmody 2016, 2020; Cook Hale and Sanger 2020), IFD accurately predicts the earliest occupations of the interior Coastal Plain and Piedmont throughout the Late Pleistocene hunter-gatherer timeline. From the Bølling-Allerød through the end of the Younger Dryas, the highest suitability habitats I identified, based on fossil pollen frequencies and high quality lithologic units, correlated strongly with statistically significant clusters of Late Pleistocene diagnostics across all three temporal ranges. Using expectations derived from the IFD, humans should be expected to colonize interior Coastal Plain environments with the highest quality arboreal and lithic resources. When adjusting for space using county-normalized diagnostic densities, I demonstrated that prior to the onset of the Early Holocene, finished bifaces are concentrated in areas of reliably high quality arboreal and lithic resources. There is remarkable consistency in the significant

clusters of finished bifaces, even when the respective county densities change across periods. More than any other archaeological period in this study, high GiZ score clusters (hotspots) for diagnostic bifaces correlate strongly with the locations of high quality arboreal, and especially lithic, resources. While population levels did not approach densities that would result in a negative density dependence situation necessitating the relocation of conspecifics into lower ranked territories (Robinson et al. 2019; Winterhalder et al. 2010), habitat suitability and lithic resource availability undoubtedly influenced settlement locations.

The IFD-congruent results for Late Pleistocene settlement trends run counter to contemporary considerations of hunter-gatherer lifeways, which "view as anathema attempts to relate hunter-gatherer settlement patterns to the occurrence of tool-stone availability" (Daniel 2001:261). Some of the Coastal Plain lithic outcrops are restricted in space and quantity (Bridgman Sweeney 2013; Goad 1979; Goodyear 1979, 1989, 2018; Smallwood et al. 2015). The concentration of diagnostic biface locations near the Fall Line may be more indicative of tool stone preferences rather than ease of access or degree of mobility and curation (Daniel 2001; Surovell 2009; Thompson 2022). Because PIDBA records the location of fully-discarded diagnostic tools, the implication of finding significant concentrations of finished and discarded diagnostics is that hunter-gatherers were discarding tools where they could be easily replaced. Contrary to the spatial discard patterns expected with a "high technology forager" (HTF) adaptation (*sensu* Kelly and Todd 1988), this concentration of bifaces near areas of high quality lithic resources is more consistent with a "staging area" model of settlement and population growth (Anderson 1990, 1996a).

For the "high technology forager" model to manifest in the watershed extents of the study area, I would need to see discard patterns consistent with logistic and residential mobility (Binford 1980), with evidence of the "redundant archaeological

record" characteristic of the Early-to-Middle Paleoindian types (Anderson and Sassaman 1996a:32) found at a distance from lithic quarries. If HTF explains the spatial patterning of bifaces across the study region, I should see at least one of two potential patterns: (1) no significant clusters of diagnostics, reflecting the near-constant mobility and discard patterns anticipated by HTF; or (2) significant clusters of diagnostics within the study area where fossil pollen frequencies reflect the dominance of mast-producing taxa that provide forage for megafauna and other prey species. Instead, a variation of Anderson's "staging area" model better explains the statistically significant spatial patterns identified herein. According to the "staging area" model:

> …some of these initial populations slowed their movement, settling in for greater or lesser periods of time…Decreased group mobility may have prompted massive population growth…Residing in staging areas for extended periods would have also given these early populations the opportunity to familiarize themselves with the resources available in their new homeland (Anderson 1996a:36).

The patterns I see in the Late Pleistocene spatial arrangements of diagnostics on the landscape reflect Smallwood's (2010, 2012) characterization of Early-to-Middle Paleoindian settlement strategies. In comparing the "staging area" model and the HTF model of Late Pleistocene mobility and subsistence, she identified that Clovis diagnostics concentrated in the resource-rich Savannah River valley, one of the "staging areas" posited by Anderson for the lower Southeast (1996a). My results similarly reinforce Goodyear's (2018) argument that the Brier Creek drainage (separating the Savannah watershed from the Ogeechee watershed to the west) was a core "staging area" within Anderson's model. Similar to Gardner's Flint Run model (1974, 1977), Goodyear suggests the high quality chert outcrops in the Brier Creek drainage would have "tethered" band-level populations to the Middle Savannah region. Smallwood and colleagues (2015) reinforce Goodyear's Brier Creek tethering model, concluding that Early-to-Middle Paleoindian populations in Georgia targeted and mapped onto high

quality tool stone locations in the Coastal Plain. My results do not contraindicate any of these predictions of Early-to-Middle Paleoindian settlement; rather, they expand the prospective "staging area" locales to include much of the Fall Line zone, which would afford hunter-gatherers access to reliable, high quality tool stone and amplified "no analog" environmental conditions (Williams and Jackson 2007) by virtue of proximity to the Fall Line ecotone.

My results for Late Pleistocene Dalton horizon settlement are also consistent with interpretations made by Smallwood and colleagues (2015) for Late Pleistocene occupations of the interior Coastal Plain. They argued that Younger Dryas climate disruptions (coinciding with Dalton-using Late Pleistocene hunter-gatherer occupations) destabilized the coastal zone and much of the interior Coastal Plain. When faced with climatic instability and coastal margin transgression, Dalton-users tethered themselves to high quality tool stone outcrops in the Fall Line zone and areas north into the Piedmont. My climate models, fossil pollen frequencies, and hotspot analyses demonstrate that Dalton hotspot clusters retract toward the Piedmont during the same millennium that temperature and precipitation averages steeply decline in the Coastal Plain. Regression analyses similarly reinforce the notion that climate conditions and resultant arboreal pollen frequencies were a moderate-to-strong predictor variable for Dalton diagnostic clusters (Table 4.4).

Curated Technologies and Common Pool Resources

My results – settlement akin to low residential mobility "staging areas" around local raw material outcrops – while consistent with other interior Coastal Plain studies, are somewhat anomalous for broader southeastern Late Pleistocene settlement patterns. As it is currently understood, the earliest occupations of the Southeast are characterized as highly-mobile band-level populations using high quality, non-local raw materials to craft a curated toolkit (Bridgman Sweeney 2013:51; Charles 1986; Futato

1983a, 1983b; Goodyear et al. 2009; Kelly and Todd 1988; McGahey 1987; Miller et al. 2022a). Inherent in discussions of Late Pleistocene hunter-gatherers are concepts of mobility and resource availability, but these processes are never explained in trade or exchange contexts – socioeconomic processes and institutions assumed of most hunter-gatherer societies since the onset of the Early Holocene (Holland-Lulewicz et al. 2020; Thompson 2022). Instead, the concept of "curation" (Binford 1973:242) and long-term consideration of tool reuse dominates theorizing for Late Pleistocene societies. This concept of curation is where I perceive to be the most direct inroad to considerations of incipient trade, exchange, and accessibility relationships for Late Pleistocene hunter-gatherers. While IFD assumptions are met for the settlement *patterns*, I suggest the underlying *processes* behind these distributions extend beyond the quasi-environmentally deterministic lithic tethering strategies.

Models of technological organization must consider constraints like those imposed by restricted mobility (Binford 1977, 1979; Kuhn 1989, 1995; Shott 1986; Surovell 2009), raw material access and availability (Andrefsky 1994; Bamforth 1986), subsistence strategies and environmental structure (Bleed 1986; Torrence 1983, 1989), and the social contexts within which all these activities take place (Wiessner 1983). Mobility constraints impacting the use of curated technologies are a matter of recurring debate in Late Pleistocene studies (Bamforth 1986; Binford 1973, 1977, 1979, 1980; Hayden et al. 1996; Nash 1996; Shott 1996; Surovell 2009). Binford (1973) defined the curation strategy as "…a tool once produced or purchased is carefully curated and transported to and from locations in direct relationship to the anticipated performance of different activities" (Binford 1973:242). In later work, Binford associated the curation strategy with efficiency, or "use-life per manufacture time" (Surovell 2009:10), and suggested that curation is implicated in maintenance and recycling activities to prolong the use-life of a tool (Binford 1977). From this assumption, Binford suggested that the

degree to which tools are curated should correlate to organizational mobility. Logistic hunter-gatherers trend toward curated technologies because of their infrequent or seasonal moves, and 'foragers' use more expedient technology because of their ability to move people to resources (Binford 1980). Curation as conceived by Binford was seen as an optimization method of moving food to consumers – it "increased the efficiency of tools (by prolonging use-life) in terms of the work they performed relative to the investment made in their manufacture" (Surovell 2009:11). But in his conception of the forager-collector spectrum of organizational mobility, he failed to consider the impact that *availability of* or *access to* raw materials would have as a condition of the optimality of curation.

Bamforth (1986) investigated how organizational mobility is impacted by raw material availability, maintenance activities, and recycling strategies. In a similar fashion to the optimality assumptions of behavioral ecology, he suggested that hunter-gatherers attempt to maximize their efficiency through the creation of efficient technologies, defined as those that meet "the requirements of an activity or set of activities that constrain variation in all aspects of tool manufacture and use…with a minimum effort" (1986:39). His critique of Binford's curation concept was that "the different aspects of 'curation' are adaptations to different circumstances, implying that no single measure of technological 'efficiency' can be universally applied to explain them" (1986:39). According to Bamforth, access to raw materials is only one variable in calculations of hunter-gatherer technological efficiency. The subsequent movement of those materials (or lack thereof) is more than an indicator of mobility or a forager-collector strategy (Binford 1980) – it is indicative of the social realities that condition access to materials as well (Bamforth 1986:48-49). In other words, the *processes* behind the patterns of raw material movement and curation strategies necessitate consideration of the social

access to raw materials in addition to optimality decisions derived from distance to raw material sources.

Late Pleistocene diagnostic distributions, especially those made from non-local materials, fall outside even the broadest definitions of intentional exchange (Meltzer 1989). Rather than formal exchange relationships, the long distance movement of raw materials could be linked to other forms of resource sharing and the social relationships underpinning access to raw materials (Acheson 2015; Thompson 2022). Thompson (2022) suggests that high quality tool stone might have served as a common pool resource (CPR) for Late Pleistocene populations. Common pool resources are defined in terms of subtractability and costs of exclusion (*sensu* Ostrom et al. 2004):

> Common pool resources are subtractable, such that one person's use detracts from someone else's use of the resource. It is also costly to exclude others from using the resources once they are produced…In most instances, one will not go too far astray to think of private goods or resources as controlled by individuals, while rights to common pool resources are held by groups (Acheson 2015:28-29).

According to Thompson (2022), high quality tool stone is fixed to specific places on the landscape, allowing for some degree of control over and access to outcrops and quarries. Additionally, some high quality tool stone sources are highly circumscribed and limited in quantity, making their economic defendability high (Acheson 2015:29; Dyson-Hudson and Smith 1978:23). For lithic outcrops to be considered a common pool resource, the costs of excluding individuals or groups from accessing the outcrops must be high relative to the perceived value of the resource (Acheson 2015; Cashdan 1983; Demsetz 1967; Dyson-Hudson and Smith 1978).

The Late Pleistocene GiZ hotspots I identified in the Middle Savannah and Middle Ogeechee watersheds occur in counties dense with Allendale-Brier Creek chert outcrops, considered by Late Pleistocene hunter-gatherer specialists in this region to be among the highest quality cryptocrystalline tool stone sources in the Southeast (Daniel

1996; Daniel and Goodyear 2018; Goad 1979; Goodyear 1979, 2018; Upchurch 1984) (Figure 5.1). Following Thompson (2022), I suggest this high quality, circumscribed raw material and its macroregional distributions are proxy correlates for large-scale social relationships, akin to the “bandscapes” described by Bridgman Sweeney (2013:305) for the Early Archaic period manifested on the landscape as early as the initial Clovis-using occupations of the Southeast, nearly 2,000 years earlier than the widely-accepted macroband model for the Early Archaic period (Anderson and Hanson 1988).

The Allendale-Brier Creek Clovis technocomplex (ABCC) is inclusive of the quarry locations in the Middle Savannah and Middle Ogeechee watersheds in Georgia and South Carolina where the most extensive outcrops of ABCC and Ogeechee cherts (variants of Coastal Plain cherts) are found. Late Pleistocene assemblages within this technocomplex are differentiated in subtle ways from the broader southeastern Clovis tool kit. Diagnostics from this regional assemblage have excurvate blades (Morrow 1996), differential fluting techniques (Smallwood 2010), prismatic blade technologies in direct association with Clovis components (Bradley et al. 2010; Collins 1999; Goodyear 1999; Sain 2012), and biface curation via retouch strategies (Goodyear 2018:254; Sain and Goodyear 2012). In describing the quarry areas within the ABCC district, Goodyear (2018) suggests “…these sites are not just quarries, as evidenced by the large numbers of tools. Situated as they are…a more subtropical climate and biota as well as adaptive strategy may have been operating” (256).

This “adaptive strategy,” I suggest, is likely some combination of the loosely-integrated incipient macrobands identified in the region by the Early Archaic period (Anderson and Hanson 1988; Bridgman Sweeney 2013) and the embedded procurement strategies characteristic of Anderson’s “staging area” model (1990, 1996a). The resulting settlement landscape would include “staging areas” in resource-rich areas like “the intersection of major rivers, physiographic boundaries, and lithic raw material

sources" (Miller 2016:697) within larger established macrobands "linked by appropriately distant kinship within larger-scale networks" (Daniel and Goodyear 2018:240). This level of formality and spatial understanding "has important implications when we consider population scaling vis-à-vis mobility and duration of aggregation" (Thompson 2022). The distribution of these "staging area" sites is non-uniformly distributed in several major watersheds across the Southeast, including the Ohio, Tennessee, and Cumberland watersheds in addition to areas of the Coastal Plain like the Middle Savannah River valley (Anderson 1996a; Anderson et al. 2010; Anderson and Sassaman 2012; Miller 2016; Smallwood 2012). Diagnostic variation is higher in these regions, and in the broader Southeast more generally, than in other regions like the Northeast (Eren et al. 2016; Meltzer 1984) or Southwest (O'Brien et al. 2014). This variation in form within the context of embedded procurement suggests the Kelly and Todd (1988) "high technology forager" adaptation of high residential mobility slowed as diet breadth broadened with the increased biodiversity of the Eastern Woodlands, interpretations supported by both my NPP estimates (Figures 4.3 and 4.4) and fossil pollen projections of habitat suitability (Figures 4.7 through 4.9) (Hollenbach and Carmody 2022).

According to Daniel and Goodyear (2018), the regional organization of macrobands "requires adequate control of lithic raw material sources, which can be reliably traced over the landscape as a measure of settlement range" (2018:240). As proof of concept, they provide raw material evidence for what they believe to be two contemporary and adjacent macrobands, each centered on separate high quality tool stone outcrops – the Allendale-Brier Creek cherts of the Middle Savannah and Middle Ogeechee watersheds, and the metavolcanic rhyolites of the Uwharrie Mountains in North Carolina (Figure 5.2). The ABCC cherts dominate Clovis and Middle Paleoindian assemblages in the Middle Savannah watershed region. The patterned distribution within the Middle Savannah, and conspicuous lack of distribution in adjacent areas west

of the river valley, offers the possibility that this pattern could represent the geographic range of a macroband centered on the use and control of the ABCC chert outcrops (Daniel and Goodyear 2018:242). They identify a possible boundary between chert-users and metavolcanic rhyolite-users near the confluence of the Saluda-Congaree-Santee Rivers in northern South Carolina (Figure 5.3). Local sedimentary raw materials in the boundary regions of these macrobands were used in lower frequencies than the non-local, high quality raw materials characterizing the majority share of raw materials within the proposed macroband extents. The authors suggest that bands were bringing tools with them from the ABCC chert and Uwharrie rhyolite outcrops rather than residing within the surrounding region long enough to incorporate local tool stones into their tool kits (Daniel and Goodyear 2018:243). Interestingly, the Saluda-Congaree-Santee watershed boundary between the macrobands contains sites with nearly equal proportions of both ABCC chert and Uwharrie rhyolite tools, interpreted as the aggregation zone (*sensu* Anderson and Hanson 1988) between macroband territories where interaction and exchange occurred (Daniel and Goodyear 2018:246).

My results articulate well with the prevailing narratives for Late Pleistocene regional settlement systems, but strengthen their conclusions through direct application of process-driven theory. I argue that, when investigating the processes behind regional distributions of diagnostics, consideration of the “social means of access” (Thompson 2022) surrounding curated technologies, embedded procurement, and long-range movement of raw materials is a necessary step in understanding Late Pleistocene settlement systems. Characterizing the social landscape and drivers for patterned variation in material culture moves us beyond conceptualizing these environments as purely functional. And consideration of high quality tool stone sources like the ABCC chert outcrops in the study area as common pool resources (*sensu* Thompson 2022) within these macroband locales brings us closer to envisioning Late Pleistocene

populations as equally capable of developing incipient rules and regulations among and between groups regarding control of resources.

Early Archaic Settlement Dynamics

The Younger Dryas terminated abruptly between ca. 11,600 and 11,700 cal BP, after nearly 1,200 years of progressive cooling and diminished precipitation across the Southeast (Alley 2000; Alley et al. 1993). The onset of the Early Holocene is also the traditional separation between the Paleoindian and Archaic periods, characterized by the infilling of the southeastern landscape via Archaic period population increase, regionalization of tool forms vis-à-vis decreased residential mobility, and a generalized foraging strategy (Anderson 1996a; Anderson and Hanson 1988; Anderson and Sassaman 1996b, 2012; Anderson et al. 2015; Cleland 1976:69; Miller et al. 2022a). Models of Early Archaic settlement generally focus on hunter-gatherer organizational mobility in the context of environmental shifts at the end of the Younger Dryas (Anderson and Hanson 1988; Asch and Asch 1985; Caldwell 1958; Elliott 2006; Goodyear 1974; Hollenbach 2009; Hollenbach and Carmody 2022; O'Steen 1996).

Landscapes and Bandscapes

The Late Pleistocene-Early Holocene transition is generally considered a period during which hunter-gatherer mobility progressively decreased and diet breadth increased, viewed as a response to the post-glacial climatic conditions of the Early Holocene (Anderson and Sassaman 1996b, 2012; Brose 1979; Ford 1977; Sassaman 2010; Sassaman and Anderson 1996; Sassaman et al. 1988; Smith 1986; Steponaitis 1986). This "transitional" period in the culture-historical timeline of the Southeast encompasses the shift from big game hunting and focal, specialized Late Pleistocene adaptations (*sensu* Cleland 1976) to the diffuse or generalized foraging strategy of the Archaic period (Anderson and Hanson 1988:262).

Two opposing viewpoints have characterized the historical trajectory of Early Archaic settlement models: (1) those who believe settlement systems emphasize logistically-based organizational strategies (Binford and Binford 1966) of the base camp/extraction camp pattern (Chapman 1985; Gardner 1977; Goodyear et al. 1979; House and Wogaman 1978); and (2) those that emphasize residential mobility (Anderson and Schuldenrein 1983; Claggett and Cable 1982). All agree that a relationship exists between environmental resources and human subsistence strategies. Anderson and Hanson (1988), using an evolutionary ecological approach, suggest that specialized foraging should be favored in patchy environments, while generalized foraging would be expected in more homogeneous environments (after Pianka 1978). They test the assumption that the emergence of a dense hardwood canopy in the Coastal Plain during the Late Pleistocene-Early Holocene transition would have resulted in the concomitant development of increasingly mobile foraging adaptations among hunter-gatherers (Anderson and Hanson 1988:264). They provide an explanation for how this settlement strategy would play out in the Savannah River valley:

> During the Late Pleistocene in the southeastern United States, centralized settlements might be expected early on, when environmental change presumably was greatest. Increases in residential mobility, in contrast, would emerge as the mesic forest canopy closed, leading to a more homogeneous regional environmental structure…During winter, a time of low plant availability and high deer aggregation, when resources were most patchy and unpredictable, base camps would be most likely. Over the remainder of the year, when resources were more evenly distributed and predictable, greater residential mobility would be expected (Anderson and Hanson 1988:266).

Interestingly, Anderson and Hanson (1988:266) also indicate the importance of information sharing in the creation of settlement and subsistence systems during the Early Archaic. They suggest that disseminating information to other groups about anticipated foraging behaviors helps guarantee exclusive use of resources, and assumes some cooperative interaction in the protection and avoidance of certain areas. According to this model, periodic macroband aggregations were an “insurance” (*sensu*

Thompson 2022) meant to circumvent redundant land use and ease tensions between proximate groups as the landscape became more densely populated.

The band/macroband model posits an annual settlement round of winter base camps in the Piedmont and foraging camps dispersed in a watershed-extensive pattern from the coast and up through the Coastal Plain through the remainder of the year (Figure 5.4) (Anderson and Hanson 1988:267). Periodic macroband aggregations at the edges of watershed-extensive territories are expected, and serve to promote efficient patterns of land use, encourage exchange, and keep bands biologically viable through cross-drainage mating networks. The archaeological manifestations of this band/macroband model include the long-distance movement of finished bifaces (up to 300km from the source) in a gradual fall-off pattern from the outcrop location (Figure 5.5). This gradual drop-off in raw material occurrences should indicate that minimal social boundaries exist and a relatively low-density population is moving long distances across the landscape (Anderson and Hanson 1988:271). This hypothesis contains some validity outside of the Savannah River valley. The Davis Plantation site in Burke County within the Ogeechee watershed (Figure 2.8) contains finished bifaces of non-local Ridge and Valley cherts, which originate in northwestern Georgia, over 300km distance from their depositional location (Figure 5.6).

For Early Archaic site distributions to conform to the expectations of IFD, I should see densities (but not necessarily hotspot clusters) expanding into medium suitability areas as a product of population expansion at the onset of the Early Holocene (Winterhalder et al. 2010:471). In addition to the high suitability areas of the Fall Line Zone and northern Piedmont, I would expect to see Early Archaic site densities throughout most of the Piedmont region and northern Coastal Plain (Figures 3.6, 4.9 through 4.12). High suitability areas near the Fall Line and northern Piedmont should have the statistically significant densities (high GiZ score hotspot clusters) of Early

Archaic sites, signaling either repeated occupations of the same high suitability areas or locations where the majority of the population is located. Early Archaic sites should be more widely distributed than the preceding Late Paleoindian Dalton horizon, but still biased toward the highest suitability areas within the watersheds (Miller and Carmody 2020:6).

GiZ hotspots clustered in the central Piedmont, with highly significant clustering in Oconee, Greene, and Morgan counties – all of which contain outcrops of high quality Piedmont chert (Smallwood et al. 2015). Significant site clustering in the central Piedmont did not correlate with habitat suitability metrics for any millennium intersecting with the Early Archaic period (Table 4.5). Low statistical correlation between site clusters and habitat suitability reflects the much wider distribution of sites across the study area, which prevents significant correlation between a single habitat type (in this case, high or very high habitat suitabilities) and relative site densities. Correlation statistical results for the Early Archaic period do not meet the expectations of IFD. The distribution and density of sites (Figure 4.38) was more evenly distributed across habitat types and landscapes than predicted by IFD settlement in the high and medium suitability areas. Hotspot density clusters are likely more indicative of remnant occupation in the Piedmont post-Younger Dryas settlement configurations and community conceptions of landscapes tied to shared social memories of reliable resources (Bender 2002; Bridgman Sweeney 2013; Tilley 1994). Early Holocene population expansion may have led to settlement in areas beyond what is predicted by IFD, into less optimal environments with different significance to hunter-gatherers. This non-conformity with IFD is consistent with broader patterns of Early Archaic site distributions across the Southeast, where Anderson (1996a) has argued that Early and Middle Archaic site densities became more concentrated in river valley bottomlands.

Nuts and Rocks: "Predictable Prey"

The behavioral shifts of the Early Archaic in hunter-gatherer subsistence and mobility practices are frequently attributed to the renewed focus on nut mast procurement, especially that of hickory (Carmody 2014; Hollenbach and Carmody 2022:237; Peres 2017; Thompson 2022). Hickory nutshell is archaeologically durable, and a robust carbonized remain in site assemblages as opposed to carbonized wood, acorns, and smaller seeds (Hollenbach and Carmody 2022:230; Lopinot 1984; Miksicek 1987; Pearsall 2000; Popper and Hastorf 1988). Because of its durability, hickory is sometimes overrepresented in subsistence assemblages over more fragile remains. By the Early Archaic period across the Southeast, hickory nutshell is ubiquitous in feature contexts, and dominates subsistence remains in both count and weight (Hollenbach and Carmody 2022:234). Social shifts are also implicated in this renewed focus on nut mast products. Among modern foraging groups living outside of marginal or extreme climate conditions, plant foods comprise at least half of hunter-gatherer diets (Hollenbach and Carmody 2014:230; Keeley 1999; Kelly 2013). Ethnohistoric and contemporary hunter-gatherer analogs indicate gathering activities were directed by women, children, and elders (Bird and Bird 2005; Bliege Bird 1999; Blurton Jones et al. 1994; Hill et al. 1987; Hurtado et al. 1985; Hurtado et al. 1992; Marlowe 2005; O'Connell and Hawkes 1981). Various nut taxa (including hickory) reach their peak availability in the autumn, usually in October (Hollenbach and Carmody 2022:234; Petruso and Wickens 1984; Talalay et al. 1984).

By the Early Archaic, population expansion and organizational mobility strategies may have led to the targeted collection of hickory mast products at upland sites, evidenced by the hotspot clusters of sites in the central Piedmont region where mesic cool-temperate taxa existed in the highest frequencies after the onset of the Early Holocene (Figure 4.44) (Hollenbach and Carmody 2022:237; LaMoreaux et al. 2009;

Watts 1975b, 1980). As a masting tree, hickory only produces sizeable yields every two to five years (Carmody 2014; Fritz et al. 2001; Schopmeyer 1974). Early Archaic foragers, especially women and children, may have targeted their seasonal activities around the collection of hickory nuts – the "most predictable prey" (*sensu* Hollenbach and Carmody 2022) – at upland Piedmont sites in years when the harvest would be predictable. The site densities seen in my GiZ scores, rather than demonstrating a dense residential population, could indicate palimpsest occupations of repeated ventures to sites where predictable mast products and high quality lithics were found.

Given the intensity of nut mast harvesting during the Early Archaic, its ubiquity at sites from this period, and the coordinated activities of women and children in its collection and preparation, I suggest that hickory nut mast was likely another CPR in addition to tool stone (after Thompson 2022). As mentioned previously, Early Archaic settlement does not conform to IFD predictions. Early Archaic sites are significantly clustered in areas north of the Fall Line that are not considered the highest suitability landscapes as I have defined them. I suggest the Piedmont site clusters, while sub-optimal for IFD predictions, are culturally significant regions with high density mast production that provisioned their Late Pleistocene ancestors during the Younger Dryas. This area retains additional utility as a source region for Piedmont chert outcrops (Smallwood et al. 2015).

As populations expanded during the Early Archaic, this region remained densely and significantly settled, likely because of the "anticipated surplus" offered by the reliable mast harvest. Thompson (2022) defines "anticipated surplus" as "places where resources are restricted in both time and space and are frequently reoccurring or replenished." The labor of task-oriented groups of women and children promoted cooperation and commitment to the landscapes that produced this anticipated surplus, not unlike the predictions of IFD with Allee effect (IFDA) (Figure 1.3), which suggest that

"socially obligate" societies (Winterhalder et al. 2010:473) will cooperate to enhance the suitability of an environment. Positive density dependence increases the overall habitat suitability of environments that necessitate cooperative investment in resource acquisition or use (Allee 1931; Stephens et al. 1999). As a socially organized and time-intensive subsistence activity, hickory nut collection may have served as the social context within which positive density dependence Allee effects manifested across the landscape. When assessed through the negative density dependence assumptions of IFD, Early Archaic site distributions do not conform to predictions. Sites are located in areas that are not considered high suitability. But when assessed through the lens of IFDA predictions, the cultural significance of remaining in a landscape that provisioned ancestors in addition to the social necessity of group labor around hickory nut collection aligns with positive density dependence assumptions of IFDA.

Bridgman Sweeney (2013), in a multi-state study of Early Archaic diagnostic tool forms, suggests that 'kinscapes' or 'bandscapes,' within the larger southeastern social landscape, are a more appropriate way of viewing Early Archaic adaptive strategies and macroband relationships. Based on patterned similarities in raw materials and forms within the Early Archaic side-notched biface tradition, she identified three macrobands which occupied multi-drainage environments, expanding the predictions of the watershed-extensive band/macroband model of Anderson and Hanson (1988) (Figure 5.7). The regional scale of social interaction manifested through cross-drainage similarities in tool forms, long-distance movement of raw materials, and rapid infilling of the landscape led Bridgman Sweeney to consider the entire Coastal Plain landscape as a *bandscape*, or "a collectivity of multiple macrobands who were engaged in broadly similar cultural traditions" (Bridgman Sweeney 2013:305). I believe Bridgman Sweeney's consideration of a broad regional bandscape model for Early Archaic interaction is the social setting within which the long-distance exchange relationships characterizing

Middle Archaic settlement systems are embedded, and from which regional interaction spheres developed.

Middle Archaic Settlement Dynamics

Climatic conditions near the end of the Early Holocene were characterized by progressively warming temperatures that reached near-modern averages by the onset of the Middle Holocene (ca. 8200 cal BP) and the Holocene Climatic Optimum (HCO), ca. 9000-5000BP. The HCO was a climatic period of extended warm temperatures, coinciding with the retraction of mesic mixed deciduous taxa into higher latitudes and the expansion of pine across the Southeast (LaMoreaux 1999; LaMoreaux et al. 2009; Watts et al. 1996). Paleodischarge estimates indicate that "wetter than modern climatic conditions existed during the first part of the Holocene (~8.5-4.5 ka [*~9300-5000 cal BP*])" in the lower Coastal Plain (Leigh and Feeney 1995:689), roughly coinciding with the HCO. The pollen record reflects the dominance of pine species by at least 4500 cal BP, with fossil pollen interpolations indicating the replacement began as early as 7000BP (Figure 4.28) (LaMoreaux et al. 2009). Pollen concentrations during the Middle Holocene are lower than those dating to the Early Holocene, suggesting an overall thinning of the forest canopy, consistent with millennial- and archaeological period-averaged NPP estimates that indicate Middle Archaic biomass outputs are lower than any other period (Figures 4.3 and 4.4).

Hunter-gatherer settlement and subsistence strategies during the HCO are typically explained as ecological adaptations to changing environmental conditions (Shah and Whitley 2009:48), with highly mobile foraging populations characterizing organizational mobility for the period. The Middle Archaic is also defined by the manufacture and discard of a more expedient lithic technological tool kit (Anderson 1996b; Blanton and Sassaman 1989; Claggett and Cable 1982; Sassaman 1991). The ubiquity of the perceived low-quality Morrow Mountain diagnostic biface from this period

is “unlikely to represent the presence of dense populations but instead reflect(s) the remains of small, organizationally uncomplicated groups ranging widely over the landscape” (Anderson 1996b:164). Site densities in the Coastal Plain decline, interpreted as a response to the spread of pine and xeric environmental conditions, and use of the interior Coastal Plain is limited to lithic outcrops and major river valley bottomlands (Anderson 1996a; Anderson and Sassaman 2012).

Adaptive Flexibility?

The Middle Holocene initiated thousands of years of postglacial climatic warming and rising sea levels resulting in near-modern climate and vegetation analogs (Delcourt and Delcourt 1983, 1984, 1985; LaMoreaux et al. 2009). Researchers generally agree that the late Early Holocene and onset of the Holocene Climatic Optimum were characterized by patchy and less predictable resources throughout the Coastal Plain as mixed deciduous taxa retracted to higher latitudes. This environmental fluctuation understandably impacted the subsistence strategies of Middle Archaic hunter-gatherers (Claggett and Cable 1982; Ward and Davis 1999:63). These shifting subsistence strategies are widely considered the most probable explanation for the shift in lithic technology during the Middle Archaic from higher quality non-local materials to almost exclusive use of locally available raw materials in the construction of a more expedient technology in both the Piedmont and Coastal Plain (Anderson and Sassaman 2012; Blanton 1983, 1984; Sassaman 1991). Hunter-gatherers living through the Holocene Climatic Optimum increasingly used locally available raw material resources to craft a less curated and more expedient technological tool kit (Blanton 1983, 1984; Blanton and Sassaman 1989; Goodyear et al. 1979; House and Ballenger 1976; Sassaman 1983, 1991).

Three separate hypotheses have been offered to explain the differentiation between Early Archaic and Middle Archaic tool kits. One suggests the transition to using

locally available raw materials was a result of limited access to high quality raw material sources, suggesting some economic benefit for groups restricting access to lithic raw material outcrops (Acheson 2015; Cashdan 1983; Dawson 2016:55; Dyson-Hudson and Smith 1978; Sassaman 1991:37; Rose 1994). Another hypothesis correlates increased sedentism with decreased use of high quality non-local lithics, but does not necessarily offer an explanation for decreased mobility (Goodyear et al. 1979:111). A third explanation attributes the use of locally available raw materials and expedient technologies to incipient territorial circumscription and decreased territory sizes as a result of population increase and regionalization during the Middle Archaic (Blanton and Sassaman 1989).

Middle Archaic Piedmont sites tend to be evenly distributed between riverine and interriverine environments (Sassaman 1983). Coastal Plain sites are more concentrated in smaller tributary basins instead of broad floodplains (Elliott and Sassaman 1995; McMakin and Poplin 1997; Williams et al. 2010:83). Anderson (1996b) suggests the differentiation between Piedmont and Coastal Plain Middle Archaic settlement patterns is attributed to the expansion of pine and spread of swamplands as temperatures and sea levels rose during the HCO. Shah and Whitley (2009:11-12) similarly argue that the open canopy structure of southeastern pine forests created a heterogeneous and unstable resource structure. They consider site densities in the Piedmont reflective of a more stable mixed deciduous resource base (Goman and Leigh 2004). The Middle Archaic hunter-gatherer presence in the Coastal Plain and Piedmont of Georgia and South Carolina is defined by its redundant lithic assemblage which prioritizes expediency over curation and locally available and abundant raw materials (including quartz) over higher quality cherts (Blanton 1983, 1984; Goodyear et al. 1979; House and Ballenger 1976; Sassaman 1983, 1991).

Sassaman (1991) proposed the “Adaptive Flexibility” model to explain Morrow Mountain Middle Archaic organizational mobility and settlement strategies, specifically for the South Carolina Piedmont. He attributed the expedient technologies and high residential mobility of Middle Archaic populations with easy access to local sources of lithic raw material and an egalitarian or flexible social system. The three characteristics of this “adaptive flexibility” model and immediate-return economy – frequent residential mobility, expedient and unspecialized technology, and individual access to raw materials – created a flexible social system where individuals had limited social debt and where society was generally egalitarian in nature (Sassaman 1991:38). Sassaman argues that, because social organization was “homogeneous” (1991:35), it would be easy for Morrow Mountain-era hunter-gatherers to adapt this strategy to any environment.

The Coastal Plain, in comparison, was a heterogeneous and unstable landscape, a product of rising temperatures and the spread of pine. His hypothesized settlement strategy for the more unstable Coastal Plain was circumscription around high quality resources and “accentuated resource disparity” (Sassaman 1991:37). His example for this protected resource is the Brier Creek lanceolate, local to the Allendale-Brier Creek region of the Middle Savannah and Ogeechee watersheds, considered to be both coeval with the post-Morrow Mountain Guilford technocomplex and reflective of production beyond individual consumption (Sassaman 1991:37). Sassaman suggests that, based on the perceived quality of tools created from this high quality raw material in a form distinct from other bifaces from the period, this location may “signify the activity of part-time specialists engaged in production for exchange” (Sassaman 1991:37).

One complicating consideration in this “adaptive flexibility” model of Middle Archaic settlement is that there are no explanations for why, if Middle Archaic lifestyles were so highly mobile and socially flexible, individuals did not access high quality lithic raw materials from source locations. Additionally, this model does not align with Binford’s

forager-collector model (1980) or ethnographic research in other temperate environments, which indicates heterogeneity of resources was responsible for high residential mobility:

> The residential mobility system is used by groups of hunter-gatherers when resources are widely scattered and perhaps scarce. The group moves en masse through the exploitive territory; the people 'map on' to their resources by these moves (Phillips 1987:175).

The Middle Archaic is also known for the development and amplification of intergroup social and exchange networks, sometimes spanning great regional distances across the Midsouth and lower Southeast (Jefferies 1997; Johnson 1994; Johnson and Brookes 1989; Sassaman and Anderson 1996; Thompson 2022). In addition to providing access to resources and trade items like bone pins (Jefferies 1997), bannerstones (Burdin 2004; Sassaman and Randall 2007), and exotic raw materials (Johnson 1994; Johnson and Brookes 1989), these networks signaled access to and membership in regional social groups where members could be relied on in times of economic or environmental stress (Jefferies 1997:481; Thompson 2022). Trade across environmental boundaries maximizes the ability of an exchange network to cancel the impacts of environmental fluctuation. The "adaptive flexibility" model does not account for the robust trade networks present during the Middle Archaic, suggesting that, if true, its application is limited to the South Carolina Piedmont.

Common Pool Resources and Ideal Free Distribution

Similar to trends seen in Early Archaic subsistence strategies, Middle Archaic sites demonstrate increased utilization of nut mast resources, especially hickory. According to Thompson (2022), hickory was likely a managed CPR by the Middle Archaic when residential mobility decreased and the use of storage increased (Carmody 2014). Moore and Dekle (2010) argued that Middle Archaic household economies were transformed by the intensification of cooperative hickory nut mast processing and

storage activities. They suggested that Middle Archaic communities participated in the cooperative collection and processing of nuts for storage, which Thompson (2022) further suggests could indicate the large-scale management of hickory stands as a CPR. This cooperative utilization of and investment in hickory stands would have led to a reduction in residential mobility around this “anticipated surplus” (Thompson 2022), and is consistent with other regional findings that Middle Archaic occupations shifted to intensive use of resource-rich areas (Brown and Vierra 1983; Hollenbach 2007; Miller and Carmody 2020).

For Middle Archaic occupations to conform to IFD expectations during the late Early Holocene and through the Holocene Climatic Optimum, I would expect human populations to be present in every watershed as populations increased throughout the Holocene, but with the highest densities in counties with high suitability hotspot clusters. From 8000BP to 5000BP, high habitat suitability hotspot clusters remain in the northernmost reaches of the study area in the northern Piedmont and Blue Ridge provinces (Figures 4.12 through 4.15). Conspicuous low suitability cold spot clusters appear in the lower Coastal Plain with the addition of lithologic units, particularly in the southernmost extents of the Ogeechee, Altamaha, and Ocmulgee watersheds. The site density gradient appears to conform to IFD expectations – the lowest densities occur in the lower Coastal Plain, while the highest densities occur in the northern Piedmont (Figure 4.39). GiZ scores for site clustering do not conform to IFD expectations, nor do regression analyses of Middle Archaic site clusters against high habitat suitability regions. Contrary to the expectations of the “adaptive flexibility” model, there is no significant site clustering in the Allendale-Brier Creek region, where high quality cherts were interpreted to initiate a “provincial splitting of Middle Archaic culture” through exclusive access to these raw materials (Sassaman 1991:37).

The clustering of Middle Archaic sites in the Piedmont indicates a similar pattern to that identified for the Early Archaic. This site clustering in a sub-optimal landscape displays the positive density dependence associated with IFDA settlement. The addition of individuals to this Piedmont landscape could be related to the boom in mast product collection during the Middle Archaic, when nuts make up nearly 80% of the floral subsistence products at some sites (Jefferies 2008; Lopinot 1984; Thompson 2022), with hickory accounting for 78.9/80% of this total (Jefferies 2008:163). Hickory "is amenable to being a managed CPR" (Thompson 2022) during this time because of widespread food storage and low residential mobility during the Middle Archaic (Gardner 1997; Moore and Dekle 2010), especially in rockshelter contexts (Carmody 2014; Miller and Carmody 2020). Moore and Dekle (2010) stress the cooperative element of mast processing, indicating that the collection and processing of hickory nuts facilitated frequent group interactions, low residential mobility, and investment in storage technologies. Thompson (2022) further suggests that the cooperative element of group hickory nut processing also necessitates consideration of group management of hickory groves as a CPR associated with territorial rights and limited access (Acheson 2015; Rose 1994).

Late Archaic Settlement Dynamics

The environmental shifts during the late Middle Holocene are better understood than the culture historical shifts. Features associated with Late Archaic adaptations to near-modern environmental conditions after ca. 5000BP had cultural analogs in the Middle Archaic period (Anderson and Sassaman 2012; Sassaman and Anderson 1996), including mound building (Russo 1996; Saunders and Allen 1994; Saunders et al. 1997), permanent habitation in coastal contexts and scattered throughout the interior (Elliott and Sassaman 1995; Quitmyer et al. 1997; Russo 1998), and long-distance exchange (Jefferies 1997; Johnson 1994; Johnson and Brookes 1989; Quinn et al. 2020).

Similarly, the traits that distinguish the Late Archaic from the succeeding Woodland period are equally nebulous (Anderson and Sassaman 2012:112).

Climatic conditions stabilized in the study area by ca. 9000BP to near-modern seasonal temperature and precipitation averages, coinciding with the gradual increase and eventual domination of pine by 4500 cal BP across the Coastal Plain (LaMoreaux et al. 2009). The presence of *Vitis* (likely muscadine grape), indicates thinning of the forest canopies such that diffuse sunlight could reach understory plants (LaMoreaux 1999). Charcoal concentrations in pollen cores from this period increase significantly, suggesting both drier conditions than previous periods and the impact of human population increase (Christensen 1981; LaMoreaux 2009:307; Patterson and Sassaman 1988; Veblen et al. 1999). The Late Archaic marks a human population explosion across the Southeast, with marked increases in sedentism, particularly in coastal contexts (Quitmyer et al. 1997; Russo 1998; Thompson and Turck 2009).

Late Archaic "Despotism"

Sea levels rose gradually during the later Middle Holocene, allowing for the formation of coastal estuaries which, in turn, resulted in increased availability and diversity of aquatic resources for coastal inhabitants (Brooks et al. 1989, 1990; DePratter and Howard 1981; Thompson and Turck 2009). Population expanded during the Late Archaic across the study area and the wider Southeast region, and semipermanent-to-permanent habitation and shell rings sites became common along the coasts of Georgia and South Carolina (Elliott and Sassaman 1995; Quitmyer et al. 1997; Russo 1998; Thompson 2007; Thompson and Andrus 2011). The Late Archaic was a transformative period for southeastern hunter-gatherer settlement and subsistence strategies. Trade (Jefferies 2008; Johnson 1994; Sassaman 2005; Waggoner 2009), territorial circumscription (Savage 1989, 1990), population pressure around desirable resources and environments (Sassaman 2010), material analogs for group membership

(Sassaman 1993, 2004, 2010; Saunders and Hays 2004; Waggoner 2009), long-distance trade networks in “sociotechnic” objects (*sensu* Binford 1963; Johnson 1994), and an increase in inter-group violence (Anderson et al. 2007; Smith 1996) suggest a shift in hunter-gatherer settlement dynamics by the Late Archaic.

For Late Archaic occupations to conform to an IFD settlement pattern, there should be evidence of population expansion into every habitat type across all watersheds. I should see decreased densities and low-to-no clustering in the lower Coastal Plain. While sites should still cluster in the northern Piedmont, consistent with settlement packing in high suitability environments, additional clusters should be present in medium suitability environments of the Fall Line zone Piedmont, where mixed deciduous taxa are still present, particularly mast producers like oak, hickory, and walnut. Sites should be underrepresented in the lower Coastal Plain watershed extents of the Ogeechee, Altamaha, and Ocmulgee watersheds where low suitability cold spot clusters persist from ca. 8000BP to 3000BP.

Late Archaic site densities indicate a deviation from IFD, with dense Late Archaic settlement in the coastal counties of the lower Coastal Plain. As anticipated, site densities in the Piedmont are consistent with trends identified in the Early Holocene, with clusters in the central Piedmont north of the Fall Line where masting taxa like hickory were still located post-HCO (LaMoreaux et al. 2009). Late Archaic GiZ scores deviate from the predictions of IFD. A significant cluster of sites is located in the Piedmont north of the Fall Line, consistent with both Early and Middle Archaic GiZ hotspots. Additional significant clusters appear in the Middle Savannah watershed in Columbia County, and along the coast. GiZ scores for site clustering only weakly correlate to habitat suitability hotspots, indicating that the most suitable habitats as I have defined them are poor predictors for Late Archaic site locations.

Instead, I suggest these specific hotspot site clusters are indicative of a shift from cooperative IFDA settlement systems to another IFD variant – ideal despotic distribution (IDD) (Bell and Winterhalder 2014; Kennett and Winterhalder 2008). Expanding population numbers near the end of the Middle Holocene necessitated settlement circumscription around highly suitable locations. Climatic stabilization further differentiated the Piedmont from the Coastal Plain, and dense mixed deciduous forests were limited to the northernmost boundaries of the study area. The hotspot clusters of Late Archaic sites, I argue, are in locations that were identified as the most productive locations for increasingly sedentary populations to protect. Coastal populations, relying on the "anticipated surplus" (Thompson 2022) of both hickory (Sanger 2017) and aquatic resources (Reitz 2014; Thompson 2018; Thompson et al. 2020:5-6), would have been engaged in systems of communal resource proprietorship, necessitating strict adherence to in-group/out-group dynamics (see also Acheson 2015 for counterargument on open access aquatic resources). Piedmont Late Archaic GiZ clusters, consistent with interpretations for both the Early and Middle Archaic, likely correspond with locations of reliable nut mast harvests. The low residential mobility and territorial circumscription of the period necessitates consideration that, by the Late Archaic period, hickory groves were a protected CPR overseen by institutions that directed cooperative activities in the collection, processing, and storage of mast products (Thompson 2022).

Ideal Free Distribution Predictions

My study used the null model of IFD to interpret the variability and spatial distribution of archaeological diagnostics and site data through the lens of environmental change from the Late Pleistocene through the Middle Holocene (ca. 14,000BP to 3000BP). My results demonstrate that, while IFD and IFD variants (IFDA and IDD) help explain some of the settlement variation present across the Coastal Plain, human organizational mobility and settlement strategies transcend the expectations of

environmental optimality modeling. I made four predictions in the opening chapter, consistent with the top-down behavioral ecological approach of investigating mobility, settlement, and subsistence strategies in tandem with environmental change. I briefly revisit them in the following sections, and indicate whether my initial assumptions withstood rigorous environmental and settlement modeling.

Prediction 1: The ecological landscape of the Ogeechee River valley was arguably as heterogeneous and diverse as surrounding watersheds (perhaps more so), complicating existing archaeological narratives of settlement aggregation and subregional abandonment in the Holocene.

I made this prediction assuming the lack of available archaeological data for the Ogeechee watershed was biasing interpretations of its relative environmental suitability for human occupation (Braley and Malone 1996; Elliott 1992; Larson 1980; Schnell and Wright 1983). The fossil pollen record, hydrologic history, and archaeological settlement data for the Ogeechee and surrounding watersheds generally confirms the first half of this prediction. Late Pleistocene and Early Holocene habitat suitability GiZ scores cluster significantly in the Ogeechee watershed near the Fall Line, where high quality Allendale-Brier Creek cherts outcrop. These raw materials were heavily utilized by Late Pleistocene populations (Daniel 1996; Daniel and Goodyear 2018; Goad 1979; Goodyear 1979, 2018; Upchurch 1984). The temperature and precipitation shifts of the Holocene Climatic Optimum upended habitat suitability GiZ scores for the Coastal Plain extent of the Ogeechee watershed and surrounding watersheds, and for the remainder of the Middle Holocene, habitat suitability never improved in the Ogeechee basin. While significant site clustering occurs in the lower Ogeechee valley during the Late Archaic, that settlement configuration is likely attributed to island and coastal resource acquisition rather than resources inherent to the interior Ogeechee valley.

Prediction 2: As a whole, the landscape structure of the watersheds within the interior Coastal Plain study area offer similar incentives for increased hunter-gatherer sedentism and regionalized material cultures throughout the Holocene. Perceived settlement 'gaps' in subregions like the Ogeechee watershed can be better explained by social phenomena other than habitat preference.

I was partially correct with this prediction, but perhaps not for the reasons I had originally envisioned. Informed by Holocene watershed-extensive models like Anderson and Hanson's (1988) band/macroband model, Bridgman Sweeney's bandscapes model (2013) and complicating narratives like the "adaptive flexibility" model for the Piedmont (Sassaman 1991), I anticipated that habitat suitability metrics would indicate a broadly similar resource base in the Coastal Plain post-Younger Dryas. This would indicate that existing narratives for Coastal Plain settlement – and lack of settlement – in specific watersheds was a product of watershed-extensive theorizing rather than something inherently more suitable about the landscape structure in more densely-settled areas of the Coastal Plain.

I was partially correct in predicting that the Coastal Plain offered similar incentives for hunter-gatherer sedentism. Similarities certainly exist in the Coastal Plain habitat suitability metrics and GiZ scores from the Early Holocene through the Middle Holocene. A more accurate prediction is: "The landscape structures of the watersheds within the interior Coastal Plain study area are similarly *disincentivized* to hunter-gatherers after Early Holocene retraction of mast species into higher latitudes." Based on the habitat suitability metrics I identified as important to settlement and subsistence decision-making, the Coastal Plain was at best a medium suitability habitation area near the Fall Line, and at worst a significantly low suitability region throughout most of the Early and Middle Holocene. The only significant site clustering occurs during the Late

Archaic period, and only in coastal contexts where hunter-gatherers had the added benefits of marine and estuarine resources available as subsistence products.

Prediction 3: Macroregional trends in the location and frequency of hunter-gatherer sites in the 12,000-year temporal range of this study reflect considerable variation both intra- and inter-watershed in terms of habitat type.

Habitat suitability GiZ scores derived from county-normalized fossil pollen and lithologic habitat suitabilities demonstrate that there is significant variation in quality between Coastal Plain and Piedmont environments. Hotspot analysis of archaeological data indicate a strong preference during the Holocene for site locations in the Piedmont, with clusters only showing up south of the Piedmont during the Late Archaic when they appear in coastal counties (Figure 4.46). The Piedmont settlement clusters are attributed to the presence of nut mast groves like hickory, which provided “anticipated surplus” (*sensu* Thompson 2022) to hunter-gatherers and a more stable resource base during high-amplitude climatic fluctuations characteristic of transitional periods during the Early and Middle Holocene. Late Pleistocene diagnostic clusters appear ‘tethered’ to high quality lithic outcrops in the Fall Line zone and especially the Middle Savannah and Ogeechee watersheds, consistent with IFD interpretations and southeastern settlement narratives of residentially mobile groups seeking out high quality tool stone for a curated tool kit (Bridgman Sweeney 2013:51; Charles 1986; Futato 1983a, 1983b; Goodyear et al. 2009; Kelly and Todd 1988; McGahey 1987; Miller et al. 2022a).

A consequence of multiscalar and multivariate projects such as this is the need to normalize data sets for comparative analyses. As a result, I had to normalize all data to the coarse-grained county and millennial levels of interpretation. That way, I could discuss PIDBA and GNAHRGIS trends, and incorporate fossil pollen suitabilities into the MCM. Because of this gross scale of analysis, I am not able to make interpretations at

this time on watershed-extensive habitat differentiation, other than comment on settlement pattern variation across major physiographic regions.

Prediction 4: Macroregional settlement pattern continuities and discontinuities suggest a potential shift to ideal free distribution with Allee effect at the onset of the Early Archaic period, and perhaps a shift to ideal despotic distribution by the Late Archaic period.

Early Archaic settlement patterns cluster meaningfully in the Piedmont north of the Fall Line (Figure 4.44). This significant site clustering did not correlate with high habitat suitability metrics for any millennia intersecting with the Early Archaic period. Sites were more widely distributed across the study area, preventing significant correlation between site densities and a single habitat type. While IFD is contraindicated for this sub-optimal settlement pattern, IFDA among "socially obligate" band level societies in the Early Archaic is a viable interpretation of settlement patterns in the Piedmont (Winterhalder et al. 2010:473). I interpret this significant clustering in a less suitable habitat as a culturally significant and coordinated effort by Early Archaic groups to engage in the time-intensive acquisition and processing of hickory nuts in the Piedmont (Carmody 2014; Miller and Carmody 2020; Thompson 2022). Mast product collection and processing may have served as the social context in which positive density dependence Allee effects manifested across the southeastern landscape, which continued into the Middle Archaic occupations of the Piedmont.

Population expansion (Amick and Carr 1996; Anderson and Joseph 1988) and the concomitant circumscription of territorial ranges in the Late Archaic (Anderson and Sassaman 2012; Sassaman 1993), along with aberrant site clustering along the coastline (Figure 4.46), evidence of perimortem skeletal trauma across the region (Anderson et al. 2007; Smith 1996), and expansion of trade and exchange networks in ceramics and soapstone (Elliott 2017; Sassaman 1997, 2004, 2006b; Waggoner 2006,

2009) indicate that a shift away from IFDA and positive density dependence occurred during the Late Archaic. I suggest these changes instead reflect a shift toward ideal despotic distribution (IDD), wherein populations identified the most productive locations on the landscape – in this case, the coast and Piedmont hickory stands – and excluded others from them.

Putting the Ogeechee in Its Place

As I mentioned in the opening chapter, a tangential research objective of this study was "putting the Ogeechee in its place" (*sensu* Sassaman et al. 1995) within the broader culture histories of the interior Coastal Plain. Archaeological investigations in the Ogeechee watershed demonstrate its rich and unbroken settlement history from the Late Pleistocene through the present day (Anderson and Sassaman 1996a:17; Braley 1995; Elliott and Sassaman 1995; Smallwood et al. 2022; Steinen 1995). I considered the Ogeechee watershed to be the perfect place to investigate settlement variation through structured environmental and settlement modeling. Archaeological research within the river valley is limited, and prior investigations have concentrated on a limited number of landscapes within the basin (Botwick et al. 2016; Butler et al. 2010; Fish 1976; Thomas 2008; Thompson and Thomas 2013; Turck and Thompson 2016). Additionally, the Ogeechee's ecological and hydrological composition as a forested blackwater river valley with riparian buffers differentiates it from the well-studied alluvial watersheds within the state (Lowrance et al. 1984; Meyer 1992; Mulholland 1981). I was skeptical of the Schnell and Wright (1993) characterization of this area's "reputation for poor resources" (8), and believed targeted environmental and settlement modeling centering the Ogeechee watershed's resource structure would problematize this persistent narrative.

During the Bølling-Allerød interstadial, the Ogeechee watershed, especially the Fall Line region and southern extent of the watershed near the coast, was a high

suitability region for both arboreal and lithic resources. The warm and wet conditions of this “no analog” interstadial (Leigh 2006, 2008; Williams and Jackson 2007) supported a variety of mixed deciduous taxa, and the high quality tool stone outcrops of the Allendale-Brier Creek cherts in Burke County were conspicuously important to hunter-gatherers settling into the landscape (Daniel and Goodyear 2018; Goodyear 2018; Smallwood 2010). Rapid climatic cooling during the Younger Dryas destabilized the lower Coastal Plain, with significant frequency declines in mesic mixed deciduous taxa (Figures 4.19 through 4.32), likely leading to a population reorganization near sources of reliable tool stone and nut mast in the Fall Line zone and Piedmont (Smallwood et al. 2015).

By the Early Archaic period, the ubiquity of hickory at sites indicates its renewed importance as a primary subsistence product, and sites cluster significantly in Piedmont counties where mast products were located. These Piedmont clusters, while sub-optimal for IFD predictions, were likely culturally significant regions where ancestors were able to provision themselves after vacating the Coastal Plain during the Younger Dryas (Smallwood et al. 2015). Hickory frequencies in the fossil pollen record for the Early Holocene fluctuate from near-0% to almost 6% of the total pollen count, with the highest concentrations present in the Piedmont. The decline in mixed deciduous taxa within the Coastal Plain after the onset of the Early Holocene made the entire interior Coastal Plain – not just the Ogeechee watershed – less suitable for the residentially mobile hunter-gatherers of the Early Archaic period.

Middle Holocene climatic fluctuations depressed the overall habitat suitability of the lower Coastal Plain, as warming temperatures, rising sea levels, and the spread of pine across lower latitudes made the interior Coastal Plain a less attractive environment for hunter-gatherers than the Piedmont. Settlement patterns in the lower Ogeechee are consistent with narrative of Middle Archaic organizational mobility and subsistence

narratives suggesting that the interior Coastal Plain was less suitable for populations practicing low residential mobility than the resource-rich river valleys of the Piedmont (Brown and Vierra 1983; Anderson 1996b; Anderson and Sassaman 2012; Sassaman and Anderson 1996). While Sassaman (1991) has suggested that the presence of high quality Allendale-Brier Creek cherts in the Ogeechee valley may have initiated a "provincial splitting of Middle Archaic culture" (1991:37), my site GiZ scores and statistical regression analyses do not indicate any meaningful relationship between this high quality lithic outcrop and Middle Archaic site densities.

Middle Holocene settlement systems in the Ogeechee watershed shift during the Late Archaic period, with hotspot clusters of sites located along the coast signaling a change in subsistence strategies. Coastally-adapted hunter-gatherers clustered near the coastline and on the barrier islands, drawing from terrestrial mast resources and aquatic resources (Sanger 2017; Sassaman 2010; Thompson 2022). Coupled with narratives of the timing and tempo for the spread of early ceramics from this region (Sassaman 1993, 2004, 2006a, 2010; Sassaman et al. 1995), the lower Ogeechee was a veritable hotbed of cultural expression by the late Middle Holocene.

Summary

In this chapter, I contextualized the climatic, environmental, and archaeological results of my investigations in the interior Coastal Plain of Georgia within broader regional narratives of hunter-gatherer settlement and subsistence. I investigated the degree of conformity my results shared with an IFD model of settlement and subsistence, and provided explanations for settlement variations that deviate from expectations derived from the IFD, inclusive of IFD variants like IFD with Allee effect (IFDA) and ideal despotic distribution (IDD). In particular, I offered explanations of diachronic hunter-gatherer settlement and subsistence choices that more fully explain

the totality of human occupation and decision-making beyond the simplifying assumptions of IFD.

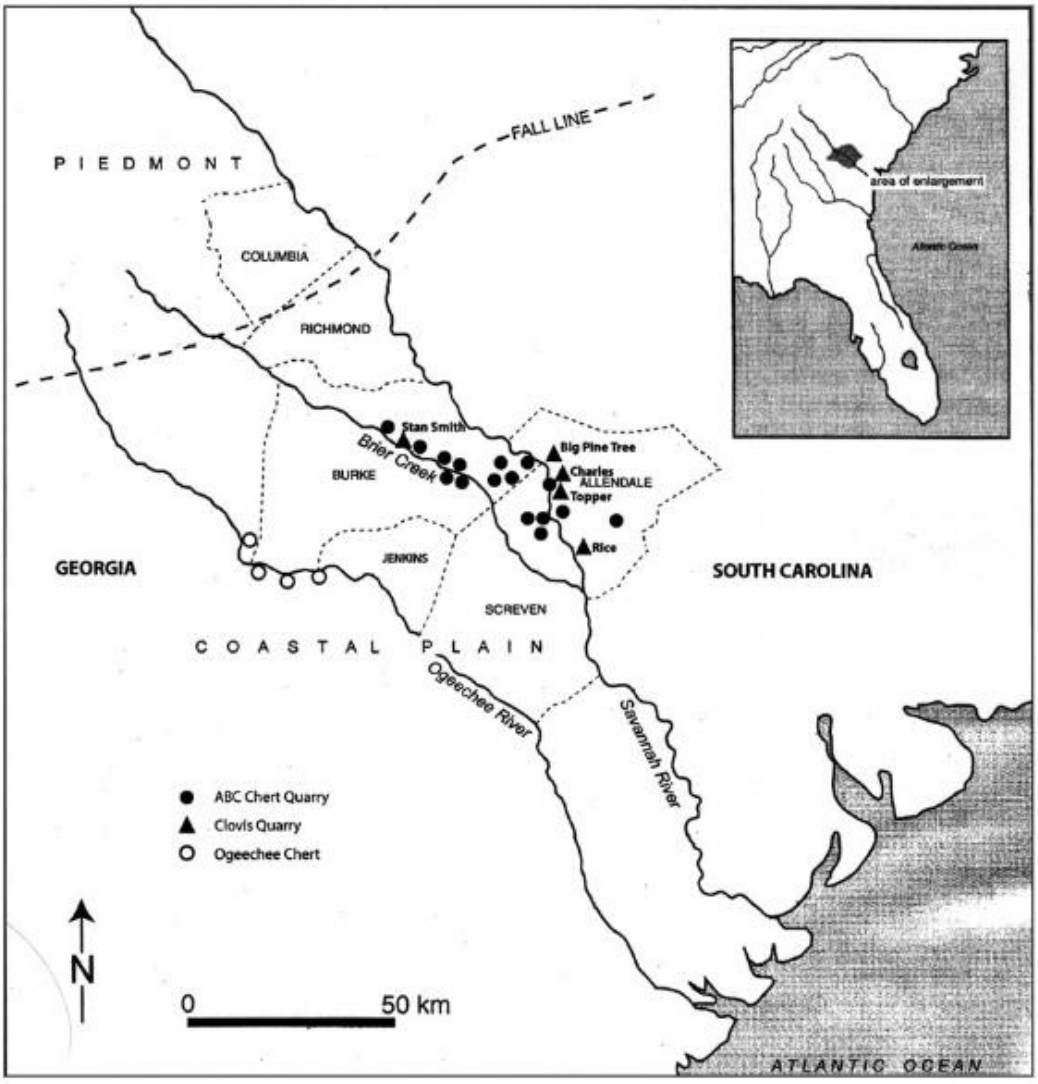

Figure 5.1: Location of Allendale-Brier Creek chert quarries in the Middle Savannah and Middle Ogeechee watersheds (Goodyear 2018, Figure 12.1).

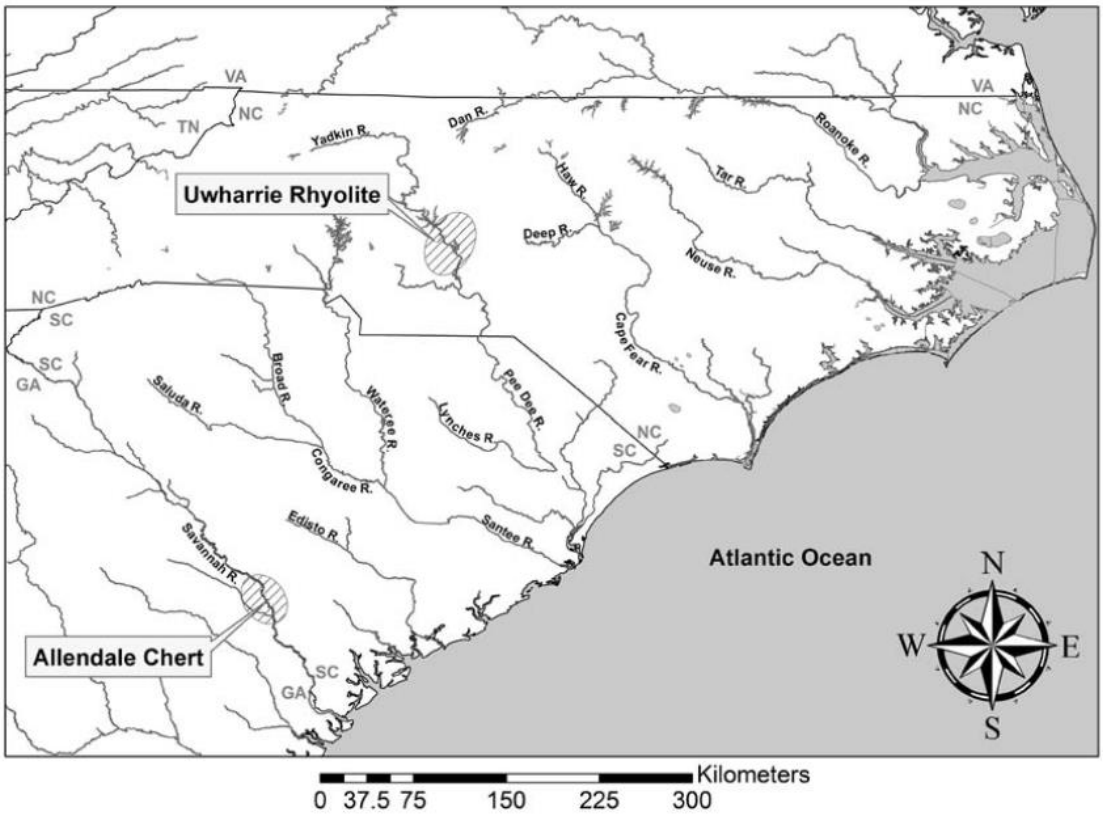

Figure 5.2: Locations of major Clovis occupation tool stone sources in the Carolinas and Georgia (Daniel and Goodyear 2018, Figure 11.2).

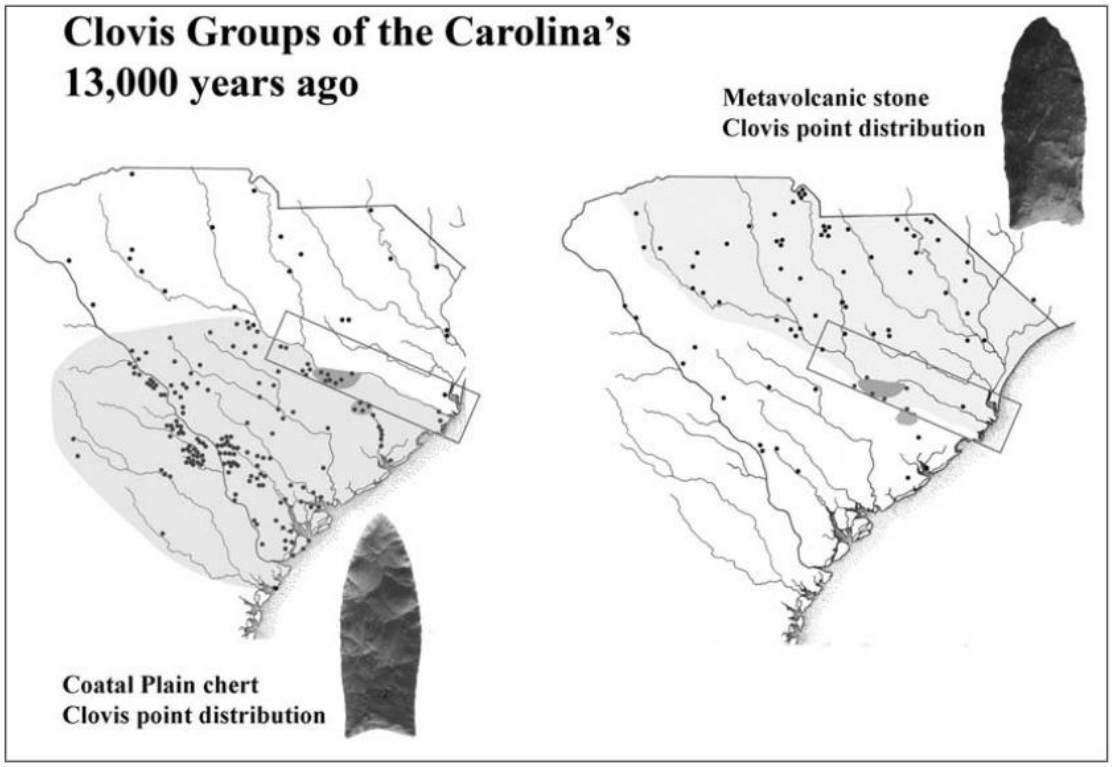

Figure 5.3: Clovis biface distributions and hypothesized macroband extents (gray) across Georgia and South Carolina based on raw material distributions (Daniel and Goodyear 2018, Figure 11.4).

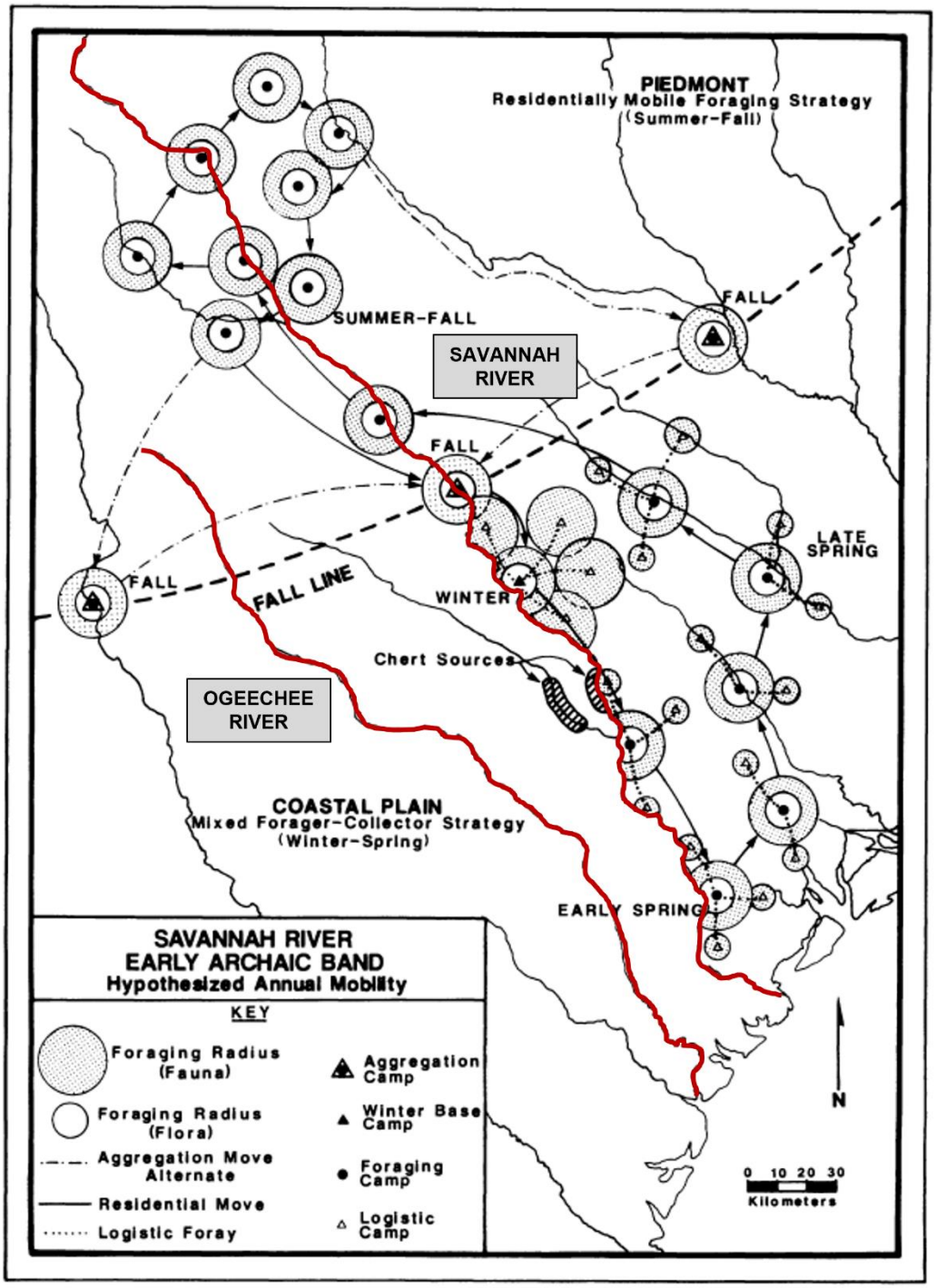

Figure 5.4: Anderson and Hanson's (1988) band-macroband model of watershed-extensive residential mobility among hunter-gatherers of the interior Coastal Plain. Proximity to study area is indicated by highlighting both the Ogeechee and Savannah Rivers (red outlines). Adapted from Anderson and Hanson (1988), Figure 2.

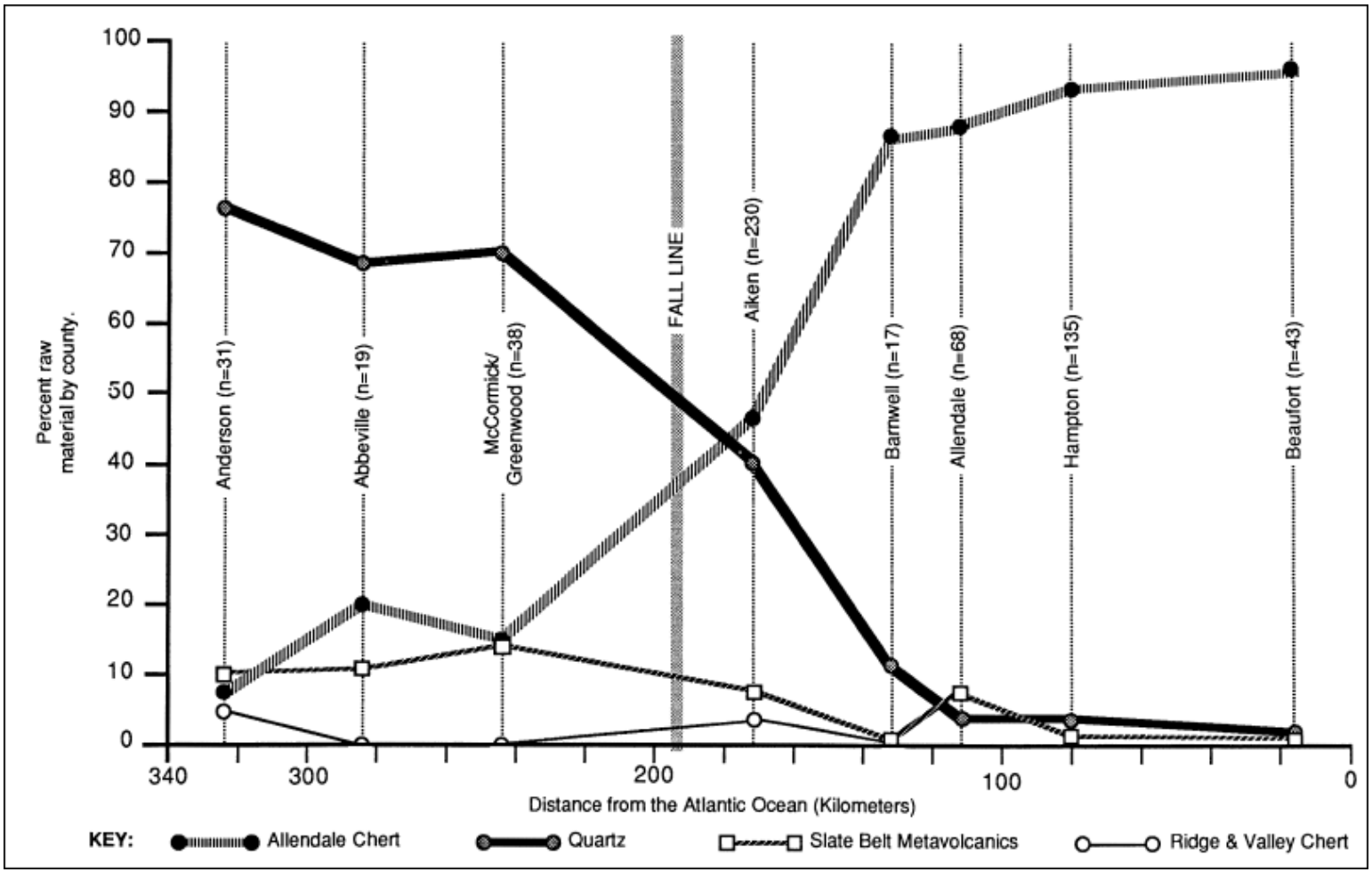

Figure 5.5: Raw material types used in the manufacture of Early Archaic diagnostics in the Savannah River valley, by county, progressing from the Appalachian Summit to the Atlantic Ocean (Anderson and Hanson 1988, Figure 8).

Figure 5.6: Non-local Ridge and Valley chert Early Archaic diagnostics from the Davis Plantation Collection, Burke County, Georgia (K. Jones, with permission from the Smithsonian Museum Support Center).

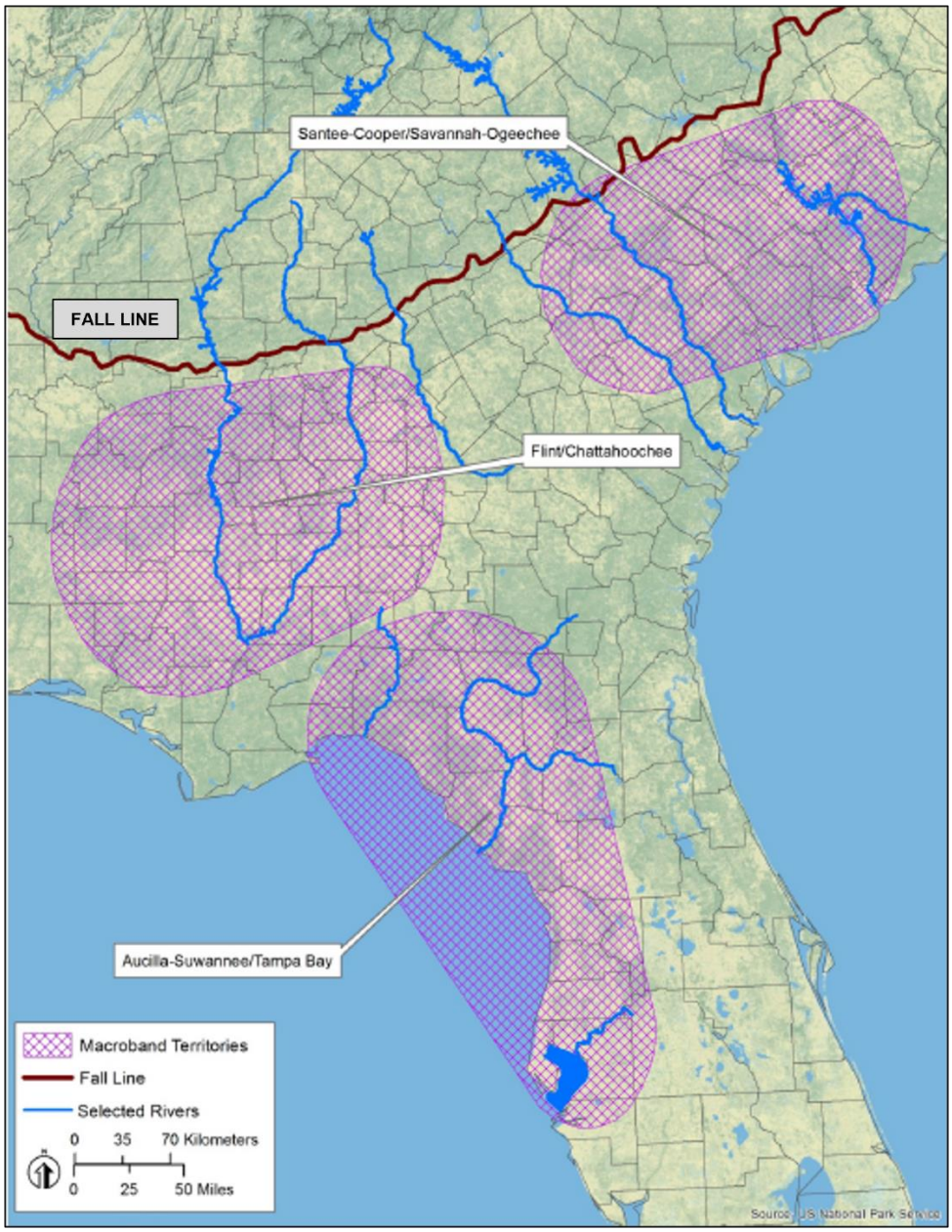

Figure 5.7: Proposed Coastal Plain macroband territories (adapted from Bridgman Sweeney 2013, Figure 6-1).

CHAPTER 6

CONCLUSIONS

My research provides a new and multivariate approach to understanding the long-term changes in hunter-gatherer relationships with their landscapes in the interior Coastal Plain from the Late Pleistocene through the Middle Holocene. I used the simplifying optimality assumptions offered through ideal free distribution (IFD) behavioral ecology modeling (*sensu* Fretwell and Lucas 1969) as the 'null model' – the 'ideal' settlement pattern that represents a baseline for optimal distribution of archaeological sites. IFD provided the "yardstick of objective economic rationality" against which I compared diachronic archaeological settlement pattern data (Bettinger 1991:106).

I employed a synoptic climatological approach (Yarnal 1993) vis-à-vis macrophysical climate modeling (MCM) (Agenbroad and Thayer 2019; Bryson and DeWall 2007; Bryson et al. 2009) to reconstruct the climate conditions of the interior Coastal Plain from 14,000BP to 3000BP, inclusive of the Paleoindian and Archaic periods in the Southeast. I assessed the accuracy of the MCM using net primary productivity (NPP) biomass estimates (Lieth 1972) and fossil pollen biodiversity indices derived from taxa identified in the Williams and colleagues' (2004) continental fossil isopollen study. I generated habitat suitability metrics (*sensu* Miller and Carmody 2020) to rank arboreal resources in the interior Coastal Plain that (1) were indicator taxa for shifting climatic conditions, especially in moisture and temperature gradients; and/or (2) were well-documented archaeologically or ethnographically to have utility to hunter-gatherers. I incorporated a lithic suitability metric to further test assumptions of hunter-gatherer settlement choices related to lithic "tethering" strategies (Gardner 1974, 1977). From this climate and landscape reconstruction, I mapped the densities and spatial

statistical hotspot clusters (Getis and Ord 2010) of archaeological diagnostic bifaces and sites using data from both the Paleoindian Database of the Americas (PIDBA) and Georgia's Natural, Archaeological, and Historic Resources GIS (GNAHRGIS). Using county-normalized environmental and archaeological GiZ scores, I regressed archaeological spatial cluster z-scores against time-averaged millennial habitat suitability z-scores to identify meaningful relationships between archaeological settlement locations and habitat suitability metrics.

The research question posed for this study was: Can an ideal free distribution model of human population establishment and expansion explain the settlement dynamics seen in the interior Coastal Plain of Georgia from the Late Pleistocene through Mid-Holocene (ca. 13,400 to 3200 cal BP)? I used IFD as a null model to investigate the distributions of diagnostic bifaces and archaeological sites across five watersheds with significant extents in the interior Coastal Plain of Georgia. I then contextualized the simplifying assumptions of IFD within existing settlement narratives for hunter-gatherer populations in the interior Coastal Plain to identify concordance with and deviations from existing models.

Summary of Findings

For the Late Pleistocene, diagnostic biface distributions generally conform to the assumptions of IFD, with significant statistical correlation between biface clustering and habitat suitability. For the earliest occupations of the interior Coastal Plain, there is a statistically significant correlation between habitation areas and high quality arboreal and lithologic resources. While population levels during the Late Pleistocene contraindicate a negative density dependence relationship between humans and their environments (Winterhalder et al. 2010), habitat suitability undoubtedly influenced settlement locations. Lithologies in this area of the Coastal Plain dominate narratives of hunter-gatherer settlement and subsistence (Bridgman Sweeney 2013; Daniel and Goodyear 2018;

Goad 1979; Goodyear 1979, 1989, 2018; Smallwood 2010; Smallwood et al. 2015). I identified that, while existing narratives of hunter-gatherer settlement strategies are consistent with my own results, they could be strengthened with direct application of process-driven theory centered on the social means of access (*sensu* Thompson 2022) to common pool resources like high quality tool stone.

I investigated the evolutionary ecological assumptions of Early Archaic hunter-gatherer organizational mobility offered by Anderson and Hanson (1988), and identified that site clusters do not conform to the optimality expectations of IFD. Instead, populations expanded into landscapes considered sub-optimal by IFD predictions. I interpreted these concentrations of sites in the Piedmont region as palimpsest occupations of logistical camps organized around the collection of hickory nuts and the utilization of high-quality Piedmont chert outcrops. I suggest that hickory nuts were a common pool resource (Thompson 2022), requiring coordinated activities of women and children in their collection and processing. Hickory nuts offer an “anticipated surplus” (*sensu* Thompson 2022), encouraging cooperative behaviors and long-term commitments to the landscape. My interpretation of this extra-optimal settlement strategy is consistent with the expectations of IFD with Allee effect (Allee 1931), which hypothesizes that “socially obligate” societies (Winterhalder et al. 2010:473) will cooperate to enhance the overall suitability of an environment. In addition to the coordinated activities and positive density dependence associated with IFDA, I also suggest that Bridgman Sweeney’s ‘bandscapes’ model (2013) for Early Archaic regional interactions provides the deep-time social contexts for the long-distance exchange networks characterizing Middle Archaic settlement systems.

Middle Archaic site GiZ scores clustered meaningfully in the Piedmont, but not in an area of anticipated high suitability. Like Early Archaic GiZ scores, Middle Archaic site clusters do not conform to the expectations of IFD. Site clustering is consistent with

hunter-gatherer settlement trends during the Holocene Climatic Optimum, typically explained as an ecological adaptation to the unstable environmental conditions of the Coastal Plain as temperatures and sea levels rose, and pine overtook deciduous taxa as the dominant arboreal taxa in lower latitude environments (Anderson 1996b; Blanton 1983, 1984; Blanton and Sassaman 1989; Goodyear et al. 1979; House and Ballenger 1976; Sassaman 1983, 1991). The Middle Archaic tool kit, characterized by its expediency and breadth of locally available raw materials, is intrinsically tied to shifting narratives of organizational mobility for this period. Sassaman's "adaptive flexibility" model (1991) suggests that expedient technologies and access to local raw materials indicate a flexible social system characterized by high residential mobility. Other theories for Middle Archaic organizational mobility consider large-scale social networks in the trade and exchange of items like bone pins (Jefferies 1997), bannerstones (Burdin 2004; Sassaman and Randall 2007), and exotic raw materials (Johnson 1994; Johnson and Brookes 1989), as well as cooperative organization in the processing and storage of hickory (Miller and Carmody 2020; Moore and Dekle 2010; Thompson 2022). I argue that, like the Early Archaic period, Middle Archaic sites cluster meaningfully around locations where hickory nuts could be managed and stored, consistent with the positive density dependence assumptions of IFD with Allee effect (Allee 1931).

Late Archaic GiZ scores deviated from both Early Archaic and Middle Archaic hotspot distributions. While a remnant hotspot cluster exists in the Piedmont, similar to both the Early and Middle Archaic hotspots, additional hotspots cluster in the Middle Savannah watershed and along the coast. While hotspot locations do not conform to IFD predictions based on defined habitat suitability metrics, they do align with IDD predictions for a population that is increasingly territorially circumscribed. Population expansion during the Late Archaic period came with concomitant shifts in settlement systems, including semipermanent habitation (Elliott and Sassaman 1995; Quitmyer et

al. 1997; Russo 1998; Thompson 2007; Thompson and Andrus 2011), trade and exchange in “sociotechnic” objects, as well as utilitarian items like ceramics and soapstone (Jefferies 2008; Johnson 1994; Sassaman 2005; Waggoner 2009), and increased intergroup violence (Anderson et al. 2007; Smith 1996). Late Archaic GiZ clusters do not conform to IFD settlement predictions; rather, I suggest the Late Archaic is the first instance in the hunter-gatherer settlement history of the Southeast where compelling evidence for ideal despotic distribution (IDD) characterizes settlement decision-making. I believe expanding population sizes and low residential mobility necessitated settlement circumscription around and protection of highly suitable locations. As with previous periods, the central Piedmont north of the Fall Line was a highly suitable location because of the reliable “anticipated surplus” provided by hickory. And the coastal hotspots are indicative of coastally-adapted hunter-gatherer communities engaging in systems of communal resource proprietorship around the harvest of both mast products (Sanger 2017) and aquatic resources (Thompson 2018).

Significance

Identifying the social processes inherent in the local and regional ways hunter-gatherers interacted with their environments is akin to looking at “fragments of the entire family album” (Jochim 1991:315). The totality of human interaction and decision-making is impossible to derive from the piecemeal regional data sets available, necessitating the use of simplifying assumptions offered by IFD to craft a coherent narrative of hunter-gatherer settlement and subsistence change over time. This technique “neglects to some degree the myriad ancillary variables of concern” to anthropological research that can’t be controlled for in formal modeling (Winterhalder and Smith 2000:52). Indeed, a critique of IFD as operationalized in human behavioral ecology is its reductionist qualities, but it “does not assume that precontact humans were slide rule-toting Einsteins

who moved from camp to camp calculating optimal solutions to foraging problems" (Surovell 2009:2).

Instead, I have used the simplifying assumptions of IFD to categorize the landscape of the interior Coastal Plain into units of social and subsistence activities, rather than perceive the landscape as an inert container in which activities occurred (Tilley 1994). While IFD may not ultimately explain some (or any) of the settlement patterns in this study, it was a useful heuristic for demonstrating that the landscape cannot be divorced from human activities, relationships, and sociality. Consistent with a settlement ecology perspective, the human experiences that played out on the southeastern landscape were "always created, reproduced, and transformed in relation to previously constructed spaces provided and established from the past" (Tilley 1994:11). The utility of IFD in this project is also its inherent reductivism. Simplifying assumptions are a necessary component of understanding complex phenomena. Regarding the simplicity of behavioral ecological modeling, Winterhalder and Smith note:

> Models, however, may invite criticism because of their simplicity. Superficially there is an intuitive appeal to such critiques. The models of evolutionary ecologists are orders of magnitude short of the complexity and variety of phenomena they purport to explain. They invite the accusation of simplemindedness and reductionism. But *simple* is not *simple-minded*. Simple models are a necessary, not a temporary or primitive stage of scientific development (Winterhalder and Smith 1992:13-14, emphasis added).

Optimality within the archaeological record is difficult to define. The processes behind optimal decision-making are even more nebulous, and hard to operationalize with an archaeological record that is piecemeal at best, and often missing entirely. I rely on simpler concepts of environmental variability, raw material transportation, and regional settlement patterns as proxies for the process of settlement variability and change over time – concepts that are too complicated to assign direct material correlates. In explaining cause and effect relationships through the IFD null model and regression statistics, I mathematically identified significant variability in hunter-gatherer settlement

strategies through time and across space. While this did not (and cannot) provide a totality of understanding of hunter-gatherer settlement systems, it certainly provided clarity to my explanations.

My research builds on the optimality studies of Miller (2018), Miller and Carmody (2016, 2020), and Cook Hale and Sanger (2020) in the Southeast, as well as the broader archaeological applications of IFD globally (Allen and O'Connell 2008; Kennett et al. 2006; Winterhalder and Kennett 2006; Winterhalder et al. 2010). I address the under-theorization of the Archaic period (Sassaman 2010), and offer alternatives to the paradigm of the Archaic period as "victim of being sandwiched between two pillars of origin" (Sassaman 2010:7).

My study is the first of its kind to incorporate diagnostic biface data, site data, and fossil isopollen data within a synoptic climatologic model to investigate settlement and subsistence changes. The incorporation of evidence-based fossil pollen data and biodiversity data as a 'quality control' check of the modeled outputs of the climate model offers a novel approach to the use of the MCM in archaeological practice. By checking the accuracy of the modeled outputs against proxy data for large-scale climate events, I was able to bridge the gap between coarse-grained generalized circulation models and fine-grained investigations of climate change from site-level fossil pollen studies.

Future Research

This multivariate research program contains multiple avenues for productive future research. I suggested that hunter-gatherer organizational mobility during the Early Archaic was likely influenced by the locations of hickory groves, and that hickory mast products and their "anticipated surplus" (Thompson 2022) encouraged long-term commitments to landscapes that were otherwise sub-optimal according to the predictions of IFD. A spatial statistical analysis of Early Archaic site cluster GiZ scores

against hickory-only GiZ scores would be an interesting test case in the correlation between dense hickory frequencies and hunter-gatherer population density.

Spatial statistical regressions of all taxa from the Williams et al. (2004) continental fossil pollen study that are native to Georgia, inclusive of grasses (Poaceae), herbaceous annuals like Asteraceae, boreal coniferous taxa other than *Pinus*, and other mixed deciduous taxa would provide a more comprehensive view of the totality of Coastal Plain environmental changes. The frequency shift in grass abundance is particularly useful for hypotheses related to the movement of certain species of megafauna across the Southeast, and where megafaunal refugia may have been located prior to their extinction. I chose thirteen target taxa based on their archaeological significance and their utility as biogeographic indicators for climate change. Expanding the data set to include additional arboreal and non-arboreal taxa provides opportunities to discuss landscape dynamics, seasonality, and localized temperature and precipitation fluctuations in a way that limited arboreal-only interpretations do not.

As is the case for most studies utilizing regional archaeological site data, more survey and testing projects need to be conducted in the interior Coastal Plain outside of the Section 110 full-coverage districts. This is especially true for the Ogeechee watershed, which, because of its lack of impoundments, has only been minimally surveyed, leaving large gaps in coverage that undoubtedly bias regional settlement pattern studies such as mine. I would also advocate, as DePratter (2010) and others have, that more effort should be spent on locating, excavating, and establishing better chronological controls for Late Pleistocene, Early Archaic, and Middle Archaic sites in the Coastal Plain and coastal zone.

The multivariate approach to top-down settlement and subsistence modeling applied herein moves hunter-gatherer optimality modeling even further toward robust conceptions of dynamic hunter-gatherer histories in the lower Southeast. The combined

behavioral and settlement ecological approaches encourage a reassessment of the hunter-gatherer archaeological record that perceives inhabitants of the interior Coastal Plain as more than passive responders to ecological change. Instead, this study demonstrates that human-environmental interactions were more than the products of optimality equations. The theoretical frameworks that situate human cultural development as a response to environmental shifts do not articulate well with concepts like agency and history as mechanisms for understanding the past. The approach applied herein moves optimality modeling even further toward robust conceptions of human decision-making around environmental considerations in archaeological research.

REFERENCES

Acheson, James M.
2015 Private Land and Common Oceans: Analysis of the Development of Property Regimes. *Current Anthropology* 56(1):28-55.

Agenbroad, Larry D., and Barb Thayer (editors)
2019 *Macrophysical Climate Modeling Workbook.* PaleoResearch Institute, Golden.

Allee, Warder C.
1931 *Animal Aggregations, A Study in General Sociology.* University of Chicago Press, Chicago.

Allen, Jim, and James O'Connell
2008 Getting from Sunda to Sahul. In *Islands of Inquiry: Colonization, Seafaring, and the Archaeology of Maritime Landscapes,* edited by Geoffrey Clark, Foss Leach, and Sue O'Connor, pp. 31-46. Australian National University, Canberra.

Alley, Richard B.
2000 Ice-Core Evidence of Abrupt Climate Changes. *PNAS* 94:1331-1334.

Alley, Richard B., D. Meese, C. Shuman, A. Gow, K. Taylor, P. Grootes, J. White, M. Ram, E. Waddington, P. Mayewski, and G. Zielinkski
1993 Abrupt Increase in Greenland Snow Accumulation at the End of the Younger Dryas Event. *Nature* 362:527-529.

Alvard, Michael S., and Lawrence Kuznar
2001 Deferred Harvests: The Transition from Hunting to Animal Husbandry. *American Anthropologist* 103(2):295-311.

Amick, Daniel S., and Philip J. Carr
1996 Changing Strategies of Lithic Technological Organization. In *Archaeology of the Mid-Holocene Southeast*, edited by Kenneth E. Sassaman and David G. Anderson, pp. 41-56. University Press of Florida, Gainesville.

Anderson, David G.
1990 Paleoindian Colonization of Eastern North America: A View from the Southeastern United States. In *Early Paleoindian Economies of Eastern North America*, edited by Kenneth Tankersley and Barry Isaac, pp. 163-216. Research in Economic Anthropology Supplement 5. JAI Press, Greenwich.

1991a Examining Prehistoric Settlement Distribution in Eastern North America. *Archaeology of Eastern North America* 19:1-22.

1991b The Bifurcate Tradition in the South Atlantic Region. *Journal of Middle Atlantic Archaeology* 7:91-106.

1995a Paleoindian Interaction Networks in the Eastern Woodlands. In *Native American Interaction: Multiscalar Analyses and Interpretations in the Eastern Woodlands,* edited by Michael S. Nassaney and Kenneth E. Sassaman, pp. 1-26. University of Tennessee Press, Knoxville.

1995b Recent Advances in Paleoindian and Archaic Period Research in the Southeastern United States. *Archaeology of Eastern North America* 23:145-176.

1996a Models of Paleoindian and Early Archaic Settlement in the Lower Southeast. In *The Paleoindian and Early Archaic Southeast*, edited by David G. Anderson and Kenneth E. Sassaman, pp. 29-57. The University of Alabaman Press, Tuscaloosa.

1996b Approaches to Modeling Regional Settlement in the Archaic Period Southeast. In *Archaeology of the Mid-Holocene Southeast,* edited by Kenneth E. Sassaman and David G. Anderson, pp. 157-176. University Press of Florida, Gainesville.

2001 Climate and Culture Change in Prehistoric and Early Historic Eastern North America. *Archaeology of Eastern North America* 29:143-186.

2002 The Evolution of Tribal Social Organization in the Southeastern United States. In *The Archaeology of Tribal Societies*, edited by William A. Parkinson, pp. 291-327. International Monographs in Prehistory, Ann Arbor.

2004 Archaic Mounds and the Archaeology of Southeastern Tribal Societies. In *Signs of Power: The Rise of Cultural Complexity in the Southeast*, edited by Jon L. Gibson and Philip J. Carr, pp. 270-299. University of Alabama Press, Tuscaloosa.

2010 The End of the Southeastern Archaic: Regional Interaction and Archaeological Interpretation. In *Trend, Tradition, and Turmoil: What Happened to the Southeastern Archaic?*, edited by David Hurst Thomas and Matthew C. Sanger, pp. 273-301. Anthropological Papers of the American Museum of Natural History No. 93. American Museum of Natural History, New York.

Anderson, David G., and J. Christopher Gillam

2000 Paleoindian Colonization of the Americas: Implications from an Examination of Physiography, Demography, and Artifact Distribution. *American Antiquity* 65(1):43-66.

Anderson, David G., and Joseph W. Joseph, Jr.

1988 *Prehistory and History along the Upper Savannah River: Technical Synthesis of Cultural Resource Investigations, Richard B. Russell Multiple Resource Area.* Russell Papers, Interagency Archaeological Services. Copies available from National Park Service, Atlanta.

Anderson, David G., D. Shane Miller, Stephen J. Yerka, J. Christopher Gillam, Erik N. Johanson, Derek T. Anderson, Albert C. Goodyear, and Ashley M. Smallwood
2010 PIDBA (Paleoindian Database of the Americas) 2010: Current Status and Findings. *Archaeology of Eastern North America* 38:63-90.

Anderson, David G., and Kenneth E. Sassaman
1996a Modeling Paleoindian and Early Archaic Settlement in the Southeast: A Historical Perspective. In *The Paleoindian and Early Archaic Southeast,* edited by David G. Anderson and Kenneth E. Sassaman, pp. 16-28. The University of Alabama Press, Tuscaloosa.

1996b *The Paleoindian and Early Archaic Southeast*, edited by David G. Anderson and Kenneth E. Sassaman. The University of Alabama Press, Tuscaloosa.

2004 Early and Middle Holocene Periods, 9500 to 3750 B.C. In *Handbook of North American Indians: Southeast*, vol. 14, edited by Raymond D. Fogelson, pp. 87-100. Smithsonian Institution Press, Washington, D.C.

2012 *Recent Developments in Southeastern Archaeology: From Colonization to Complexity*. Society for American Archaeology Press, Washington, D.C.

Anderson, David G., and Joseph Schuldenrein
1983 Early Archaic Settlement on the Southeastern Atlantic Slope: A View from the Rucker's Bottom Site, Elbert County, Georgia. *North American Archaeologist* 4:177-210.

Anderson, David G., Ashley M. Smallwood, and D. Shane Miller
2015 Pleistocene Human Settlement in the Southeastern United States: Current Evidence and Future Directions. *PaleoAmerica* 1(1):7-51.

Anderson, David G., Albert C. Goodyear, James P. Kennett, and Allen West
2011 Multiple Lines of Evidence for Possible Human Population Decline/Settlement Reorganization during the Early Younger Dryas. *Quaternary International* 242(2):570-583.

Anderson, David G., and Glen T. Hanson
1988 Early Archaic Settlement in the Southeastern United States: A Case Study from the Savannah River Valley. *American Antiquity* 53(2):262-286.

Anderson, David G., Michael Russo, and Kenneth E. Sassaman
2007 Mid-Holocene Cultural Dynamics in Southeastern North America. In *Climate Change and Cultural Dynamics: A Global Perspective on Mid-Holocene Transitions,* edited by David G. Anderson, Kirk A. Maasch, and Daniel H. Sandweiss, pp. 457-490. Academic Press, Amsterdam.

Andrefsky, William
1994 Raw-Material Variability and the Organization of Technology. *American Antiquity* 59(1):21-34.

2009 The Analysis of Stone Tool Procurement, Production, and Maintenance. *Journal of Archaeological Research* 17:65-103.

Asch, David L., and Nancy B. Asch
1985 Prehistoric Plant Cultivation in West-Central Illinois. In *Prehistoric Food Production in North America*, edited by R.I. Ford, pp. 149-204. Anthropological Papers No. 75. University of Michigan Museum of Anthropology, Ann Arbor.

Ashley, Keith, Neill J. Wallis, and Michael D. Glascock
2015 Forager Interactions on the Edge of the Early Mississippian World: Neutron Activation Analysis of Ocmulgee and St. Johns Pottery. *American Antiquity* 80:290-311.

Austin, Katy, and Keith Gates
2001 Physical, Chemical, and Biological Monitoring of the Satilla River. In *Proceedings of the 2001 Georgia Water Resources Conference*, edited by Kathryn J. Hatcher, pp. 623-626. University of Georgia, Athens.

Baker, Frederick S.
1948 A Revised Tolerance Table. *Journal of Forestry* 47:179-181.

Baker, J.B. and O.G. Langdon
1990 Pinus taeda L.: Loblolly Pine. In *Silvics of North America: Conifers*, vol. I, edited by R.M. Burns and B.H. Honkala, pp. 497-512. U.S. Department of Agriculture, Forest Service Agricultural Handbook 654, Washington, D.C.

Baldwin, Nicollette A., and Michael K. Crosby
2016 The Allelopathic Influence of Post Oak (Quercus stellata) on Plant Species in Southern U.S. Forests. In *Proceedings of the 18th Biennial Southern Silvicultural Research Conference*, edited by Callie J. Schweitzer, Wayne K. Clatterbuck, and Christopher M. Oswalt, pp. 405-412. USDA Forest Service Southern Research Station, Asheville.

Bamforth, Douglas B.
1986 Technological Efficiency and Tool Curation. *American Antiquity* 51:38-50.

2013 Evidence and Metaphor in Evolutionary Archaeology. *American Antiquity* 67(3):435-452.

Barrett, Tim, and Joel Fleming
2011 *Fish Kill Investigation Report: Ogeechee River*. Submitted to Georgia Department of Natural Resources Wildlife Resources Division. Copies available from Georgia DNR, Atlanta.

Barry, Roger G., and Andrew M. Carleton
2001 *Synoptic and Dynamic Climatology.* Routledge, New York.

Bayham, Frank E.
1979 Factors Influencing the Archaic Patterns of Animal Exploitation. *Kiva* 44:219-235.

Beaton, J.M.
1991 Colonizing Continents: Some Problems from Australia and the Americas. In *The First Americans: Search and Research*, edited by Tom D. Dillehay and David J. Meltzer, pp. 209-230. CRC Press, Baton Rouge.

Beck, Charlotte, Amanda K. Taylor, George T. Jones, Cynthia M. Fadem, Caitlyn R. Cook, and Sara A. Millward
2002 Rocks Are Heavy: Transport Costs and Paleoarchaic Quarry Behavior in the Great Bason. *Journal of Anthropological Archaeology* 21:481-507.

Beck, Hylke E., Niklaus E. Zimmermann, Tim R. McVicar, Noemi Vergopolan, Alexis Berg, and Eric F. Wood
2018 Present and Future Koppen-Geiger Climate Classification Maps at 1-km Resolution. *Scientific Data*, DOI: 10.1038/sdata.2018.214.

Bell, Adrian Viliami, and Bruce Winterhalder
2014 The Population Ecology of Despotism. *Human Nature* 25(1):121-135.

Bender, Barbara
2002 Time and Landscape. *Current Anthropology* 43 Supplement S103-S112.

Bender, Barbara, and Brian Morris
1988 Twenty Years of History, Evolution, and Social Change in Gatherer-Hunter Studies. In *Hunters and Gatherers: History, Evolution, and Social Change,* edited by Tim Ingold, David Riches, and James Woodburn, pp. 1-14. Berg, Oxford.

Benson, Robert W.
1994 *Fort Gordon Revisited: Cultural Resources Survey of the Final 12,784 Acres*. Submitted to the U.S. Army Corps of Engineers, Savannah District. Copies available from Southeastern Archeological Services, Athens.

1995 Quartz Passports of the Morrow Mountain Middle Archaic in the Savannah River Drainage. *Early Georgia* 23(1):1-19.

Bettinger, Robert L.
1991 *Hunter-Gatherers: Archaeological and Evolutionary Theory*. Plenum Pres, New York.

Bettinger, Robert L., Ripan Malhi, and Helen McCarthy
1997 Central Place Models of Acorn and Mussel Processing. *Journal of Archaeological Science* 24(10):887-899.

Bey, Calvin F.
1990 Ulmus americana L.: American Elm. In *Silvics of North America: Hardwoods*, vol. II, edited by R.M. Burns and B.H. Honkala, pp. 1534-1545. U.S. Department of Agriculture, Forest Service Agriculture Handbook 654, Washington, D.C.

Billman, Brian R.
1999 Settlement Pattern Research in the Americas: Past, Present, and Future. In *Settlement Pattern Studies in the Americas: Fifty Years Since Víru,* edited by Brian R. Billman and Gary M. Feinman, pp. 1-5. Smithsonian Institution Press, Washington, D.C.

Binford, Lewis R.
1963 "Red Ochre" Caches from the Michigan Area: A Possible Case of Cultural Drift. *Southwestern Journal of Anthropology* 19:89-108.

1965 Archaeological Systematics and the Study of Culture Process. *American Antiquity* 31:203-210.

1973 Interassemblage Variability – The Mousterian and the "Functional" Argument. In *The Explanation of Culture Change: Models in Prehistory*, edited by Colin Renfrew, pp. 227-254. Duckworth, London.

1977 Forty-Seven Trips: A Case Study in the Character of Archaeological Formation Processes. In *Stone Tools as Cultural Markers,* edited by R.V.S. Wright, pp. 24-36. Australian Institute of Aboriginal Studies, Canberra.

1979 Organization and Formation Processes: Looking at Curated Technologies. *Journal of Anthropological Research* 35(3):255-273.

1980 Willow Smoke and Dogs' Tails: Hunter-Gatherer Settlement Systems and Archaeological Site Formation. *American Antiquity* 45(1):4-20.

2001 *Constructing Frames of Reference: An Analytical Method for Archaeological Theory Building Using Hunter-Gatherer and Environmental Data Sets.* University of California Press, Berkeley.

Binford, Lewis R., and Sally R. Binford
1966 A Preliminary Analysis of Functional Variability in the Mousterian of Levallois Facies. *American Anthropologist* 68(2):238-295.

Bird, Douglas W., and Rebecca Bliege Bird
2005 Martu Children's Hunting Strategies in the Western Desert, Australia. In *Hunter-Gatherer Childhoods: Evolutionary, Developmental, and Cultural Perspectives,* edited by Barry S. Hewlett and Michael E. Lamb, pp. 129-146. Transaction Press, New Brunswick.

Bird, Douglas W., and James F. O'Connell
2006 Behavioral Ecology and Archaeology. *Journal of Archaeological Research* 14:143-188.

Bird, Douglas W., Jennifer L. Richardson, Peter M. Veth, and Anthony J. Barham
2002 Explaining Shellfish Variability in Middens on the Meriam Islands, Torres Strait, Australia. *Journal of Archaeological Science* 29(5):457-469.

Bishop, G. Norman
2001 *Native Trees of Georgia.* Georgia Forestry Commission, Dry Branch.

Blanton, Dennis B.
1983 *Lithic Raw Material Procurement and Use During the Morrow Mountain Phase in South Carolina.* Master's Thesis, Department of Anthropology, Brown University, Providence.

1984 Lithic Raw Material Procurement and Use During the Morrow Mountain Phase in South Carolina. In *Lithic Resource Procurement: Proceedings from the Second Conference on Prehistoric Chert Exploitation,* edited by Susan C. Vehik, pp. 115-132. Occasional Paper 4, Southern Illinois University Center for Archaeological Investigations, Carbondale.

Blanton, Dennis B., and Kenneth E. Sassaman
1989 Pattern and Process in the Middle Archaic Period of South Carolina. In *Studies in South Carolina Archaeology: Essays in Honor of Robert L. Stephenson,* edited by Albert C. Goodyear and Glen T. Hanson, pp. 53-72. Anthropological Studies 9. South Carolina Institute of Archaeology and Anthropology, Columbia.

Blanton, Richard E., Mary H. Parsons, Luis Morett Alatorre, and Carla M. Sinopoli
2005 Introduction. In *Settlement, Subsistence, and Complexity: Essays Honoring the Legacy of Jeffrey R. Parsons*, edited by Richard E. Blanton, pp. 1-18. Cotsen Institute of Archaeology, Los Angeles.

Bleed, Peter
1986 The Optimal Design of Hunting Weapons: Maintainability or Reliability. *American Antiquity* 51:737-747.

Bliege Bird, Rebecca
1999 Cooperation and Conflict: The Behavioral Ecology of Sexual Division of Labor. *Evolutionary Anthropology* 8:65-75.

Blois, J.L., John W. Williams, M.C. Fitzpatrick, S. Ferrier, S. Veloz, F. He, Z. Liu, G. Manion, and B. Otto-Bliesner
2013 Modeling the Climatic Drivers of Spatial Patterns in Vegetation Composition since the Last Glacial Maximum. *Ecography* 36:460-473.

Blurton Jones, Nicholas, Kristen Hawkes, and Patricia Draper
1994 Foraging Patterns of !Kung Adults and Children: Why Didn't !Kung Children Forage? *Journal of Anthropological Research* 50(1):217-248.

Botwick, Brad, Scot Keith, Hugh Matternes, and Patrick Sullivan
2016 *Phase I Archaeological Survey of 8181 Acres at Fort Stewart Military Reservation*. Submitted to Directorate of Public Works, Environmental Division, Fort Stewart. Copies available from New South Associates, Stone Mountain, Georgia.

Boyer, W.D.
1990 Pinus palustris Mill.: Longleaf Pine. In *Silvics of North America: Conifers*, vol. I, edited by R.M. Burns and B.H. Honkala, pp. 405-412. U.S. Department of Agriculture, Forest Service Agricultural Handbook 654, Washington, D.C.

Bradley, Bruce A., Michael B. Collins, and Andrew Hemmings
2010 *Clovis Technology.* Archaeological Series No. 17. International Monographs in Prehistory, Ann Arbor.

Braley, Chad O.
1995 *Historic Indian Period Archaeology of the Georgia Coastal Plain*. University of Georgia Laboratory of Archaeology Series Publication 34. University of Georgia, Athens.

Braley, Chad O., and Constance M. Malone
1996 *Di-Lane Plantation: A Cultural Resources Survey of 8,000 Acres in Burke County, Georgia*. Submitted to U.S. Army Corps of Engineers. Copies available from University of Georgia Laboratory of Archaeology, Athens, Georgia.

Braley, Chad O., and T.J. Price
1991 *Cultural Resources Survey of Selected (FY90) Timber Harvesting Areas, Fort Gordon, Richmond and Columbia Counties, Georgia*. Submitted to U.S. Army Corps of Engineers, Savannah District. Copies available from Southeastern Archeological Services, Athens.

Bramlett, D.L.
1990 Pinus serotina Michx.: Pond Pine. In *Silvics of North America: Conifers*, vol. I, edited by R.M. Burns and B.H. Honkala, pp. 471-475. U.S. Department of Agriculture, Forest Service Agricultural Handbook 654, Washington, D.C.

Brawner, Tim
1993 The Gulf Formational Period. *Central States Archaeological Journal* 40(2):92-94.

Bridgman Sweeney, Kara
2013 *A Complex Web of History and Artifact Types in the Early Archaic Southeast.* Ph.D. Dissertation, Department of Anthropology, University of Florida, Gainesville.

Brockington, Paul E., Jr.
1971 *A Preliminary Investigation of an Early Knapping Site in Southeastern Georgia*. South Carolina Institute of Archaeology and Anthropology Series '*The Notebook'* Vol.3, Issue 2. South Carolina Institute of Archaeology and Anthropology, Columbia.

Brooks, Mark J., Peter A. Stone, Donald J. Colquhoun, and Janice G. Brown
1989 Sea Level Change, Estuarine Development and Temporal Variability in Woodland Period Subsistence Settlement Patterning on the Lower Coastal Plain of South Carolina. In *Studies in South Carolina Archaeology in Honor of Robert L. Stephenson,* edited by Albert C. Goodyear and Glen T. Hanson, pp. 91-100. Anthropological Studies No. 9, University of South Carolina Institute of Archaeology and Anthropology, Columbia.

Brooks, Mark J., Kenneth E. Sassaman, and Glen T. Hanson
1990 Environmental Background and Models. In *Native American Prehistory of the Middle Savannah River Valley: A Synthesis of Archaeological Investigations on the Savannah River Site, Aiken and Barnwell Counties, South Carolina,* edited by Kenneth E. Sassaman, Mark J. Brooks, Glen T. Hanson, and David G. Anderson, pp. 19-66. Savannah River Archaeological Research Papers No. 1, University of South Carolina Institute of Archaeology and Anthropology, Columbia.

Brose, David S.
1979 A Speculative Model of the Role of Exchange in the Prehistory of the Eastern Woodlands. In *Hopewell Archaeology: The Chillicothe Conference,* edited by David S. Brose and N'omi Greber, pp. 3-8. Kent State University, Kent.

Brown, R.H.
2002 *The Greening of Georgia: The Improvement of the Environment in the Twentieth Century*. Mercer University Press, Macon.

Brown, James A., and Robert K. Vierra
1983 What Happened in the Middle Archaic? Introduction to an Ecological Approach to Koster Site Archaeology. In *Archaic Hunter-Gatherers in the American Midwest*, edited by James L. Phillips and James A. Brown, pp. 165-195. Academic Press, New York.

Broyles, Bettye J.
1971 *The St. Albans Site, Kanawha County, West Virginia*. Geological and Economic Report of Archaeological Investigations 3. West Virginia Geological and Economic Survey, Morgantown.

Bryson, Reid A.
2019 Forward: A Roadmap of the Book. In *Macrophysical Climate Modeling Workbook*, edited by Larry Agenbroad and Barb Thayer, pg. xi. PaleoResearch Institute, Golden.

Bryson, Reid A., and Katherine McEnaney DeWall
2007 *A Paleoclimatology Workbook: High Resolution, Site-Specific, Macrophysical Climate.* The Mammoth Hot Springs Site, Hot Springs.

Bryson, Reid A., Katherine McEnaney DeWall, and Alison Stenger
2009 *Archaeoclimatology Atlas of Oregon: The Modeled Distribution in Space and Time of Past Climates.* University of Utah Press, Salt Lake City.

Buchanan, Briggs
2003 The Effects of Sample Bias on Paleoindian Fluted Point Recover in the United States. *North American Archaeologist* 24:311-338.

Burdin, Richard
2004 *Interaction, Exchange, and Social Organization among Hunter-Gatherers in the Midcontinent – Evidence from the Lower Ohio River Valley: Bannerstone Use from 6500 to 3000 BP.* Master's Thesis, Department of Anthropology, University of Kentucky, Lexington.

Burns, R.M., and B.H. Honkala (editors)
1990a *Silvics of Northa America: Conifers*, vol I. U.S. Department of Agriculture, Forest Service Agriculture Handbook 654, Washington, D.C.

1990b *Silvics of North America: Hardwoods*, vol. II. U.S. Department of Agriculture, Forest Service Agriculture Handbook 654, Washington, D.C.

Butler, Scott, Shannon Dunn, Will Brockenbrough, and Jeff Sherard
2010 *Phase I Archaeological Survey of 3899 Acres at Fort Stewart Military Reservation (NRMUs A13.1, A14.1, A16.1, A16.2, and Aholbrook)*. Submitted to the U.S. Army Environmental Command for Fort Stewart. Copies available from Brockington and Associates, Savannah, Georgia.

Cable, John S.
1996 Haw River Revisited: Implications for Modeling Terminal Late Glacial and Early Holocene Hunter-Gatherer Settlement Systems in the Southeast. In *The Paleoindian and Early Archaic Southeast,* edited by David G. Anderson and Kenneth E. Sassaman, pp. 107-148. University of Alabama Press, Tuscaloosa.

Caldwell, Joseph R.
1953a *Appraisal of the Archaeological Resources, Buford Reservoir in Hall, Forsyth, Dawson, and Gwinnett Counties, Northern Georgia*. River Basin Surveys Report Series. Smithsonian Institution, Washington, D.C.

1953b Appraisal of the Archaeological Resources of Hartwell Reservoir, South Carolina and Georgia. National Park Service, Atlanta.

1954 The Old Quartz Industry of Piedmont Georgia and South Carolina. *Southern Indian Studies* 6:37-39.

1958 *Trend and Tradition in the Prehistory of the Eastern United States*. Memoirs of the American Anthropological Association No. 88. American Anthropological Association, Menasha.

Cambron, James W., and David C. Hulse
1964 *Handbook of Alabama Archaeology, Part I: Point Types.* Archaeological Research Association of Alabama, Tuscaloosa.

Campbell, L. Janice, Carol S. Weed, and Prentice M. Thomas
1981 *Archaeological Investigations at the Fort Gordon Military Reservation, Georgia*. Submitted to Interagency Archaeological Services, National Park Services, Atlanta. New World Research Report of Investigations 33. National Park Service, Atlanta.

Cannon, Michael D.
2000 Large Mammal Relative Abundance in Pithouse and Pueblo Period Archaeofaunas from Southwestern New Mexico: Resource Depression in the Mimbres-Mogollon? *Journal of Anthropological Archaeology* 19:317-347.

Carlson, Kristen, and Leland C. Bement
2018 *The Archaeology of Large-Scale Manipulation of Prey: The Economic and Social Dynamics of Mass Hunting*. University Press of Colorado, Louisville.

Carmody, Stephen B.
2014 *From Foraging to Food Production on the Southern Cumberland Plateau of Alabama and Tennessee, USA*. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, Knoxville.

Carter, K.K., and A.G. Snow
1990 Pinus virginiana Mill.: Virginia Pine. In *Silvics of North America: Conifers*, vol. I, edited by R.M. Burns and B.H. Honkala, pp. 513-519. U.S. Department of Agriculture, Forest Service Agricultural Handbook 654, Washington, D.C.

Cashdan, Elizabeth
1983 Territoriality among Human Foragers: Ecological Models and an Application to Four Bushman Groups. *Current Anthropology* 24(1):47-66.

Center for New Crops and Plants Products, Purdue University (CNCPP)
1997 Alnus maritima Nutt. Electronic document, https://hort.purdue.edu/newcrop/duke_energy/Alnus_maritima.html, accessed November 3, 2022.

Chagnon, Napoleon A., and William G. Irons
1979 *Evolutionary Biology and Human Social Behavior: An Anthropological Perspective.* Duxbury Press, North Scituate.

Chanez Rodriguez-Ramirez, Ernesto, Agustina Rosa Andres-Hernandez, and Isolda Luna-Vega
2021 Floral Morphology and Anatomy of Fagus Grandifolia Subsp. Mexicana (Fagaceae), an Endangered-Relict Tree of the Mexican Montane Cloud Forest. *Botanical Sciences* 99(3):599-610.

Chapman, Jefferson
1975 *The Rose Island Site and the Bifurcate Point Tradition.* Report of Investigations 14. University of Tennessee Department of Anthropology, Knoxville.

1985 Archaeology and the Archaic Period in the Southern Ridge-and-Valley Province. In *Structure and Process in Southeastern Archaeology,* edited by Roy S. Dickens and H. Trawick Ward, pp. 137-153. University of Alabama Press, Tuscaloosa.

Charles, Tommy C.
1986 The Fifth Phase of the Collectors Survey. *South Carolina Institute of Archaeology Notebook* 18.

Charnov, Eric L.
1976 Optimal Foraging: The Marginal Value Theorem. *Theoretical Population Biology* 9:129-136.

Charnov, Eric L., and Gordon H. Orians
1973 *Optimal Foraging: Some Theoretical Explorations*. University of New Mexico Digital Repository: https://digitalrepository.unm.edu/biol_fsp/45.

Chin, Wynne W.
1998 The Partial Least Squares Approach for Structural Equation Modeling. In *Modern Methods for Business Research*, edited by G.A. Marcoulides, pp. 295-336. Lawrence Erlbaum Associates, Mahwah.

Christensen, Norman L.
1981 Fire Regimes in Southeastern Ecosystems. In *Fire Regimes and Ecosystem Properties*, edited by H.A. Fleney, pp. 112-136. USDA Forest Service General Technical Report W0-26. USDA, Washington, D.C.

Claggett, Stephen R., and John S. Cable (editors)
1982 *The Haw River Site: Archaeological Investigations at Two Stratified Sites in the North Carolina Piedmont.* Submitted to U.S. Army Corps of Engineers, Wilmington District. Copies available from Commonwealth Associates, Jackson.

Clark, Joseph S., and Robert R. Pierce
1984 *National Water Summary 1984: Hydrologic Events, Selected Water-Quality Trends, and Ground-Water Resources*. Water Supply Paper 2275. USGS, Washington, D.C.

Clark, P.U., A.S. Dyke, J.D. Shakun, A.E. Carlson, J. Clark, B. Wohlfarth, J.X. Mitrovica, S.W. Hostetler, and A.M. McCabe
2009 The Last Glacial Maximum. *Science* 325(5941):710-714.

Cleland, C.E.
1976 The Focal-Diffuse Model: An Evolutionary Perspective on the Prehistoric Cultural Adaptations of the Eastern United States. *Mid-Continental Journal of Archaeology* 1:59-76.

Cleveland, Williams S.
1993 *Visualizing Data.* Hobart Press, Summit.

Codding, Brian F., and Douglas W. Bird
2015 Behavioral Ecology and the Future of Archaeological Science. *Journal of Archaeological Science* 56:9-20.

Codding, Brian F., and Terry L. Jones
2013 Environmental Productivity Predicts Migration, Demographic, and Linguistic Patterns in Prehistoric California. *PNAS* 110(36):14569-14573.

Coe, Joffre L.
1959 *Prehistoric Cultural Change and Stability in the Carolina Piedmont Area*. Master's Thesis, Department of Anthropology, University of Michigan, Ann Arbor.

1964 *The Formative Cultures of the Carolina Piedmont.* Transactions of the American Philosophical Society, vol. 54, issue 5. APS, Philadelphia.

Colannino, Carol A.
2010 *Zooarchaeological Analysis of Vertebrate Remains from Five Late Archaic Shell Rings on the Georgia Coast, USA*. PhD Dissertation, Department of Anthropology, University of Georgia, Athens.

Collins, Michael B.
1999 *Clovis Blade Technology.* University of Texas Press, Austin.

Cook, H.J.
1927 New Geological and Paleontological Evidence Bearing on the Antiquity of Mankind in America. *Natural History* 27:240-247.

Cook Hale, Jessica W., and Matthew Sanger
2020 Cultural Spaces and Climate Change: Modeling Holocene Archaeological Settlement Patterns on the Coastal Plain of the Southeastern United States. *Journal of Anthropological Archaeology* 59:1-13.

Cotter, John L.
1937 The Occurrence of Flints and Extinct Animals in Pluvial Deposits Near Clovis, New Mexico, Part IV: Report on the Excavations at the Gravel Pit in 1936. *Proceedings of the Academy of Natural Sciences of Philadelphia* 89:1-16.

Cowan, C. Wesley
1985 Understanding the Evolution of Plant Husbandry in Eastern North America: Lessons from Botany, Ethnography, and Archaeology. In *Prehistoric Food Production in North America*, edited by Richard I. Ford, pp. 205-243. Anthropological Papers 75. University of Michigan Museum of Anthropology, Ann Arbor.

Cressler, A.M.
1998 Ground-Water Conditions in Georgia, 1997. *U.S. Geological Survey Open-File Report Series*, pp. 98-172. U.S. Geological Survey, Atlanta.

Crites, Gary D.
1993 Domesticated Sunflower in Fifth Millennium B.P. Temporal Context: New Evidence from Middle Tennessee. *American Antiquity* 58:146-148.

Cronk, Lee, Napoleon Chagnon, and William Irons (editors)
2000 *Adaptation and Human Behavior: An Anthropological Perspective.* Aldine de Gruyter, Hawthorne.

Crothers, George M.
2004 The Green River in Comparison to the Lower Mississippi Valley during the Archaic: To Build or Not to Build Mounds. In *Signs of Power: The Rise of Cultural Complexity in the Southeast*, edited by Jon L. Gibson and Philip J. Carr, pp. 86-96. University of Alabama Press, Tuscaloosa.

Dall, William H., and Gilbert D. Harris
1892 Correlation Papers: Neocene. *U.S. Geological Survey Bulletin* 84:107-111.

Daniel, I. Randolph
1996 Raw Material Availability and Early Archaic Settlement in the Southeast. In *The Paleoindian and Early Archaic Southeast,* edited by David G. Anderson and Kenneth E. Sassaman, pp. 84-91. University of Alabama Press, Tuscaloosa.

1998 *Hardaway Revisited: Early Archaic Settlement in the Southeast.* University of Alabama Press, Tuscaloosa.

2001 Stone Raw Material Availability and Early Archaic Settlement in the Southeastern United States. *American Antiquity* 66(2):237-265.

Daniel, I. Randolph, and Albert C. Goodyear
2018 Clovis Macrobands in the Carolinas. In *In the Eastern Fluted Point Tradition*, vol. II, edited by Joseph A.M. Gingerich, pp. 240-247. University of Utah Press, Salt Lake City.

Dawson, Audrey Rachel
2016 *Sifting Through the Sand: Adaptive Flexibility in the Middle Archaic Occupations of the Sandhills Province of South Carolina*. Ph.D. Dissertation, Department of Anthropology, University of South Carolina, Columbia.

Dekking, F.M., C. Kraaikamp, H.P. Lopuhaa, and L.E. Meester
2005 *A Modern Introduction to Probability and Statistics: Understanding Why and How.* Springer, New York.

DeJarnette, David L., E. Kurjack, and J. Cambron
1962 Excavations at the Stanfield-Worley Bluff Shelter. *Journal of Alabama Archaeology* 8(1-2):1-124.

Del Grosso, Stephen, William Parton, Thomas Stohlgren, Daolan Zheng, Dominique Bachelet, Stephen Prince, Kathy Hibbard, and Richard Olsen
2008 Global Potential Net Primary Production Predicted from Vegetation Class, Precipitation, and Temperature. *Ecology* 89(8):2117-2126.

Delcourt, Paul A.
1980 Goshen Springs: Late-Quaternary Vegetation Record for Southern Alabama. *Ecology* 61:371-386.

Delcourt, Hazel R., and Paul A. Delcourt
1985 Quaternary Palynology and Vegetational History of the Southeastern United States. In *Pollen Records of Late-Quaternary North American Sediments*, edited by Vaughn M. Bryant and Richard G. Holloway, pp. 1-38. American Association of Stratigraphic Palynologists, Dallas.

1994 Postglacial Rise and Decline of Ostrya virginiana (Mill.) K. Koch and Carpinus caroliniana Walt. in Eastern North America: Predictable Responses of Forest Species to Cyclic Changes in Seasonality of Climates. *Journal of Biogeography* 21(2):137-150.

Delcourt, Paul A., and Hazel R. Delcourt
1977 The Tunica Hills, Louisiana-Mississippi: Late Glacial Locality for Spruce and Deciduous Forest Species. *Quaternary Research* 7:218-237.

1981 Vegetation Maps for Eastern North America. In *Geobotany II*, edited by R.C. Romans, pp. 123-165. Plenum Press, New York.

1983 Late Quaternary Vegetational Dynamics and Community Stability Reconsidered. *Quaternary Research* 19(2):265-271.

1984 Late Quaternary Paleoclimates and Biotic Responses in Eastern North America and the Western North Atlantic Ocean. *Paleogeography, Paleoclimatology, Paleoecology* 48:263-284.

Demsetz, Harold
1967 Towards a Theory of Property Rights. *American Economic Review* 62:347-359.

Denham, M.E.
1999 *Savannah River Site Geology and Hydrogeology: Environmental Information Document*. Submitted to U.S. Department of Energy (Contract No. DE-AC09-96SR18500). Copies available from BAT Associates, Atlanta.

DePratter, Chester B.
2010 Thoughts on the Late Archaic/Early Woodland Transition on the Georgia and South Carolina Coasts. In *Trend, Tradition, and Turmoil: What Happened to the Southeastern Archaic?*, edited by David Hurst Thomas and Matthew C. Sanger, pp. 247-252. Anthropological Paper of the American Museum of Natural History No. 93, New York.

DePratter, Chester B., and James D. Howard
1981 Evidence for a Sea Level Lowstand between 4500 and 2400 Years BP on the Southeast Coast of the United States. *Journal of Sedimentary Petrology* 1:1287-1295.

Diehl, Michael W.
2008 Rational Behavior, the Adoption of Agriculture, and the Organization of Subsistence during the Late Archaic Period in the Greater Tucson Basin. *Archaeological Papers of the American Anthropological Association* 7(1):251-265.

Ditchkoff, S.S.
2011 Anatomy and Physiology. In *Biology and Management of White-Tailed Deer,* edited by David G. Hewitt, pp. 43-74. CRC Press, Boca Raton.

Doran, Glen H., David N. Dickel, and Lee A. Newsom
1990 A 7,290-Year-Old Bottle Gourd from the Windover Site, Florida. *American Antiquity* 55:354-359.

Dye, David H.
2011 Primary Forest Efficiency in the Eastern Woodlands of North America. *Early Georgia* 38(2):159-167.

Dyson-Hudson, Rada, and Eric A. Smith
1978 Human Territoriality: An Ecological Reassessment. *American Anthropologist* 80(1):21-41.

Edwards, Leslie, Jonathan Ambrose, and L. Katherine Kirkman
2013 *The Natural Communities of Georgia.* University of Georgia Press, Athens.

Elliott, Daniel T.
1992 *West Effingham Survey*. LAMAR Institute Publication Series Report No. 17. LAMAR Institute, Savannah.

2006 *The Archaic Period of Georgia, South of the Fall Line*. LAMAR Institute Report 80. LAMAR Institute, Savannah.

2010 *The Roland Steiner Project, Phase I: Introductory Background and Correspondence.* LAMAR Institute Report 59. LAMAR Institute, Savannah.

2017 *Soapstone in Georgia.* LAMAR Institute Report 112. LAMAR Institute, Savannah.

Elliott, Daniel T., and Kenneth E. Sassaman
1995 *Archaic Period Archaeology of the Georgia Coastal Plain and Coastal Zone*. University of Georgia Laboratory of Archaeology Series Publication 35. University of Georgia, Athens.

Environmental Protection Agency
2006 Ecological Regions of North America – Level III, (color poster with map and key; map scale 1:10,000,000). U.S. Environmental Protection Agency, Washington, D.C.

Eren, Metin I., Anne Chao, Chun-Huo Chiu, Robert K. Colwell, Briggs Buchana, Matthew T. Boulanger, John Darwent, and Michael J. O'Brien
2016 Statistical Analysis of Paradigmatic Class Richness Supports Greater Paleoindian Projectile-Point Diversity in the Southeast. *American Antiquity* 81(1):174-192.

Eren, Metin I. (editor)
2012 *Hunter-Gatherer Behavior: Human Response during the Younger Dryas*. Left Coast Press, Walnut Creek.

Erlandson, Jon M.
1991 Shellfish and Seeds as Optimal Resources: Early Holocene Subsistence on the Santa Barbara Coast. In *Hunter-Gatherers of Early Holocene Coastal California*, edited by Jon M. Erlandson and Roger H. Colton, pp. 101-111. University of California Institute of Archaeology, Los Angeles.

Farr, Grayal E.
2006 *A Reevaluation of Bullen's Typology for Preceramic Projectile Points*. Master's Thesis, Department of Anthropology, Florida State University, Tallahassee.

Fearn, Lawrence B., and Arthur D. Cohen
1984 Palynological Investigations of Six Sites in the Okefenokee Swamp. In *The Okefenokee Swamp: Its Natural History, Geology, and Geochemistry*, edited by A.D. Cohen, D.J. Casagrande, M.J. Casagrande, and J.R. Best, pp. 423-443. Wetland Surveys, New Mexico.

Fiedel, Stuart J.
2022 Initial Human Colonization of the America: An Overview of the Issues and the Evidence. *Radiocarbon* 44(2):407-436.

Fish, Paul R.
1976 *Patterns of Prehistoric Site Distribution in Effingham and Screven Counties, Georgia: Results of an Archaeological Survey for the USDA Soil Conservation Service in the Ebenezer Creek Watershed*. University of Georgia Laboratory of Archaeology Series Publication 11. University of Georgia, Athens.

Fitzhugh, Ben
2001 Risk and Invention in Human Technological Evolution. *Journal of Anthropological Archaeology* 20:125-167.

Florida Museum of Natural History
2022 Bullen Projectile Point Type Collection. Electronic document, https://www.florida museum.ufl.edu/flarch/collections/bullen/, accessed October 23, 2022.

Ford, Richard I.
1977 Evolutionary Ecology and the Evolution of Human Ecosystems: A Case Study from the Midwestern USA. In *Explanation of Prehistoric Change,* edited by James N. Hill, pp. 153-184. University of Arizona Press, Albuquerque.

Fowler, Melvin R.
1959 Modoc Rock Shelter: An Early Archaic Site in Southern Illinois. *American Antiquity* 24:257-270.

Frazier, William J.
2019 Coastal Plain Geologic Province. Electronic document, https://www.georgia encyclopedia.org/articles/science-medicine/coastal-plain-geologic-province/, accessed October 10, 2022.

Fretwell, Steven Dewitt, and Henry L. Lucas
1969 On Territorial Behavior and Other Factors Influencing Habitat Distribution in Birds. I. Theoretical Development. *Acta Biotheoretica* 19:16-36.

Fritz, Gayle J.
2019 Rise of the Eastern Agricultural Complex: Terminal Late Archaic and Early Woodland Periods. In *Feeding Cahokia: Early Agriculture in the North American Heartland*, pp. 29-43. University of Alabama Press, Tuscaloosa.

Fritz, Gayle J., Virginia Drywater Whitekiller, and James W. McIntosh
2001 Ethnobotany of Ku-Nu-Che: Cherokee Hickory Nut Soup. *Journal of Ethnobiology* 21(2):1-27.

Futato, Eugene M.
1983a Patterns of Lithic Resource Utilization in the Cedar Creek Reservoir Area. *Southeastern Archaeology* 2(2):118-131.

1983b *Archaeological Investigations in the Cedar Creek and Upper Bear Creek Reservoirs.* University of Alabama Office of Archaeological Research Report of Investigations 13. University of Alabama, Tuscaloosa.

Galloway, Patricia
1994 Prehistoric Population of Mississippi: A First Approximation. *Mississippi Archaeology* 29(2):44-71.

Gardner, Paul
1997 The Ecological Structure and Behavioral Implications of Mast Exploitation Strategies. In *People, Plants, and Landscapes: Studies in Paleoethnobotany*, edited by Kristen J. Gremillion, pp. 161-178. University of Alabama Press, Tuscaloosa.

Gardner, William A.
1974 *The Flint Run Complex: Pattern and Process during the Paleoindian to Early Archaic.* Catholic University of America Occasional Publication No. 1. CUA Archaeology Laboratory, Washington, D.C.

1977 Flint Run Paleoindian Complex and Its Implications for Eastern North America Prehistory. *Annals of the New York Academy of Sciences* 288:251-263.

Georgia Automated Environmental Monitoring Network (AEMN)
2020 Climate Averages. Electronic document, weather.uga.edu, accessed October 11, 2022.

Georgia River Land-Margin Ecosystems Research (GARLMER)
2002 Ogeechee River. Electronic document, http://lmer.marsci.uga.edu/ogeechee.html, accessed October 10, 2022.

Getis, Arthur, and J. Keith Ord
2010 The Analysis of Spatial Association by Use of Distance Statistics. In *Perspectives on Spatial Data Analysis,* edited by Luc Anselin and Sergio J. Rey, pp. 127-145. Springer, New York.

Gill, J.L., John W. Williams, S.T. Jackson, K.B. Lininger, and G.S. Robinson
2009 Pleistocene Megafaunal Collapse, Novel Plant Communities, and Enhanced Fire Regimes in North America. *Science* 326:1100-1103.

Gilmore, Zackary I.
2015 Direct Radiocarbon Dating of Spanish Moss (*Tillandsia usneoides*) from Early Fiber-Tempered Pottery in the Southeastern United States. *Journal of Archaeological Science* 58:1-8.

2016 *Gathering at Silver Glen: History and Community in Late Archaic Florida*. University Press of Florida, Gainesville.

Gilmore, Zackary I., Kenneth E. Sassaman, and Michael D. Glascock
2018 Geochemical Sourcing of Fiber-Tempered Pottery and the Organization of Late Archaic Stallings Communities in the American Southeast. *Journal of Archaeological Science* 99:35-46.

Gil-Pelegrin, Eustaquio, Jose Javier Peguero-Pina, and Domingo Sancho-Knapik (editors)
2017 *Oaks Physiological Ecology: Exploring the Functional Diversity of Genus Quercus L.* Springer, New York.

Glenn, James R.
1994 The River Basin Survey Program. In *40 Something: The Smithsonian Institution River Basin Surveys*, edited by Kimball M. Banks, pp. 5-14. North Dakota Archaeological Society, Bismarck.

Goad, Sharon I.
1979 *Chert Resources in Georgia: Archaeological and Geological Perspectives*. Laboratory of Archaeology Series Publication 21. University of Georgia, Athens.

Goman, Michelle, and David S. Leigh
2004 Wet Early to Middle Holocene Conditions on the Upper Coastal Plain of North Carolina. *Quaternary Research* 61:256-264.

Gonzalez, L.M., and Eric C. Grimm
2009 Synchronization of Late-Glacial Vegetation Changes at Crystal Lake, Illinois, USA with the North Atlantic Event Stratigraphy. *Quaternary Research* 72:234-245.

Goodyear, Albert C.
1974 *The Brand Site: A Techno-Functional Study of a Dalton Site in Northeast Arkansas.* Research Series 7. Arkansas Archaeological Survey, Fayetteville.

1979 *A Hypothesis for the Use of Cryptocrystalline Raw Materials Among Paleoindian Groups of North America.* Research Manuscript Series 156. South Carolina Institute of Archaeology and Anthropology, Columbia.

1989 A Hypothesis for the Use of Cryptocrystalline Raw Materials among Paleoindian Groups of North America. In *Eastern Paleoindian Lithic Resource Use,* edited by Christopher Ellis and Jonathan Lothrop, pp. 1-9. Westview Press, Boulder.

1999 The Early Holocene Occupation of the Southeastern United States: A Geoarchaeological Summary. In *Ice Age Peoples of North America: Environments, Origins, and Adaptations of the First Americans,* edited by Robsen Bonnischen and Karen Turnmire, pp. 432-481. Center for the Study of First Americans, College Station.

2018 The Allendale-Brier Creek Clovis Complex of the Central Savannah River Valley. In *In the Eastern Fluted Point Tradition*, vol. II, edited by Joseph A.M. Gingerich, pp. 248-266. University of Utah Press, Salt Lake City.

Goodyear, Albert C., Keith Derting, D. Shane Miller, and Ashley M. Smallwood
2009 Exotic Clovis Stone Tools from the Topper Site, 38AL23, Allendale County, South Carolina. *Current Research in the Pleistocene* 26:60-62.

Goodyear, Albert C., John H. House, and Neal W. Ackerly
1979 *Laurens-Anderson: An Archaeological Study of the Inter-Riverine Piedmont.* Anthropological Studies 4. South Carolina Institute of Archaeology and Anthropology, Columbia.

Grauke, L.J., and R. Heerema (editors)
2015 *Proceedings of the 1st International Symposium on Pecans and Other Carya in Indigenous and Managed Systems*. Leuven University Press, Leuven.

Gremillion, Kristen J.
1996 The Paleoethnobotanical Record for the Mid-Holocene Southeast. In *Archaeology of the Mid-Holocene Southeast,* edited by Kenneth E. Sassaman and David G. Anderson, pp. 99-114. University Press of Florida, Gainesville.

2004 Seed Processing and the Origins of Food Production in Eastern North America. *American Antiquity* 69:215-233.

Griffin, James B.
1967 Eastern North American Archaeology: A Summary. *Science* 156(3772):175-191.

Griffin, James B. (editor)
1952 *Archaeology of Eastern United States*. University of Chicago Press, Chicago.

Griffin, John W.
1974 *Investigations in Russell Cave.* National Park Service Publications in Archaeology No. 13. U.S. Government Printing Office, Washington, D.C.

Griffith, Glenn E., James M. Omernik, Jeffrey A. Comstock, Steve Lawrence, George Martin, Art Goddard, Vickie J. Hulcher, and Trish Foster
2001 Ecoregions of Alabama and Georgia, (color poster with map, descriptive text, summary tables, and photographs; map scale 1:1,700,000). U.S. Geological Survey, Reston.

Griffith, Glenn E., James M. Omernik, Jeffrey A. Comstock, M.P. Schafale, W.H. McNab, D.R. Lenat, and T.F. MacPherson
2002 Ecoregions of North Carolina (map scale 1:1,500,000). U.S. Environmental Protection Agency, Corvallis.

Grimm, Eric C., Socorro Lozano-Garcia, Hermann Behling, and Vera Markgraf
2001 Holocene Vegetation and Climate Variability in the Americas. In *Interhemispheric Climate Linkages*, edited by Vera Markgraf, pp. 325-370. Academic Press, San Diego.

Guzman, Jose, and Mohammed H. Golabi
2017 Agroecosystem Net Primary Productivity and Carbon Footprint. In *Soil Health and Intensification of Agroecosystems,* edited by Jose Guzman, pp. 215-229. Elsevier, New York.

Hair, Joe F., Christian M. Ringle, and Marko Sarsedt
2014 PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice* 19(2):139-152.

Halligan, Jessi J., Michael R. Waters, Angelina Perrotti, Ivy J. Owens, Joshua M. Feinberg, Mark D. Bourne, Brendan Fenerty, Barbara Winsborough, David Carlson, Daniel C. Fisher, Thomas W. Stafford, Jr., and James S. Dunbar
2016 Pre-Clovis Occupation 14,550 Years Ago at the Page-Ladson Site, Florida, and the Peopling of the Americas. *Science Advances* 2(5):1-8.

Hamilton, Fran E.
1999 Southeastern Archaic Mounds: Examples of Elaboration in a Temporally Fluctuating Environment? *Journal of Anthropological Archaeology* 18(3):344-355.

Hanley, Thomas
2018 Piedmont Geologic Province. Electronic document, https://www.georgiaencyclopedia .org/articles/science-medicine/piedmont-geologic-province, accessed October 10, 2022.

Harms, W.R.
1997 Fraxinus profunda (Bush) Bush: Pumpkin Ash. Electronic document, https://www.srs. fs.usda.gov/pubs/misc/ag_654/volume_2/fraxinus/profunda.htm, accessed November 3, 2022.

Hawkes, Kristen, Kim Hill, and James F. O'Connell
1982 Why Hunters Gather: Optimal Foraging and the Aché of Eastern Paraguay. *American Ethnologist* 9(2):379-398.

Hayden, Brian, Nora Franco, and Jim Spafford
1996 Evaluating Lithic Strategies and Design Criteria. In *Stone Tools: Theoretical Insights into Human Behavior,* edited by G.H. Odell, pp. 9.49. Plenum Press, New York.

Hendryx, Greg S., Colin E. O'Brien, and Angus C. Sawyer
2006 *An Intensive Archaeological Assessment Survey and Limited Site Excavation at the Genesis Point Development Tract, Bryan County, Georgia.* Submitted to the Georgia Department of Natural Resources. Copies available from Environmental Services, Inc., Atlanta.

Hill, Kim, and Kristen Hawkes
1983 Neo-Tropical Hunting among the Ache of Eastern Paraguay. In *Adaptive Responses of Native Amazonians,* edited by R.B. Hames and W.T. Vickers, pp. 129-188. Academic Press, New York.

Hill, Kim, Hillard Kaplan, Kristen Hawkes, and A. Magdalena Hurtado
1987 Foraging Decisions among Aché Hunter-Gatherers: New Data and Implications for Optimal Foraging Models. *Ethnology and Sociobiology* 8:1-36.

Holland-Lulewicz, Jacob, Megan A. Conger, Jennifer A. Birch, Stephen A. Kowalewski, and Travis W. Jones
2020 An Institutional Approach for Archaeology. *Journal of Anthropological Archaeology* 58:1-15.

Hollenbach, Kandace
2005 *Gathering in the Late Paleoindian and Early Archaic Periods in the Middle Tennessee River Valley, Northern Alabama*. PhD Dissertation, Department of Anthropology, University of North Carolina, Chapel Hill.

2007 Gathering in the Late Paleoindian Period: Archaeobotanical Remains from Dust Cave, Alabama. In *Foragers of the Terminal Pleistocene in North America,* edited by Boyce N. Driskell and Renee Walker, pp. 132-147. University of Nebraska Press, Lincoln.

2009 *Foraging in the Tennessee River Valley 12,500 to 8,000 Years Ago.* University of Alabama Press, Tuscaloosa.

Hollenbach, Kandace D., and Stephen B. Carmody
2022 Stalking the Most Predictable Prey: Early Gatherers in the Eastern Woodlands. In *The American Southeast at the End of the Ice Age*, edited by D. Shane Miller, Ashley M. Smallwood, and Jesse W. Tune, pp. 230-249. University of Alabama Press, Tuscaloosa.

Holmes, W.H.
1913 *Report on Archaeological Investigations in North and South Carolina and Georgia*. University of Georgia Laboratory of Archaeology Manuscript No. 154. University of Georgia, Athens.

House, John H., and David L. Ballenger
1976 *An Archaeological Survey of the Interstate 77 Route in the South Carolina Piedmont.* Research Manuscript Series 104. South Carolina Institute of Archaeology and Anthropology, Columbia.

House, John H., and Ronald W. Wogaman
1978 *Windy Ridge: A Prehistoric Site in the Inter-Riverine Piedmont in South Carolina.* Anthropological Studies 3. University of South Carolina Institute of Archaeology and Anthropology, Columbia.

Howard, Edgar B.
1935 Evidence of Early Man in North America. *The Museum Journal* 24:2-3.

Huntley, Brian, P.J. Bartlein, and I.C. Prentice
1989 Climatic Control of the Distribution and Abundance of Beech (*Fagus* L.) in Europe and North America. *Journal of Biogeography* 16:551-560.

Hurtado, A. Magdalena, Kristen Hawkes, Kim P. Hill, and Hillard Kaplan
1985 Female Subsistence Strategies among Ache Hunter-Gatherers of Eastern Paraguay. *Human Ecology* 13:1-47.

Hurtado, A Magdalena, Kim P. Hill, Ines Hurtado, and Hillard Kaplan
1992 Trade-Offs between Female Food Acquisition and Child Care among Hiwi and Ache Foragers. *Human Nature* 3(3):185-216.

Hussey, Tristram C.
1993 *A 20,000-Year History of Vegetation and Climate at Clear Pond, Northeastern South Carolina*. Master's thesis, Department of Anthropology, University of Maine, Orono.

Hutchinson, George E.
1965 *The Ecological Theater and the Evolutionary Play*. Yale University Press, New Haven.

Ingbar, Eric E.
1994 Lithic Material Selection and Technological Organization. In *The Organization of North American Prehistoric Chipped Stone Tool Technologies,* edited by Phillip J. Carr, pp. 45-56. Archaeological Series No. 7. International Monographs in Prehistory, Ann Arbor.

Ivester, Andrew H., Daid S. Leigh, and D.I. Godfrey-Smith
2001 Chronology of Inland Eolian Dunes on the Coastal Plain of Georgia. *Quaternary Research* 55:293-302.

Jackson, Stephen T., and Donald R. Whitehead
1993 Pollen and Macrofossils from Wisconsinan Interstadial Sediments in Northeastern Georgia. *Quaternary Research* 39:99-106.

Jackson, Stephen T., and John W. Williams
2004 Modern Analogs in Quaternary Paleoecology: Here Today, Gone Yesterday, Gone Tomorrow? *Annual Review of Earth and Planetary Science* 32:495-537.

Jefferies, Richard W.
1997 Middle Archaic Bone Pins: Evidence of Mid-Holocene Regional-Scale Social Groups in the Southern Midwest. *American Antiquity* 62(3):464-487.

2008 *Holocene Hunter-Gatherers of the Lower Ohio River Valley.* University of Alabama Press, Tuscaloosa.

Jennings, Jesse D. (editor)
1955 The American Southwest: A Problem in Cultural Isolation. *Society for American Archaeology Memoir* 11:63-127.

Jochim, Michael A.
1976 *Hunter-Gatherer Subsistence and Settlement: A Predictive Model*. Academic Press, New York.

1989 Optimization and Stone Tool Studies: Problems and Potential. In *Time, Energy, and Stone Tools,* edited by Robin Torrence, pp. 106-111. Cambridge University Press, Cambridge.

1991 Archaeology as Long-Term Ethnography. *American Anthropologist* 93(2):308-321.

Johnson, Jay K.
1994 Prehistoric Exchange in the Southeast. In *Prehistoric Exchange Systems in North America,* edited by Timothy G. Baugh and Jonathon E. Ericson, pp. 99-126. Springer, New York.

Johnson, Jay K., and Samuel O. Brookes
1989 Benton Points, Turkey Tails, and Cache Blades: Middle Archaic Exchange in the Midsouth. *Southeastern Archaeology* 8(2):134-145.

Johnson, Kenneth W.
1981 The Rise and Decline of the Old Quartz Industry in the Southern Piedmont. *Early Georgia* 9(1-2):56-75.

Johnson, R.L.
1997 Nyssa aquatica L.: Water Tupelo. Electronic document, https://www.srs.fs.usda.gov /pubs/misc/ag_654/volume_2/nyssa/aquatica.htm, accessed November 3, 2022.

Jones, K.C., Daniel T. Elliott, and R. Jerald Ledbetter
2016 Georgia's Lost Archaeologist: Reconnaissance of the Davis Plantation Collection of Dr. Roland Steiner. Paper presented at the 73rd Annual Southeastern Archaeological Conference, Athens, Georgia.

Jones, K.C., Carla S. Hadden, Travis W. Jones, and Robert J. Speakman
2019 Assessing AMS Dating of Fiber-Tempered Ceramics: Comparing Bulk Combustion and Isolated Organic Temper (*T. usneoides*). Paper presented at the 9th International Symposium of Radiocarbon and Archaeology, Athens.

Jones, K.C., Travis W. Jones, and R.A. Varney
2022 Assessing Hydrofluoric Acid Digestion of Siliceous Clay Matrices and Its Utility in AMS Dating of Fiber-Tempered Ceramics. Poster presented at the 87th annual Society for American Archaeology Conference, Chicago.

Kaplan, Hillard, and Kim Hill
1992 The Evolutionary Ecology of Food Acquisition. In *Evolutionary Ecology and Human Behavior*, edited by Eric A. Smith and Bruce Winterhalder, pp. 167-202. Aldine de Gruyter, Hawthorne.

Kapp, R.O.
1969 *How to Know Pollen and Spores.* William C. Brown, Dubuque.

Keegan, William F.
1995 Modeling Dispersal in the Prehistoric West Indies. *World Archaeology* 26:400-420.

Keeley, Lawrence H.
1999 Use of Plant Foods among Hunter-Gatherers: A Cross-Cultural Study. In *Prehistory of Agriculture: New Experimental and Ethnographic Approaches*, edited by Patricia C. Anderson, pp. 6-14. Monograph 40, Institute of Archaeology, University of California, Los Angeles.

Keene, Arthur S.
1979 Economic Optimization Models and the Study of Hunter-Gatherer Subsistence Settlement Systems. In *Transformations: Mathematical Approaches to Culture Change,* edited by Colin Renfrew and Kenneth L. Cooke, pp. 369-404. Academic Press, New York.

1981 *Prehistoric Foraging in a Temperate Forest: A Linear Programming Model.* Academic Press, New York.

Kellett, Lucas C., and Eric E. Jones (editors)
2017 *Settlement Ecology of the Ancient Americas*. Routledge, New York.

Kellett, Lucas C., and Eric E. Jones
2017 Settlement Ecology of the Ancient Americas: An Introduction. In *Settlement Ecology of the Ancient Americas,* edited by L.C. Kellett and E.E. Jones, pp. 3-26. Routledge, New York.

Kelly, Robert L.
1983 Hunter-Gatherer Mobility Strategies. *Journal of Anthropological Research* 39(3):277-306.

1988 The Three Sides of a Biface. *American Antiquity* 53:717-734.

1995 *The Foraging Spectrum: Diversity in Hunter-Gatherer Lifeways.* Smithsonian Institution Press, Washington, D.C.

1999 Hunter-Gatherer Foraging and the Colonization of the Western Hemisphere. *Anthropologie* 37:143-153.

2001 *Prehistory of the Carson Desert and Stillwater Mountains: Environment, Mobility, and Subsistence in a Great Basin Wetland.* Anthropological Papers 123. University of Utah, Salt Lake City.

2013 *The Lifeways of Hunter-Gatherers: The Foraging Spectrum.* Cambridge University Press, Cambridge.

Kelly, Robert L., and Lawrence C. Todd
1988 Coming into the Country: Early Paleoindian Hunting and Mobility. *American Antiquity* 53(2):231-244.

Kennedy, Harvey E., Jr.
1997 Fraxinus pennsylvanica Marsh.: Green Ash. Electronic document, https://www.srs.fs.usda.gov/pubs/misc/ag_654/volume_2/fraxinus/pennsylvanica.htm, accessed November 3, 2022.

Kennett, Douglas J., A. Anderson, and Bruce Winterhalder
2006 The Ideal Free Distribution, Food Production, and the Colonization of Oceania. In *Behavioral Ecology and the Transition to Agriculture*, edited by Douglas J. Kennett and Bruce Winterhalder, pp. 265-288. University of California Press, Berkeley.

Kennett, Douglas J., and Bruce Winterhalder
2006a The Ideal Free Distribution, Food Production, and the Colonization of Oceania. In *Behavioral Ecology and the Transition to Agriculture*, edited by Douglas J. Kennett and Bruce Winterhalder, pp. 265-288. University of California Press, Berkeley.

2006b *Behavioral Ecology and the Transition to Agriculture*, edited by Douglas J. Kennett and Bruce Winterhalder. University of California Press, Berkeley.

2008 Demographic Expansion, Despotism, and the Colonization of East and South Polynesia. In *Islands of Inquiry: Colonization, Seafaring, and the Archaeology of Maritime Landscapes*, edited by Geoffrey Clark, Foss Leach, and Sue O'Connor, pp. 87-96. Australian National University, Canberra.

Kent, Susan (editor)
1996 *Cultural Diversity among Twentieth Century Foragers.* Cambridge University Press, Cambridge.

King, Adam, and Chad O. Braley
1992 *Cultural Resources Survey of Selected (FY92) Timber Harvesting Areas, Fort Gordon, Richmond and McDuffie Counties*. Submitted to U.S. Army Corps of Engineers, Savannah District. Copies available from Southeastern Archeological Services, Athens.

Kneller, Margaret, and Dorothy Peteet
1993 Late-Quaternary Climate in the Ridge and Valley of Virginia, USA: Changes in Vegetation and Depositional Environment: A Contribution to the North Atlantic Seaboard Programme of IGCP-253, Termination of the Pleistocene. *Quaternary Science Reviews* 12(8):613-628.

1999 Late Glacial to Early Holocene Climate Changes from a Central Appalachian Pollen and Macrofossil Record. *Quaternary Research* 51:133-147.

Koch, P.L., and A.D. Barnosky
2006 Late Quaternary Extinctions: State of the Debate. *Annual Review of Ecology, Evolution, and Systematics* 37:215-250.

Kornfeld, Marcel, and Bruce B. Huckell (editors)
2016 *Stones, Bones, and Profiles: Exploring Archaeological Context, Early American Hunter-Gatherers, and Bison*. University Press of Colorado, Boulder.

Kornfeld, Marcel, and Alan J. Osborn (editors)
2003 *Islands on the Plains: Ecological, Social, and Ritual Use of Landscapes.* University of Utah Press, Salt Lake City.

Kossuth, Susan V., and J.L. Michael
1990 Pinus glabra Walt.: Spruce Pine. In *Silvics of North America: Conifers*, vol. I, edited by R.M. Burns and B.H. Honkala, pp. 355-358. U.S. Department of Agriculture, Forest Service Agricultural Handbook 654, Washington, D.C.

Kossuth, Susan, and Robert L. Scheer
1997 Nyssa ogeche Bartr. Ex Marsh.: Ogeechee Tupelo. Electronic document, https://www. srs.fs.usda.gov/pubs/misc/ag_654/volume_2/nyssa/ogeche.htm, accessed November 3, 2022.

Krause, Teresa P., James M. Russell, Rui Zhang, John W. Williams, and Stephen T. Jackson
2018 Late Quaternary Vegetation, Climate, and Fire History of the Southeast Atlantic Coastal Plain based on a 30,000-Year Multi-Proxy Record from White Pond, South Carolina. *Quaternary Research* 2018:1-20.

Kuhn, Steven L.
1989 Hunter-Gatherer Foraging Organization and Strategies of Artifact Replacement and Discard. In *Experiments in Lithic Technology*, edited by Daniel S. Amick and Raymond P. Mauldin, pp. 33-47. British Archaeological Reports, Oxford.

1995 *Mousterian Lithic Technology*. Princeton University Press, Princeton.

2004 Upper Paleolithic Raw Material Economies at Ucagizli Cave, Turkey. *Journal of Anthropological Archaeology* 23:431-448.

Kuhn, Steven L., and D. Shane Miller
2015 Artifacts as Patches: The Marginal Value Theorem and Stone Tool Life Histories. In *Lithic Technological Systems and Evolutionary Theory*, edited by Nathan Goodale and William Andrefsky, Jr., pp. 172-197. Cambridge University Press, Cambridge.

Kutzbach, J., R. Gallimore, S. Harrison, P. Behling, R. Selin, and F. Laarif
1998 Climate and Biome Simulations for the Past 21,000 Years. *Quaternary Science Reviews* 17:473-308.

LaMoreaux, Heidi K.
1999 *Human-Environmental Relationships in the Coastal Plain of Georgia Based on High-Resolution Paleoenvironmental Records from Three Peat Deposits*. Ph.D. Dissertation, Department of Anthropology, University of Georgia, Athens.

LaMoreaux, Heidi K., George A. Brook, and John A. Knox
2009 Late Pleistocene and Holocene Environments of the Southeastern United States from the Stratigraphy and Pollen Content of a Peat Deposit on the Georgia Coastal Plain. *Palaeogeography, Palaeoclimatology, Palaeoecology* 280(3-4):300-312.

Larson Lewis
1980 *Aboriginal Subsistence Technology on the Southeastern Coastal Plain during the Late Prehistoric Period.* University Press of Florida, Gainesville.

Larson, Lewis (editor)
1998 *The Georgia and South Carolina Coastal Expeditions of Clarence Bloomfield Moore*. University of Alabama Press, Tuscaloosa.

Lawson, E.R.
1990 Pinus echinata Mill.: Shortleaf Pine. In *Silvics of North America: Conifers*, vol. I, edited by R.M. Burns and B.H. Honkala, pp. 316-326. U.S. Department of Agriculture, Forest Service Agricultural Handbook 654, Washington, D.C.

Lawton, D.E., F.J. Moye, J.B. Murray, B.J. O'Connor, H.M. Penley, G.S. Sandrock, W.E. Marsalis, M.S. Friddell, J.H. Hetrick, P.F. Huddlestun, R.E. Hunter, W.R. Mann, B.F. Martin, S.M. Pickering, F.J. Schneeberger, and J.D. Wilson
1976 Geologic Map of Georgia (scale: 1:500,000). Georgia Geologic Survey, Atlanta.

Ledbetter, R. Jerald, and Lisa D. O'Steen
2013 *Archaeological Investigations at the Gertrude Shell Midden Site, 9BK14, Burke County, Georgia.* Submitted to the Georgia Council on American Indian Concerns. Copies available from Southeastern Archeological Services, Athens.

Lee, Richard B.
1979 *The !Kung San: Men, Women, and Work in a Foraging Society.* Cambridge University Press, Cambridge.

Lee, Richard B., and Irven DeVore (editors)
1968 *Man the Hunter*. Aldine de Gruyter, Chicago.

Leigh, Jack
1986 *The Ogeechee: A River and Its People.* The University of Georgia Press, Athens.

Leigh, David S.
2006 Terminal Pleistocene Braided to Meandering Transition in Rivers of the Southeastern USA. *Catena* 66:155-160.

2008 Late Quaternary Climates and River Channels of the Atlantic Coastal Plain, Southeastern USA. *Geomorphology* 101:90-108.

Leigh, David S., and Thomas P. Feeney
1995 Paleochannels Indicating Wet Climate and Lack of Response to Lower Sea Level, Southeast Georgia. *Geology* 23(8):687-690.

Leigh, David S., Pradeep Srivastava, and George A. Brook
2004 Late Pleistocene Braided Rivers of the Atlantic Coastal Plain. *Quaternary Science Reviews* 23:65-84.

Lepper, Bradley T.
1985 The Effects of Cultivation and Collecting on Ohio Fluted Point Finds: A Reply to Seeman and Prufer. *Midcontinental Journal of Archaeology* 10:241-250.

Lieth, Helmut
1972 Modeling the Primary Productivity of the World. *Nature and Resources* 2:5-10.

Little, S., and P.W. Garrett
1990 Pinus rigida Mill.: Pitch Pine. In *Silvics of North America: Conifers*, vol. I, edited by R.M. Burns and B.H. Honkala, pp. 456-462. U.S. Department of Agriculture, Forest Service Agricultural Handbook 654, Washington, D.C.

Liu, Yao, Jennifer J. Andersen, John W. Williams, and Stephen T. Jackson
2013 Vegetation History in Central Kentucky and Tennessee (USA) during the Last Glacial and Deglacial Periods. *Quaternary Research* 79(2):189-198.

Logan, Wilfred D.
1952 *Graham Cave: An Archaic Site in Montgomery County, Missouri*. Missouri Archaeological Society Memoir No. 2. Missouri Archaeological Society, Columbia.

Lopinot, Neal H.
1984 *Archaeobotanical Formation Processes and Late Archaic Human-Plant Interrelationships in the Midcontinental U.S.A.* Ph.D. Dissertation, Department of Anthropology, Southern Illinois University, Carbondale.

Lowrance, R., R. Todd, J. Fail, Jr., O. Hendrickson, Jr., R. Leonard, and L. Asmussen
1984 Riparian Forests as Nutrient Filters in Agricultural Watersheds. *BioScience* 34:374-377.

Luchterhand, Kubet
1970 *Early Archaic Projectile Points and Hunting Patterns in the Lower Illinois Valley.* Illinois State Museum Report 13. Illinois State Museum, Springfield.

MacArthur, Robert H., and Eric R. Pianka
1966 On Optimal Use of a Patchy Environment. *American Naturalist* 100:603-609.

Marine Extension and Georgia Sea Grant, University of Georgia
2022 Geology. Electronic document, https://gacoast.uga.edu/about/georgia-coast/geology/, accessed October 10, 2022.

Marlon, J.R., P.J. Bartlein, M.K. Walsh, S.P. Harrison, K.J. Brown, M.E. Edwards, P.E. Higuera, M.J. Power, R.S. Anderson, C. Briles, A. Brunelle, C. Carcaillet, M. Daniels, F.S. Hu, M. Lavoie, C. Long, T. Minckley, P.J.H. Richard, A.C. Scott, D.S. Shafer, W. Tinner, C.E. Umbanhowar, Jr, and C. Whitlock
2009 Wildfire Responses to Abrupt Climate Change in North America. *PNAS* 106(8):2519-2524.

Marlowe, Frank
2005 Who Tends Hadza Children? In *Hunter-Gatherer Childhoods: Evolutionary, Developmental, and Cultural Perspectives,* edited by Barry S. Hewlett and Michael E. Lamb, pp. 177-190. Transaction Press, Piscataway.

Martin, Paul S.
1973 The Discovery of America. *Science* 179:969-974.

Matson, George C., and Edward W. Berry
1916 *The Pliocene Citronelle Formation of the Gulf Coastal Plain and Its Flora*. U.S. Geological Survey Professional Paper No. 98-L. Government Printing Office, Washington, D.C.

Maynard Smith, J.
1982 *Evolution and Theory of Games.* Cambridge University Press, Cambridge.

McAndrews, J.H., A.A. Berti, and G. Norris
1973 *Key to the Quaternary Pollen and Spores of the Great Lakes Region*. Royal Ontario Museum Life Sciences Miscellaneous Publication, Toronto.

McClure, Sarah B., C. Michael Barton, and Michael A. Jochim
2009 Human Behavioral Ecology and Climate Change during the Transition to Agriculture in Valencia, Eastern Spain. *Journal of Anthropological Research* 65(2):253-269.

McGahey, Samuel O.
1987 Paleo-Indian Lithic Material: Implications of Distribution in Mississippi. *Mississippi Archaeology* 22(2):1-13.

McGee, Charles E.
1997 Nyssa sylvatic Marsh.: Black Tupelo. Electronic document, https://www.srs.fs.usda.gov/pubs/misc/ag_654/volume_2/nyssa/silvatica.htm, accessed November 3, 2022.

McMakin, Todd, and Eric C. Poplin
1997 Settlement Organization and Resource Use in the Sandhills: A Summary of Investigations. *South Carolina Antiquities* 29(1-2):17-41.

Meade, R., T.R. Yuzyk, and T.J. Day
1990 Movement and Storage of Sediment in Rivers of the United States and Canada. In *Surface Water Hydrology: The Geology of North America*, edited by M.G. Wolman and H.C. Riggs, pp. 255-280.

Meeks, Scott C., and David G. Anderson
2012 Evaluating the Effect of the Younger Dryas on Human Population Histories in the Southeastern United States. In *Hunter-Gatherer Behavior: Human Response during the Younger Dryas*, edited by Me tin I. Erin, pp. 111-138. Left Coast Press, Walnut Creek.

Meltzer, David J.
1984 On Stone Procurement and Settlement Mobility in Eastern Fluted Point Groups. *North American Archaeologist* 6:1-24.

1988 Late Pleistocene Human Adaptations in Eastern North America. *Journal of World Prehistory* 2:1-53.

1989 Was Stone Exchanged Among Eastern North American Paleoindians? In *Eastern Paleoindian Lithic Resource Use,* edited by C. Ellis and J. Lothrop, pp. 11-39. Westview Press, Boulder.

2002 What Do You Do When No One's Been There Before? Thoughts on the Exploration and Colonization of New Lands. In *The First Americans: The Pleistocene Colonization of the New World,* edited by Nina Jablonski, pp. 27-58. Memoirs No. 27. California Academy of Sciences, San Francisco.

2009 *First Peoples in a New World: Colonizing Ice Age America.* University of California Press, Berkeley.

Meltzer, David J., and Vance T. Holliday
2010 Would North American Paleoindians Have Noticed Younger Dryas Age Climate Changes? *Journal of World Prehistory* 23:1-41.

Metzger, F.T.
1997a Carpinus caroliniana Walt.: American Hornbeam. Electronic document, https://www.srs.fs.usda.gov/pubs/misc/ag_654/volume_2/carpinus/caroliniana.htm, accessed November 3, 2022.

1997b Ostrya virginiana (Mill.) K. Koch: Eastern Hophornbeam. Electronic document, https://www.srs.fs.usda.gov/pubs/misc/ag_654/volume_2/ostrya/virginiana.htm, accessed November 3, 2022.

Meyer, Judith L.
1990 A Blackwater Perspective on Riverine Ecosystems. *BioScience* 40(9):643-651.

1992 Seasonal Patterns of Water Quality in Blackwater Rivers of the Coastal Plain, Southeastern United States. In *Water Quality in North Americas River Systems*, edited by C.D. Becker and D.A. Neitzel, pp. 250-276. Battelle Press, Columbia.

Meyer, Judith L., and Gretchen Loeffler
2019 River Basins. Electronic document, https://www.georgiaencyclopedia.org/articles /geography-environment/river-basins/, accessed October 10, 2022.

Miksicek, Charles H.
1987 Formation Processes of the Archaeobotanical Record. In *Advances in Archaeological Method and Theory*, vol. 10, edited by Michael B. Schiffer, pp. 211-247. Academic Press, San Diego.

Miller, Carl F.
1956 Life 8,000 Years Ago Uncovered in an Alabama Cave. *National Geographic* 110(4):542-558.

Miller, James A.
1991 *Summary of the Hydrology of the Southeastern Coastal Plain Aquifer System in Mississippi, Alabama, Georgia, and South Carolina*, vol. 1410-A. U.S. Geological Survey, Washington, D.C.

Miller, D. Shane
2016 Modeling Clovis Landscape Use and Recovery Bias in the Southeastern United States Using the Paleoindian Database of the Americas (PIDBA). *American Antiquity* 81(4):697-716.

2018 *From Colonization to Domestication: Population, Environment, and the Origins of Agriculture in Eastern North America.* University of Utah Press, Salt Lake City.

Miller, D. Shane, and Stephen B. Carmody
2016 Colonization after Clovis: Using the Ideal Free Distribution to Interpret the Distribution of Late Pleistocene and Early Holocene Archaeological Sites in the Duck River Valley, Tennessee. *Tennessee Archaeologist* 8(1-2):78-101.

2020 Fire on the Mountain: The Ideal Free Distribution and Early Hunter-Gatherer Demography in the Tennessee River Drainage, USA. *Environmental Archaeology*, DOI: 10.1080/14614103.2020.1777054.

Miller, D. Shane, Ashley M. Smallwood, and Jesse W. Tune (editors)
2022a *The American Southeast at the End of the Ice Age*. University of Alabama Press, Tuscaloosa.

2022b Introduction: Five Big Questions for the Study of the Late Pleistocene and Early Holocene Archaeological Record in the American Southeast. In *The American Southeast at the End of the Ice Age*, edited by D. Shane Miller, Ashley M. Smallwood, and Jesse W. Tune, pp. 1-17. University of Alabama Press, Tuscaloosa.

Moore, Christopher R., and Victoria G. Dekle
2010 Hickory Nuts, Bulk Processing, and the Advent of Early Horticultural Economies in Eastern North America. *World Archaeology* 42:595-608.

Moore, Christopher R., Mark J. Brooks, Andrew H. Ivester, Terry Ferguson, and James K. Feathers
2012 Radiocarbon and Luminescence Dating at Flamingo Bay (38AK469): Implications for Site Formation Processes and Artifact Burial at a Carolina Bay. *Legacy* 16(1):16-21.

Morey, Darcy
1996 *Vertebrate Resource Utilization at the Widows Creek Site (1JA305), Jackson County, Alabama.* Report submitted to Tennessee Valley Authority. Copies available from TVA.

Moksony, Ferenc
1999 Small Is Beautiful: The Use and Interpretation of R^2 in Social Research. *Szociológiai Szemle* (Special Issue):130-138.

Morrow, Juliet E.
1996 *The Organization of Early Paleoindian Lithic Technology in the Confluence Region of the Mississippi, Illinois, and Missouri Rivers*. Ph.D. Dissertation, Department of Anthropology, Washington University, St. Louis.

Morse, Dan F.
1969 Introducing Northeastern Arkansas Prehistory. *Arkansas Archaeologist* 10:13-18.

Morse, Dan F., and Phyllis A. Morse
1983 *Archaeology of the Central Mississippi Valley*. Academic Press, New York.

Morse, Dan F., David G. Anderson, and Albert C. Goodyear
1996 The Pleistocene-Holocene Transition in the Eastern United States. In *Humans at the End of the Ice Age: The Archaeology of the Pleistocene-Holocene Transition,* edited by Lawrence Guy Straus, Berit Valentin Eriksen, Jon M. Erlandson, and David R. Yesner, pp. 319-338. Plenum Press, New York.

Mulholland, Patrick J.
1981 Organic Carbon Flow in a Swamp-Stream Ecosystem. *Ecological Monographs* 51:307-322.

Multimedia Environmental Simulations Laboratory (MESL)
2015 Lower Altamaha Watershed. Electronic document, https://mesl.ce.gatech.edu/RESEARCH/altamaha/watershed.htm, accessed October 9, 2022.

Nagaoka, Lisa
2002 The Effects of Resource Depression on Foraging Efficiency, Diet Breadth, and Patch Use in Southern New Zealand. *Journal of Anthropological Archaeology* 21:419-442.

Nash, Stephen E.
1996 Is Curation a Useful Heuristic? In *Stone Tools: Theoretical Insights into Human Behavior*, edited by G.H. Odell, pp. 81-99. Plenum Press, New York.

National Cooperative Soil Survey
2007 Cecil Series. Electronic document, https://soilseries.sc.egov.usda.gov/OSD_Docs/C /CECIL.html, accessed October 9, 2022.

National Historic Preservation Act
1966 Public Law 89-665; 54 U.S.C. 300101 *et seq*.

The Nature Conservancy
2019 Terrestrial Ecoregions. Electronic document, https://geospatial.tnc.org/datasets/b1636 d640ede4d6ca8f5e369f2dc368b/about, accessed October 10, 2022.

Neville, J.A., R.E. Emanuel, E.G. Nichols, and J. Vose
2021 Extreme Flooding and Nitrogen Dynamics of a Blackwater River. *Water Resources Research* 57. DOI: https://doi.org/10.1029/2020WR029106.

O'Brien, Michael J., Matthew J. Boulanger, Briggs Buchanan, Mark Collard, R. Lee Lyman, and John Darwent
2014 Innovation and Cultural Transmission in the American Paleolithic: Phylogenetic Analysis of Eastern Paleoindian Projectile-Point Classes. *Journal of Anthropological Archaeology* 34:100-119.

O'Connell, James F.
1995 Ethnoarchaeology Needs a General Theory of Behavior. *Journal of Archaeological Research* 3(3):205-255.

O'Connell, James F., and Kristen Hawkes
1981 Alyawara Plant Use and Optimal Foraging Theory. In *Hunter-Gatherer Foraging Strategies: Ethnographic and Archaeological Analyses,* edited by Bruce Winterhalder and Eric A. Smith, pp. 99-125. University of Chicago Press, Chicago.

O'Steen, Lisa D.
1996 Paleoindian and Early Archaic Settlement along the Oconee Drainage. In *The Paleoindian and Early Archaic Southeast,* edited by David G. Anderson and Kenneth E. Sassaman, pp. 92-106. University of Alabama Press, Tuscaloosa.

O'Steen, Lisa D., R. Jerald Ledbetter, Daniel T. Elliott, and William W. Barker
1986 Paleoindian Sites of the Inner Piedmont of Georgia: Observations of Settlement in the Oconee Watershed. *Early Georgia* 13:1-63.

Ostrom, Elinor, Roy Gardner, and James Walker
2004 *Rules, Games, and Common Pool Resources.* University of Michigan Press, Ann Arbor.

Otvos, Ervin G.
2005 Holocene Aridity and Storm Phases, Gulf and Atlantic Coasts, USA. *Quaternary Research* 63(3):368-373.

Ozili, Peterson K.
2022 The Acceptable R-Square in Empirical Modelling for Social Science Research. *SSRN,* DOI: http://dx.doi.org/10.2139/ssrn.4128165.

Parish, Ryan M., and Adam M. Burke
2022 Paleoindian Lithic Resources and Mobility. In *The American Southeast at the End of the Ice Age,* edited by D. Shane Miller, Ashley M. Smallwood, and Jesse W. Tune, pp. 195-212. University of Alabama Press, Tuscaloosa.

Parry, William J., and Robert L. Kelly
1987 Expedient Core Technology and Sedentism. In *The Organization of Core Technology*, edited by Jay K. Johnson and Carol A. Morrow, pp. 285-304. Westview Press, Boulder.

Patterson III, W.A., and Kenneth E. Sassaman
1988 Indian Fires in the Prehistory of New England. In *Holocene Human Ecology in Northeastern North America*, edited by G.P. Nicholas, pp. 107-135. Plenum Press, New York.

Pearsall, Deborah M.
2000 *Paleoethnobotany: A Handbook of Procedures*. Academic Press, San Diego.

Peel, Murray C., Brian L. Finlayson, and Thomas A. McMahon
2007 Updated World Map of the Köppen-Geiger Climate Classification. *Hydrology and Earth System Sciences* 11:1633-1644.

Peres, Tanya M.
2017 Foodways Archaeology: A Decade of Research from the Southeastern United States. *Journal of Archaeological Research* 25:421-460.

Petruso, Karl M., and Jere M. Wickens
1984 The Acorn in Aboriginal Subsistence in Eastern North America: A Report on Miscellaneous Experiments. In *Experiments and Observations on Aboriginal Wild Plant Food Utilization in Eastern North America,* edited by P. Munson, pp. 360-378. Prehistory Research Series 6(2), Indiana Historical Society, Indianapolis.

Pianka, Eric R.
1978 *Evolutionary Ecology*, 2nd edition. Harper and Row, New York.

Pitcher, J.A., and J.S. McKnight
1990 Salix nigra Marsh.: Black Willow. In *Silvics of North America: Hardwoods*, vol. II, edited by R.M. Burns and B.H. Honkala, pp. 1477-1485. U.S. Department of Agriculture, Forest Service Agriculture Handbook 654, Washington, D.C.

Politis, Gustavo G.
2016 *Nukak: Ethnoarchaeology of an Amazonian People*. Routledge, London.

Popper, Virginia S., and Christine A. Hastorf
1988 Introduction. In *Current Paleoethnobotany: Analytical Methods and Cultural Interpretations of Archaeological Plant Remains*, edited by Christine A. Hastorf and Virginia S. Popper, pp. 1-17. University of Chicago Press, Chicago.

Prasciunas, Mary M.
2011 Mapping Clovis: Projectile Points, Behavior, and Bias. *American Antiquity* 76:107-126.

Quinn, R.L., M. Prizzi, L. Godfrey, and J.B. Setera
2020 From the Piedmont to the Coast: LA-ICP-MS $^{87}Sr/^{86}Sr$ Evidence for Short-Term, Long-Distance Mobility in the American Southeast. *Archaeometry* 62(5):1009-1027.

Quitmyer, Irvy R., Douglas S. Jones, and William S. Arnold
1997 The Sclerochronology of Hard Clams, Mercenaria spp., from the South Eastern USA: A Method of Elucidating the Zooarchaeological Records of Seasonal Resource and Seasonality in Prehistoric Shell Middens. *Journal of Archaeological Science* 24(9):825-840.

Rahmstorf, Stefan, and Georg Feulner
2013 Paleoclimatic Ocean Circulation and Sea-Level Changes. *Ocean Circulation and Climate* 103:31-56.

Rasmussen, S.O., K.K. Andersen, A.M. Svensson, J.P. Steffensen, B.M. Vinther, H.B. Clausen, M.L. Siggaard-Andersen, S.J. Johnsen, L.B. Larsen, D. Dahl-Jensen, M. Bigler, R. Röthlisberger, H. Fischer, K. Goto-Azuma, M.E. Hansson, and U. Ruth
2006 A New Greenland Ice Core Chronology for the Last Glacial Termination. *Journal of Geophysical Research* 111, DOI: 10.1029/2005JD006079.

Reeves, Sonja L.
2007 Pinus pungens. Electronic document, https://www.fs.usda.gov/database/feis/plants/tree/pinpun/all.html, accessed November 3, 2022.

Reidhead, V.A.
1981 *A Linear Programming Model of Prehistoric Subsistence Optimization: A Southern Indiana Example.* Prehistory Research Series, Vol. 6(1). Indiana Historical Society, Indianapolis.

Reitz, Elizabeth J.
2014 Continuity and Resilience in the Central Georgia Bight (USA) Fishery between 2760 BC and AD 1580. *Journal of Archaeological Science* 41:716-731.

Richardson, David M. (editor)
1998 *Ecology and Biogeography of Pinus.* Cambridge University Press, New York.

Rietveld, W.J.
1979 Ecological Implications of Allelopathy in Forestry. In *Regenerating Oaks in Upland Hardwood Forests: Proceedings of the Wright Forestry Conference*, pp. 91-111. Purdue University, West Lafayette.

Rink, George
1997 Juglans cinerea L. Electronic document, https://www.srs.fs.usda.gov/pubs/misc/ag_654/volume_2/juglans/cinerea.htm, accessed November 3, 2022.

Robinson, Erick, H. Jabran Zahid, Brian F. Codding, Randall Haas, and Robert L. Kelly
2019 Spatiotemporal Dynamics of Prehistoric Human Population Growth: Radiocarbon 'Dates as Data' and Population Ecology. *Journal of Archaeological Science* 101:63-71.

Rose, Carol
1994 *Property and Persuasion: Essays on the History, Theory, and Rhetoric of Ownership.* Westview Press, Boulder.

Roy, Jacques, Bernard Saugier, and Harold A. Mooney
2001 *Terrestrial Global Productivity*. Academic Press, New York.

Russo, Michael
1996 Southeastern Archaic Mounds. In *Archaeology of the Mid-Holocene Southeast*, edited by Kenneth E. Sassaman and David G. Anderson, pp. 259-287. University Press of Florida, Gainesville.

1998 Measuring Sedentism with Fauna: Archaic Cultures along the Southwest Florida Coast. In *Seasonality and Sedentism: Archaeological Perspectives from Old and New World Sites,* edited by T.R. Rocek and O. Bar Yosef, pp. 143-164. Harvard University Press, Cambridge.

2004 Measuring Shell Rings for Social Inequality. In *Signs of Power: The Rise of Cultural Complexity in the Southeast,* edited by Jon L. Gibson and Philip J. Carr, pp. 26-70. University of Alabama Press, Tuscaloosa.

Sain, Douglas

2012 *Clovis Blade Technology at the Topper Site (38AL23): Assessing Lithic Attribute Variation and Regional Patterns of Technological Organization.* Occasional Papers 2. Southeastern Paleoamerican Survey, South Carolina Institute of Archaeology and Anthropology, Columbia.

Sain, Douglas, and Albert C. Goodyear

2012 A Comparison of Clovis Blade Technologies at the Topper and Big Pine Tree Sites, Allendale County, South Carolina. In *Contemporary Lithic Analysis in the Southeast: Problems, Solutions, and Interpretations,* edited by Philip J. Carr, Andrew P. Bradbury, and Sarah E. Price, pp. 42-54. University of Alabama Press, Tuscaloosa.

Sanger, Matthew C.

2017 Evidence for Significant Subterranean Storage at Two Hunter-Gatherer Sites: The Presence of a Mast-Based Economy in the Late Archaic Coastal American Southeast. *American Antiquity* 81:50-70.

Sassaman, Kenneth E.

1983 *Middle and Late Archaic Settlement in the South Carolina Piedmont.* Master's Thesis, Department of Anthropology, University of South Carolina, Columbia.

1991 Adaptive Flexibility in the Morrow Mountain Phase of the Middle Archaic Period. *South Carolina Antiquities* 23:31-41.

1993 *Early Pottery in the Southeast: Tradition and Innovation in Cooking Technology*. University of Alabama Press, Tuscaloosa.

1995 The Cultural Diversity of Interactions among Mid-Holocene Societies of the American Southeast. In *Native American Interactions: Multiscalar Analyses and Interpretations in the Eastern Woodlands,* edited by Michael S. Nassaney and Kenneth E. Sassaman, pp. 174-204. University of Tennessee Press, Knoxville.

1996 Early Archaic Settlement in the South Carolina Coastal Plain. In *The Paleoindian and Early Archaic Southeast,* edited by David G. Anderson and Kenneth E. Sassaman, pp. 58-83. University of Alabama Press, Tuscaloosa.

1997 Refining Soapstone Vessel Chronology in the Southeast. *Early Georgia* 25(1):1-20.

1999 A Southeastern Perspective on Soapstone Vessel Technology in the Northeast. In *The Archaeological Northeast,* edited by Kenneth E. Sassaman, Mary Ann Levine, and Michael S. Nassaney, pp. 76-95. Bergin & Garvey, Westport.

2002 Woodland Ceramic Beginnings. In *The Woodland Southeast,* edited by David G. Anderson and Robert C. Mainfort, Jr., pp. 398-420. University of Alabama Press, Tuscaloosa.

2004 Common Origins and Divergent Histories in the Early Pottery Traditions of the American Southeast. In *Early Pottery: Function, Style, and Interaction in the Lower Southeast,* edited by R. Saunders and C.T. Hays, pp. 23-39. University of Alabama Press, Tuscaloosa.

2005 Poverty Point as Structure, Event, Process. *Journal of Archaeological Method and Theory* 12(4):335-364.

2006a *People of the Shoals: Stallings Culture of the Savannah River Valley.* University Press of Florida, Gainesville.

2006b Dating and Explaining Soapstone Vessels: A Comment on Truncer. *American Antiquity* 41(1):141-156.

2010 *The Eastern Archaic, Historicized*. AltaMira, Lanham.

Sassaman, Kenneth E., and David G. Anderson (editors)
1996 *Archaeology of the Mid-Holocene Southeast*. University Press of Florida, Gainesville.

Sassaman, Kenneth E., and Asa R. Randall
2007 The Cultural History of Bannerstones in the Savannah River Valley. *Southeastern Archaeology* 26(2):196-211.

Sassaman, Kenneth E., Megan E. Blessing, and Asa R. Randall
2006 Stallings Island Revisited: New Evidence for Occupational History, Community Pattern, and Subsistence Technology. *American Antiquity* 71(3):539-565.

Sassaman, Kenneth E., Mark J. Brooks, Glen T. Hanson, and David G. Anderson
1990 *Native American Prehistory of the Middle Savannah River Valley: A Synthesis of Archaeological Investigations on the Savannah River Site, Aiken and Barnwell Counties, South Carolina*. Savannah River Archaeological Research Papers 1. South Carolina Institute of Archaeology and Anthropology, Columbia.

Sassaman, Kenneth E., Glen T. Hanson, and Tommy Charles
1988 Raw Material Procurement and the Reduction of Hunter-Gatherer Range in the Savannah River Valley. *Southeastern Archaeology* 7:79-94.

Sassaman, Kenneth E., and Wictoria Rudolphi
2001 Communities of Practice in the Early Pottery Traditions of the American Southeast. *Journal of Anthropological Research* 57(4):407-425.

Sassaman, Kenneth E., Kristin J. Wilson, and Frankie Snow
1995 Putting the Ogeechee in Its Place. *Early Georgia* 23(1):20-40.

Saunders, Joe W., and Thurman Allen
1994 Hedgepeth Mounds, an Archaic Mound Complex in North-Central Louisiana. *American Antiquity* 59:471-489.

Saunders, Joe W., Rolfe D. Mandel, Roger T. Saucier, Thurman Allen, C.T. Hallmark, Jay K. Johnson, Edwin H. Jackson, Charles M. Allen, Gary L. Stringer, Douglas S. Frink, James K. Feathers, Stephen Williams, Kristen J. Gremillion, Malcolm F. Vidrine, and Reca Jones
1997 A Mound Complex in Louisiana at 5400-5000 Years Before the Present. *Science* 19:1796-1799.

Saunders, Rebecca, and Christopher T. Hays (editors)
2004 *Early Pottery: Technology, Function, Style, and Interaction in the Lower Southeast.* University of Alabama Press, Tuscaloosa.

Savage, Stephen H.
1989 *Late Archaic Landscapes*. Anthropological Studies 8, University of South Carolina Institute of Archaeology and Anthropology, Columbia.

1990 Modelling the Late Archaic Social Landscape. In *Interpreting Space: GIS and Archaeology,* edited by Kathleen M.S. Allen, Stanton W. Green, and Ezra B.W. Zubrow, pp. 330-355. Taylor and Francis, New York.

Savannah Riverkeeper
2022 Geography. Electronic document, https://www.savannahriverkeeper.org/the-savannah-river.html, accessed October 9, 2022.

Scarry, C. Margaret
2003 Patterns of Wild Plant Utilization in the Prehistoric Eastern Woodlands. In *People and Plants in Ancient Eastern North America,* edited by Paul E. Minnis, pp. 50-104. Smithsonian Books, Washington, D.C.

Schiffer, Michael B.
1999 Behavioral Ecology: Some Clarifications. *American Antiquity* 64(1):166-168.

Schiffer, Michael B. (editor)
2014 *Behavioral Archaeology: Principles and Practice*. Routledge, New York.

Schlesinger, Richard C.
1997 Fraxinus americana L.: White Ash. Electronic document, https://www.srs.fs.usda. gov/pubs/misc/ag_654/volume_2/fraxinus/americana.htm, accessed November 3, 2022.

Schnell, Frank, and N.O. Wright
1993 *Mississippi Period Archaeology of the Georgia Coastal Plain.* Laboratory of Archaeology Series Publication 26. University of Georgia, Athens.

Schopmeyer, C.S.
1974 *Seeds of Woody Plants in the United States*. USFS, US Department of Agriculture Agricultural Handbook No. 450, Washington, D.C.

Schuldenrein, Joseph
1996 Geoarchaeology and the Mid-Holocene Landscape History of the Greater Southeast. In *Archaeology of the Mid-Holocene Southeast,* edited by Kenneth E. Sassaman and David G. Anderson, pp. 3-27. University Press of Florida, Gainesville.

Seielstad, C.A.
1994 Holocene Environmental History at Chatterton Springs on the Southern Coastal Plain of Georgia. Master's thesis, Department of Geography, University of Georgia, Athens.

Service, Elman R.
1962 *Primitive Social Organization*. Random House, New York.

Shah, Sudha A., and Thomas G. Whitley
2009 *An Overview and Analysis of the Middle Archaic in Georgia*. Occasional Papers in Cultural Resource Management No. 16. Brockington and Associates, Atlanta.

Shamoun, S.F., D.E. Macey, R. Prasad, R.S. Winder
2001 Acer, Alnus, Betula, Populus, and Prunus spp., Weedy Hardwood Trees. In *Biological Control Programmes in Canada,* edited by P.G. Mason and J.T. Huber, pp. 283-290. CABI Publishing, Wallingford.

Shennan, Stephen
2002 *Genes, Memes, and Human History: Darwinian Archaeology and Cultural Evolution.* Thames and Hudson, London.

2007 The Spread of Farming into Central Europe and Its Consequences. In *The Model-Based Archaeology of Socionatural Systems,* edited by Timothy A. Kohler and Sander van der Leeuw, pp. 141-155. SAR Press, Santa Fe.

Shennan, Stephen, and Kevan Edinborough
2007 Prehistoric Population History from the Late Glacial to the Late Neolithic in Central and Northern Europe. *Journal of Archaeological Science* 34:1339-1345.

Shott, Michael J.
1986 Settlement Mobility and Technological Organization: An Ethnographic Examination. *Journal of Anthropological Research* 42:15-51.

1996 An Exegesis of the Curation Concept. *Journal of Anthropological Research* 52:259-280.

2002 Sample Bias in the Distribution and Abundance of Midwestern Fluted Bifaces. *Midcontinental Journal of Archaeology* 27:89-123.

Simard, M.A., S.D. Coté, R.B. Weladii, and J. Huot
2008 Feedback Effects of Chronic Browsing on Life-History Traits of a Large Herbivore. *Journal of Animal Ecology* 77:678-686.

Smallwood, Ashley M.
2010 Clovis Biface Technology at the Topper Site, South Carolina: Evidence for Variation and Technological Flexibility. *Journal of Archaeological Science* 37:2413-2425.

2012 Clovis Technology and Settlement in the American Southeast: Using Biface Analysis to Evaluate Dispersal Models. *American Antiquity* 77:689-713.

Smallwood, Ashley M., Thomas A. Jennings, David G. Anderson, and R. Jerald Ledbetter
2015 Testing for Evidence of Paleoindian Responses to Environmental Changes during the Younger Dryas Chronozone in Georgia. *Southeastern Archaeology* 34(1):23-45.

Smallwood, Ashley M., Albert C. Goodyear, Thomas A. Jennings, and Douglas Sain
2018 Paleoindians in the South Carolina Coastal Plain: Tracking Pleistocene-Holocene Transitions. In *Early Human Life on the Southeastern Coastal Plain*, edited by Albert C. Goodyear and Christopher R. Moore, pp. 124-154. University Press of Florida, Gainesville.

Smallwood, Ashley M., Thomas A. Jennings, K.C. Jones, and Sydney O'Brien
2022 Paleoindian and Early Archaic Research in Georgia. In *The American Southeast at the End of the Ice Age*, edited by D. Shane Miller, Ashley M. Smallwood, and Jesse W. Tune, pp. 77-96. The University of Alabama Press, Tuscaloosa.

Smith, Bruce D.
1986 The Archaeology of the Southeastern United States: From Dalton to De Soto, 10,500 – 500BP. *Advances in World Archaeology* 5:1-92.

1987 Independent Domestication of Indigenous Seed-Bearing Plants in Eastern North America. In *Emergent Horticultural Economies of the Eastern Woodlands,* edited by W.F. Keegan, pp. 3-47. Occasional Paper 7. Center for Archaeological Investigations, Carbondale.

1992 The Floodplain Weed Theory of Plant Domestication in Eastern North America. In *Rivers of Change: Essays on Early Agriculture in Eastern North America,* edited by Bruce D. Smith, pp. 19-34. Smithsonian Institution Press, Washington, D.C.

2001 Low-Level Food Production. *Journal of Archaeological Research* 9(1):1-43.

Smith, Eric Alden
1981 The Application of Optimal Foraging Theory to the Analysis of Hunter-Gatherer Group Size. In *Hunter-Gatherer Foraging Strategies: Ethnographic and Archaeological Analyses,* edited by Bruce Winterhalder and Eric A. Smith, pp. 36-65. University of Chicago Press, Chicago.

1999 Three Styles in the Evolutionary Analysis of Human Behavior. In *Adaptation and Human Behavior: An Anthropological Perspective*, edited by Lee Cronk, Napoleon Chagnon, and William Irons, pp. 27-48. Aldine de Gruyter, New York.

Smith, Maria O.
1996 Bioarchaeological Inquiry into Archaic Period Populations of the Southeast: Trauma and Occupational Stress. In *Archaeology of the Mid-Holocene Southeast,* edited by Kenneth E. Sassaman and David G. Anderson, pp. 134-154. University of Alabama Press, Tuscaloosa.

Smith, Eric A., and Bruce Winterhalder (editors)
1992 *Evolutionary Ecology and Human Behavior*. Aldine de Gruyter, New York.

Smock, L.A., A.B. Wright, and A.C. Benke
2005 Atlantic Coast Rivers of the Southeastern United States. In *Rivers of North America*, edited by A.C. Benke and C.E. Cusing, pp. 73-122. Elsevier, Burlington.

Snow, G.A.
1990 Ulmus alata Michx.: Winged Elm. In *Silvics of North America: Hardwoods*, vol. II, edited by R.M. Burns and B.H. Honkala, pp. 1527-1533. U.S. Department of Agriculture, Forest Service Agriculture Handbook 654, Washington, D.C.

Snow, Frankie, and Keith Stephenson
2006 *Some Recent Late Archaic and Early Woodland AMS Dates from the Ocmulgee Big Bend Region.* Manuscript on File, South Georgia State College, Douglas.

Soltis, D.E., A.B. Morris, J.S. McLachlan, P.S. Manos, and P.S. Soltis
2006 Comparative Phylogeography of Unglaciated Eastern North America. *Molecular Ecology* 15:4261-4293.

Sowers, T., and M. Bender
1995 Climate Records Covering the Last Deglaciation. *Science* 269:210-214.

Stafford, C. Russell (editor)
1985 *The Campbell Hollow Archaic Occupations: A Study of Intrasite Spatial Structure in the Lower Illinois Valley.* Kampsville Archaeological Center Research Series No. 4. Center for American Archaeology, Kampsville.

Stein Mandryk, Carol A.
1993 Hunter-Gatherer Social Costs and the Nonviability of Submarginal Environments. *Journal of Anthropological Research* 49(1):39-71.

Steinen, Karl T.
1995 *Woodland Period Archaeology of the Georgia Coastal Plain*. University of Georgia Laboratory of Archaeology Series Publication 36. University of Georgia, Athens.

Stephens, P.A., W.J. Sutherland, and R.P. Freckleton
1999 What Is the Allee Effect? *Oikos* 87(1):185-190.

Steponaitis, Vincas P.
1986 Prehistoric Archaeology in the Southeastern United States: 1970-1985. *Annual Review of Anthropology* 15(1):363-404.

Steward, Julian H.
1938 *Basin-Plateau Aboriginal Sociopolitical Groups.* Bureau of American Ethnology Bulletin No. 120. Smithsonian, Washington, D.C.

1947 American Culture History. *Southwestern Journal of Anthropology* 3:85-107.

1955 *Theory of Culture Change: The Methodology of Multilinear Evolution.* University of Illinois Press, Urbana.

Stone, Glenn Davis
1996 *Settlement Ecology: The Social and Spatial Organization of Kofyar Agriculture.* University of Arizona Press, Tucson.

Strickland, B.K., and S. Demaris
2000 Age and Regional Difference in Antlers and Mass of White-Tailed Deer. *Journal of Wildlife Management* 64:903-911.

Sullivan, Janet
1993 Celtis laevigata: Fire Effects Information System. Electronic document, https://www.fs.usda.gov/database/feis/plants/ tree/cellae/all.html, accessed November 3, 2022.

Surovell, Todd A.
2009 *Toward a Behavioral Ecology of Lithic Technology: Cases from Paleoindian Archaeology*. University of Arizona Press, Tucson.

Sutherland, W.J.
1996 *From Individual Behavior to Population Ecology.* Oxford University Press, Oxford.

Talalay, Laurie, Donald R. Keller, and Patrick M. Munson
1984 Hickory Nuts, Walnuts, Butternuts, and Hazelnuts: Observations and Experiments Relevant to Their Aboriginal Exploitation in Eastern North America. In *Experiments and Observations on Aboriginal Wild Plant Food Utilization in Eastern North America,* edited by Patrick J. Munson, pp. 338-359. Prehistory Research Series, vol. 6(2). Indiana Historical Society, Indianapolis.

Tankersley, Kenneth B.
2004 The Concept of Clovis and the Peopling of North America. In *The Settlement of the American Continents: A Multidisciplinary Approach to Human Biogeography*, edited by C. Michael Barton, Geoff Clark, and David Yesner, pp. 49-63. University of Arizona Press, Tucson.

Thomas, David Hurst (editor)
2008 *Native American Landscapes of St. Catherines Island, Georgia*. American Museum of Natural History Anthropological Papers No. 88, Vol. I. American Museum of Natural History, New York.

Thomas, David Hurst, and Matthew C. Sanger (editors)
2010 *Trend, Tradition, and Turmoil: What Happened to the Southeastern Archaic?* Proceedings of the Third Caldwell Conference, St. Catherines Island, Anthropological Papers of the American Museum of Natural History 93. American Museum of Natural History, New York.

Thompson, Victor D.
2007 Articulating Activity Areas and Formation Processes at the Sapelo Island Shell Ring Complex. *Southeastern Archaeology* 26(1):91-107.

2014 What I Believe: Reflections on Historical And Political Ecology as Research Frameworks in Southeastern Archaeology. *Southeastern Archaeology* 33(2):246-254.

2018 Collective Action and Village Life during the Late Archaic on the Georgia Coast. In *The Archaeology of Villages in Eastern North America,* edited by Jennifer A. Birch and Victor D. Thompson, pp. 20-35. University Press of Florida, Gainesville.

2022 Considering Ideas of Collective Action, Institutions, and "Hunter-Gatherers" in the American Southeast. *Journal of Archaeological Research*, in press. DOI: https://doi.org/10.1007 /s10814-022-09179-3.

Thompson, Victor D., and C. Fred T. Andrus
2011 Evaluating Mobility, Monumentality, and Feasting at the Sapelo Island Shell Ring Complex. *American Antiquity* 76:315-343.

Thompson, Victor D., Torben Rick, Carey J. Garland, David Hurst Thomas, Karen Y. Smith, Sarah Bergh, Matt Sanger, Bryan Tucker, Isabelle Lulewicz, Anna M. Semon, John Schalles, Christine Hladik, Clark Alexander, and Brandon T. Ritchison
2020 Ecosystem Stability and Native American Oyster Harvesting along the Atlantic Coast of the United States. *Science Advances* 6(28). DOI: 10.1126/sciadv.aba9652.

Thompson, Victor D., and David Hurst Thomas (editors)
2013 *Life among the Tides: Recent Archaeology on the Georgia Bight*. American Museum of Natural History Anthropological Papers No. 98. American Museum of Natural History, New York.

Thompson, Victor D., and John A. Turck
2009 Adaptive Cycles of Coastal Hunter-Gatherers. *American Antiquity* 74(2):255-278.

Thulman, David
2009 Freshwater Availability as the Constraining Factor in the Middle Paleoindian Occupation of North-Central Florida. *Geoarchaeology* 24:243-276.

Tilley, Christopher
1994 *A Phenomenology of Landscape: Places, Paths, and Monuments.* Berg, Oxford.

Torrence, Robin
1983 Time Budgeting and Hunter-Gatherer Technology. In *Hunter-Gatherer Economy in Prehistory: A European Perspective,* edited by Geoff Bailey, pp. 11-22. Cambridge University Press, Cambridge.

1989 Tools as Optimal Solutions. In *Time, Energy, and Stone Tools,* edited by Robin Torrence, pp. 1-6. Cambridge University Press, Cambridge.

Trewartha, Glenn Thomas, and Lyle H. Horn
1980 *An Introduction to Climate*, 5th edition. McGraw Hill, New York.

Trimble, S.W.
1985 Perspectives on the History of Soil Erosion Control in the Eastern United States. *Agricultural History* 59:162-180.

Tubbs, Carl H., and David R. Houston
1997 Fagus grandifolia Ehrh.: American Beech. Electronic document, https://www.srs.fs. usda.gov/pubs/misc/ag_654/volume_2/fagus/grandifolia.htm, accessed November 3, 2022.

Turck, John A., J. Mark Williams, and John F. Chamblee
2011 Examining Variation in the Human Settlement of Prehistoric Georgia. *Early Georgia* 39:5-26.

Turck, John A., and Victor D. Thompson
2016 Revisiting the Resilience of Late Archaic Hunter-Gatherers along the Georgia Coast. *Journal of Anthropological Archaeology* 43:39-55.

Turner, E. Randolph, III
1989 Paleoindian Settlement Patterns and Population Distribution in Virginia. In *Paleoindian Research in Virginia: A Synthesis,* edited by J. Mark Wittkofski and Lyle E. Browning, pp. 109-117. Archaeological Society of Virginia, Richmond.

Tushingham, Shannon, and Robert L. Bettinger
2013 Why Foragers Choose Acorns before Salmon: Storage, Mobility, and Risk in Aboriginal California. *Journal of Anthropological Archaeology* 32(4):527-537.

United States Geological Survey (USGS)
2017 The State Geologic Map Compilation (SGMC) Geodatabase of the Conterminous United States (ver. 1.1, August 2017). Electronic document, https://mrdata.usgs.gov/ geology/state/map-us.html, accessed October 10, 2022.

University of Georgia Laboratory of Archaeology
2022 Indigenous Ceramic Type Collection. Electronic document, https://archaeology.uga. edu/indigenous-ceramic-type-collection, accessed October 23, 2022.

Upchurch, Samuel B.
1984 Petrology of Selected Lithic Materials from the South Carolina Coastal Plain. In *An Archaeological Survey of Chert Quarries in Western Allendale County, South Carolina,* edited by Albert C. Goodyear and Tommy Charles, pp. 125-160. University of South Carolina Institute of Archaeology and Anthropology, Columbia.

USDA Plant List of Attributes, Names, Taxonomy, and Symbols (PLANTS)
2022a Alnus Mill. Electronic document, https://plants.usda.gov/home/plantProfile ?symbol=ALNUS, accessed November 3, 2022.

2022b Carya Nutt. Electronic document, https://plants.usda.gov/home/plantProfile?symbol =CARYA, accessed November 3, 2022.

Veatch, O., and L. Stephenson
1911 *Geology of the Coastal Plain of Georgia*. Geological Survey of Georgia Bulletin No. 26. Foote and Davis, Atlanta.

Veblen, T.T., T. Kitzberger, R. Villalba, and J. Donnegan
1999 Fire History in Northern Patagonia: The Roles of Humans and Climatic Vegetation. *Ecological Monographs* 69(1):47-67.

Verhagen, Philip, and Thomas G. Whitley
2012 Integrating Archaeological Theory and Predictive Modeling: A Live Report from the Scene. *Journal of Archaeological Method and Theory* 19:49-100.

Vidanapathirana, Nadeesha Dilhani
2021 *A Comparison of Spatial Clustering Assessment Methods.* Master's Thesis, School of Public Health, Division of Public Health in Biostatistics, University of South Carolina, Charleston.

Waggoner, James C., Jr.
2006 A Techno-Functional Analysis of Fiber-Tempered Pottery from the Squeaking Tree Site (9TF5), Telfair County, Georgia. *Early Georgia* 34(1):3-16.

2009 Fiber-Tempered Pottery, Soapstone Vessels, and Shifting Alliances in the Interior Coastal Plain of the Late Archaic Southeast. *Southeastern Archaeology* 28(2):137-147.

Walker, Renee
1998 The Late Paleoindian through Middle Archaic Faunal Evidence from Dust Cave, Alabama. PhD Dissertation, Department of Anthropology, University of Tennessee, Knoxville.

Walker, Renee B., Kandace R. Detwiler, Scott C. Meeks, and Boyce N. Driskell
2001 Berries, Bones, and Blades: Reconstructing Late Paleoindian Subsistence Economy at Dust Cave, Alabama. *Midcontinental Journal of Archaeology* 26(2): 169-197.

Walker, Renee B., and Boyce N. Driskell
2007 Introduction: New Developments in Paleoindian Subsistence Studies. In *Foragers of the Terminal Pleistocene in North America,* edited by R.B. Walker and B.N. Driskell, pp. ix-xv. University of Nebraska Press, Lincoln.

Walker, Mike, Martin J. Head, Max Berkelhammer, Svante Bjorck, Hai Cheng, Les Cwynar, David Fisher, Vasilios Gkinis, Antony Long, John Lowe, Rewi Newnham, Sune Olander Rasmussen, and Harvey Weiss
2018 Formal Ratification of the Subdivision of the Holocene Series/Epoch (Quaternary System/Period): Two New Global Boundary Stratotype Sections and Points (GSSPs) and Three New Stages/Subseries. *Episodes (Journal of International Geoscience)* 41(4):213-223.

Wallis, Neill J., Matthew T. Boulanger, Jeffrey R. Ferguson, and Michael D. Glascock
2010 Woodland Period Ceramic Provenance and the Exchange of Swift Creek Complicated Stamped Vessels in the Southeastern United States. *Journal of Archaeological Science* 37:2598-2611.

Wallis, Neill J., Zackary I. Gilmore, Ann S. Cordell, Thomas J. Pluckhahn, Keith Ashley, and Michael D. Glascock
2016 The Ceramic Ecology of Florida: Compositional Baselines for Pottery Provenance Studies. *Science and Technology of Archaeological Research* 1(2):30-49.

Walthall, John A.
1998 Rockshelters and Hunter-Gatherer Adaptation to the Pleistocene/Holocene Transition. *American Antiquity* 63(2):223-238.

Ward, H. Trawick, and R.P. Stephen Davis, Jr.
1999 *Time Before History: The Archaeology of North Carolina.* University of North Carolina Press, Chapel Hill.

Watson, Patty Jo
1990 Trend and Tradition in Southeastern Archaeology. *Southeastern Archaeology* 9(1):43-54.

Watts, William A.
1970 The Full-Glacial Vegetation of Northwestern Georgia. *Ecology* 51:17-33.

1975a A Late-Quaternary Record of Vegetation from Lake Annie, South-Central Florida. *Geology* 3(6):344-346.

1975b Vegetation Record for the Last 20,000 Years from a Small Marsh on Lookout Mountain, Northwestern Georgia. *Geological Society of America Bulletin* 86:287-291.

1980 Late-Quaternary Vegetation History at White Pond on the Inner Coastal Plain of South Carolina. *Quaternary Research* 13:187-199.

Watts, William A., and Minze Stuiver
1980 Late Wisconsin Climate of Northern Florida and the Origin of Species-Rich Deciduous Forest. *Science* 210:325-327.

Watts, William A., B.C.S. Hansen, and Eric C. Grimm
1992 Camel Lake: A 40,000-Year Record of Vegetational and Forest History from Northwest Florida. *Ecology* 73(3):1056-1066.

Watts, William A., Eric C. Grimm, and T.C. Hussey
1996 Mid-Holocene Forest History of Florida and the Coastal Plain of Georgia and South Carolina. In *Archaeology of the Mid-Holocene Southeast,* edited by Kenneth E. Sassaman and David G. Anderson, pp. 28-40. University Press of Florida, Gainesville.

Webb, Thompson III, Katherine H. Anderson, Patrick J. Bartlein, and Robert S. Webb
1998 Late Quaternary Climate Change in Eastern North America: A Comparison of Pollen-Derived Estimates with Climate Model Results. *Quaternary Science Reviews* 17(6-7): 587-606.

Wells, O.O., and J.R. Toliver
1987 Geographic Variation in Sycamore (Platanus occidentalis L.). *Silvae Genetica* 36(3-4):154-159.

Wendt, John A.F., David B. McWethy, Chris Widga, and Bryan N. Shuman
2022 Large-Scale Climatic Drivers of Bison Distribution and Abundance in North America Since the Last Glacial Maximum. *Quaternary Science Reviews* 284:107472.

Wharton, Charles H., and Mark M. Brinson
1979 Characteristics of Southeastern River Systems. In *Strategies for Protection and Management of Floodplain Wetlands and Other Riparian Ecosystems: Proceedings of the Symposium*, edited by R.R. Johnson and J.F. McCormick, pp. 32-40. U.S. Department of Agriculture Forest Service Publication GTR-WO-12. USDA, Lakewood.

Whatley, John S.
2002 An Overview of Georgia Projectile Points and Selected Cutting Tools. *Early Georgia* 30(1):7-129.

Whittemore, Alan T., Julian J.N. Campbell, Zheng-Lian Xia, Craig H. Carlson, Daniel Atha, and Richard T. Olsen
2018 Ploidy Variation in Fraxinus L. (Oleaceae) of Eastern North America: Genome Size Diversity and Taxonomy in a Suddenly Endangered Genus. *International Journal of Plant Sciences* 179(5):377-389.

Wiessner, Polly
1983 Style and Social Information in Kalahari San Projectile Points. *American Antiquity* 48:253-276.

Wilken, Ed, Francisco Jiménez Nava, and Glenn Griffith
2011 *North American Terrestrial Ecoregions-Level III.* Commission for Environmental Cooperation, Montreal, Canada.

Willey, Gordon R.
1953 *Prehistoric Settlement Patterns in the Víru Valley, Peru*. Bureau of American Ethnology Bulletin No. 155. Bureau of American Ethnology, Washington, D.C.

Williams, J. Mark, John A. Turck, and John F. Chamblee
2010 New Data on the Distribution of Archaeological Sites in Georgia in Time and Space. *Early Georgia* 38:65-115.

Williams, John W.
2000 *Biome-Scale Vegetation Dynamics in North America Since the Last Glacial Maximum: Maps and Reconstructions from Fossil Pollen Data and the Testing of Biogeography Models*. PhD Dissertation, Department of Geological Sciences, Brown University, Providence.

Williams, John W., Bryan N. Shuman, Thompson Webb III, Patrick J. Bartlein, and Phillip L. Leduc
2004 Late-Quaternary Vegetation Dynamics in North America: Scaling from Taxa to Biomes. *Ecological Monographs* 74(2):309-334.

Williams, John W., and Stephen T. Jackson
2007 Novel Climates, No-Analog Communities, and Ecological Surprises. *Frontiers in Ecology and Environment* 5(9):475-482.

Williams, Robert D.
1997 Juglans nigra L. Electronic document, https://www.srs.fs.usda.gov/pubs/misc/ag_654/volume_2/juglans/nigra.htm, accessed November 3, 2022.

Wilmsen, Edwin N.
1973 Interaction, Spacing Behavior, and the Organization of Hunting Bands. *Journal of Anthropological Research* 29(1):1-31.

Winterhalder, Bruce
1981 Foraging Strategies in the Boreal Forest: An Analysis of Cree Hunting and Gathering. In *Hunter-Gatherer Foraging Strategies: Ethnographic and Archaeological Analyses,* edited by Bruce Winterhalder and Eric A. Smith, pp. 66-98. University of Chicago Press, Chicago.

2002 Models. In *Darwin and Archaeology: A Handbook of Key Concepts*, edited by John P. Hart and John E. Terrell, pp. 201-223. Bergin and Garvey, Westport.

Winterhalder, Bruce, and Douglas J. Kennett
2006 Behavioral Ecology and the Transition from Hunting and Gathering to Agriculture. In *Behavioral Ecology and the Transition to Agriculture*, edited by Douglas J. Kennett and Bruce Winterhalder, pp. 1-21. University of California Press, Berkeley.

Winterhalder, Bruce, Douglas J. Kennett, Mark N. Grote, and Jacob Bartruff
2010 Ideal Free Distribution of California's Northern Channel Islands. *Journal of Anthropological Archaeology* 29:469-490.

Winterhalder, Bruce, and Eric Alden Smith
1981 *Hunter-Gatherer Foraging Strategies: Ethnographic and Archaeological Analyses*. University of Chicago Press, Chicago.

1992 Evolutionary Ecology and the Social Sciences. In *Evolutionary Ecology and Human Behavior*, edited by Eric A. Smith and Bruce Winterhalder, pp. 3-23. Aldine de Gruyter, New York.

2000 Analyzing Adaptive Strategies: Human Behavioral Ecology at Twenty-Five. *Evolutionary Anthropology* 9(2):51-72.

Winterhalder, Bruce, Cedric Puleston, and Cody Ross
2015 Production Risk, Inter-Annual Food Storage by Households, and Population-Level Consequences in Seasonal Prehistoric Agrarian Societies. *Environmental Archaeology* 20(4):337-348.

Woodburn, James
1980 Hunter-Gatherers Today and Reconstruction of the Past. In *Soviet and Western Anthropology*, edited by A. Gellner, pp. 95-117. Duckworth, London.

Yang, Guoguo
2022 Analysis and Estimation of Net Primary Productivity of Vegetation in Nanjing Using Multi-Sourced Remote Sensing Data. *IEEE Access* 10:35665-35674.

Yarnal, Brent
1993 *Synoptic Climatology in Environmental Analysis: A Primer*. Belhaven Press, London.

Zeanah, David W.
2004 Sexual Division of Labor and Central Place Foraging: A Model for the Carson Desert of Western Nevada. *Journal of Anthropological Archaeology* 23(1):1-32.

APPENDIX A: Bryson Macrophysical Climate Model (MCM) Outputs

Appendix A, Section 1: VBA Code for Temperature and Precipitation Models

```
Sub precip_regress()
'
' precip_regress Macro
' Macro recorded 3/30/2005 by CCR
'
' Keyboard Shortcut: CTRL+r
'
    Application.Run "'ATPVBAEN.XLAM'!Regress", ActiveSheet.Range( _
      "$B$6:$B$18"), ActiveSheet.Range("$D$6:$I$18"), False, True, , ActiveSheet _
      .Range("$R$4"), False, False, False, False, , False
End Sub
Sub temp_regress()
'
' temp_regress Macro
' Macro recorded 4/22/2005 by CCR
'
' Keyboard Shortcut: CTRL+t
'
    Application.Run "ATPVBAEN.XLAM!Regress", ActiveSheet.Range( _
      "$B$6:$B$18"), ActiveSheet.Range("$C$6:$D$18"), False, True, , _
      ActiveSheet.Range("$R$4"), False, False, False, False, , False
End Sub
Sub evap_regression()
'
' evap_regression Macro
' Macro recorded 4/22/2005 by CCR
'
' Keyboard Shortcut: CTRL+e
'
    Application.Run "ATPVBAEN.XLAM!Regress", ActiveSheet.Range( _
      "$B$6:$B$18"), ActiveSheet.Range("$D$6:$F$18"), False, True, , _
      ActiveSheet.Range("$R$4"), False, False, False, False, , False
End Sub
```

Appendix A, Section 2: Charleston, South Carolina, MCM Outputs

Precipitation in mm [CHARLESTON, SC]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-3000	86.378	63.357	98.846	61.130	71.253	130.730	125.301	158.872	154.693	74.969	55.441	70.272	1151.242
-3100	89.014	63.541	98.726	60.346	70.950	130.271	127.014	159.979	154.988	75.305	55.517	70.278	1155.928
-3200	85.216	63.103	99.106	61.132	71.543	131.863	121.970	156.898	154.299	74.524	55.419	70.205	1145.277
-3300	87.268	63.186	98.950	60.802	71.370	131.704	122.669	157.404	154.460	74.690	55.469	70.204	1148.177
-3400	90.440	63.579	98.582	59.877	71.037	131.081	124.822	158.793	154.813	75.076	55.544	70.217	1153.862
-3500	87.884	65.635	97.711	54.246	69.777	128.398	134.099	164.341	156.078	76.707	55.817	70.074	1160.767
-3600	89.551	64.921	97.861	55.196	70.096	129.410	130.851	162.558	155.743	76.208	55.771	70.108	1158.272
-3700	84.019	66.562	97.439	52.937	69.594	128.420	134.433	164.661	156.218	76.875	55.891	69.912	1156.960
-3800	80.612	67.520	97.253	52.413	69.495	128.361	134.802	164.920	156.300	76.984	55.927	69.820	1154.405
-3900	68.212	74.017	96.596	50.915	68.636	126.268	142.369	169.029	157.115	78.398	56.148	68.901	1156.602
-4000	68.581	73.249	96.659	50.921	68.816	127.009	139.944	167.838	156.935	78.007	56.118	69.077	1153.154
-4100	89.392	63.985	99.036	56.007	70.791	132.456	121.839	157.397	154.807	75.014	55.732	70.007	1146.462
-4200	84.018	65.325	98.478	53.900	70.356	131.615	124.737	159.290	155.277	75.540	55.833	69.911	1144.281
-4300	75.676	67.950	97.552	51.640	69.722	130.316	129.282	162.132	155.944	76.366	55.983	69.609	1142.171
-4400	76.167	67.515	97.665	51.834	69.916	131.096	126.896	160.772	155.698	76.030	55.963	69.646	1139.199
-4500	77.573	66.720	97.977	52.628	70.298	132.313	123.087	158.461	155.226	75.455	55.904	69.750	1135.391
-4600	77.001	66.673	98.055	52.618	70.413	132.920	121.360	157.427	155.042	75.240	55.903	69.729	1132.383
-4700	77.251	66.376	98.154	52.968	70.635	133.782	118.837	155.834	154.722	74.892	55.881	69.739	1129.070
-4800	75.367	66.871	97.915	52.296	70.555	133.947	118.570	155.742	154.760	74.928	55.922	69.654	1126.527
-4900	75.107	66.626	98.211	53.229	70.938	135.152	115.002	153.345	154.228	74.394	55.864	69.711	1121.807
-5000	67.621	70.423	96.986	51.222	70.337	133.970	118.897	156.098	154.939	75.108	56.005	69.457	1121.061
-5100	63.135	75.405	95.949	50.503	69.951	133.210	121.483	157.870	155.384	75.590	56.101	69.164	1123.745
-5200	62.176	76.901	95.629	50.289	69.879	133.409	121.125	157.733	155.417	75.620	56.144	68.994	1123.315
-5300	60.324	82.227	94.916	50.156	69.615	132.922	122.867	158.926	155.722	75.966	56.218	68.649	1128.510
-5400	59.738	84.549	94.577	50.117	69.568	133.098	122.526	158.786	155.744	75.983	56.252	68.476	1129.413

Precipitation in mm [CHARLESTON, SC]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-5500	63.018	74.309	95.566	50.568	70.651	136.518	112.234	151.824	154.209	74.380	56.060	69.241	1108.579
-5600	71.976	66.407	97.868	53.424	71.990	140.530	101.334	143.391	152.133	72.669	55.844	69.506	1097.072
-5700	75.066	64.965	98.707	54.645	72.509	142.315	97.017	139.720	151.197	72.015	55.779	69.485	1093.421
-5800	78.792	63.618	99.890	56.224	73.131	144.362	92.346	135.451	150.042	71.275	55.698	69.438	1090.267
-5900	69.919	66.995	96.959	52.670	72.208	142.305	97.435	140.216	151.474	72.226	55.880	69.388	1087.675
-6000	71.533	66.110	97.094	52.964	72.458	143.372	95.042	138.104	150.953	71.883	55.861	69.363	1084.738
-6100	70.601	66.364	96.810	53.551	72.754	144.445	92.666	135.905	150.372	71.513	55.828	69.348	1080.158
-6200	69.742	66.616	96.534	53.826	72.972	145.370	90.739	134.068	149.893	71.226	55.812	69.320	1076.118
-6300	61.143	75.754	94.037	50.132	71.614	142.127	98.582	141.458	152.063	72.680	56.073	69.060	1084.723
-6400	73.820	64.477	97.395	54.647	73.610	148.043	85.520	128.747	148.445	70.412	55.765	69.231	1070.112
-6500	68.968	66.585	95.964	52.861	73.202	147.371	87.071	130.461	149.057	70.773	55.857	69.196	1067.366
-6600	61.907	73.361	93.918	50.216	72.223	145.099	92.144	135.676	150.680	71.774	56.045	69.029	1072.072
-6700	61.007	74.829	93.524	50.004	72.236	145.503	91.406	134.998	150.550	71.702	56.065	68.976	1070.801
-6800	60.081	76.789	93.103	49.865	72.270	145.922	90.627	134.261	150.394	71.613	56.078	68.936	1069.940
-6900	59.352	78.701	92.729	49.773	72.342	146.452	89.625	133.283	150.167	71.483	56.085	68.905	1068.897
-7000	58.782	80.514	92.390	49.623	72.379	146.930	88.771	132.445	149.987	71.384	56.101	68.856	1068.163
-7100	58.416	81.789	92.142	49.446	72.378	147.301	88.154	131.841	149.875	71.329	56.123	68.795	1067.590
-7200	57.952	84.066	91.860	49.339	72.358	147.465	87.907	131.603	149.843	71.317	56.140	68.753	1068.604
-7300	57.292	88.748	91.428	49.057	72.016	146.852	89.338	133.140	150.361	71.647	56.219	68.548	1074.646
-7400	56.909	92.409	91.120	49.009	71.590	145.954	91.409	135.285	151.036	72.089	56.312	68.223	1081.346
-7500	56.868	91.810	91.038	48.945	71.755	146.807	89.729	133.624	150.627	71.838	56.305	68.244	1077.589
-7600	56.848	91.254	91.013	48.962	71.600	146.738	90.037	133.984	150.798	71.960	56.354	68.037	1077.587
-7700	56.813	90.277	90.856	48.815	72.191	148.840	85.903	129.612	149.579	71.224	56.275	68.329	1068.714
-7800	57.448	84.006	91.112	48.900	72.888	151.191	81.655	124.721	148.117	70.413	56.180	68.556	1055.187
-7900	57.785	81.599	91.123	49.023	73.269	152.619	79.328	121.847	147.241	69.964	56.138	68.608	1048.544
-8000	56.826	88.135	90.659	48.684	72.346	150.340	83.467	126.925	148.945	70.896	56.309	68.186	1061.718

Precipitation in mm [CHARLESTON, SC]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-8100	56.434	91.569	90.364	48.739	72.067	149.860	84.489	128.137	149.379	71.157	56.375	67.932	1066.503
-8200	56.257	93.262	90.266	49.109	71.334	147.960	88.328	132.417	150.707	71.973	56.520	67.179	1075.312
-8300	56.530	89.377	90.310	48.777	71.966	150.294	83.964	127.586	149.343	71.164	56.434	67.662	1063.407
-8400	56.087	93.456	90.077	49.396	70.885	147.134	90.290	134.551	151.424	72.460	56.642	66.377	1078.778
-8500	56.065	92.882	89.876	48.819	71.901	150.644	83.529	127.117	149.298	71.158	56.476	67.451	1065.217
-8600	56.030	92.869	89.840	48.991	71.607	150.062	84.723	128.533	149.786	71.456	56.545	67.062	1067.503
-8700	55.870	92.516	89.702	49.213	71.231	149.086	86.668	130.753	150.484	71.887	56.625	66.538	1070.574
-8800	55.820	91.601	89.659	49.388	70.929	148.335	88.254	132.516	151.040	72.249	56.698	66.018	1072.508
-8900	55.759	90.282	89.571	49.399	70.913	148.521	87.980	132.244	151.006	72.237	56.716	65.895	1070.524
-9000	55.732	86.175	89.592	49.671	70.393	146.701	91.833	136.316	152.178	73.029	56.847	64.952	1073.419
-9100	55.668	92.461	89.349	49.059	71.554	151.229	83.098	126.720	149.477	71.326	56.631	66.544	1063.117
-9200	55.681	92.703	89.264	48.879	71.896	152.613	80.820	123.928	148.662	70.876	56.588	66.833	1058.742
-9300	55.648	92.096	89.079	48.426	72.779	155.566	76.278	117.857	146.703	69.859	56.458	67.534	1048.284
-9400	55.502	91.898	89.065	48.862	71.950	153.212	79.983	122.876	148.405	70.752	56.603	66.749	1055.859
-9500	55.520	78.894	89.239	49.596	70.496	148.076	89.392	133.901	151.705	72.745	56.893	64.689	1061.144
-9600	55.558	80.595	89.589	50.055	72.123	141.187	105.653	149.184	155.610	75.859	57.347	65.593	1098.353
-9700	55.644	72.847	89.865	50.269	85.100	136.529	119.111	159.406	157.761	78.237	57.649	66.649	1129.067
-9800	56.065	68.146	90.138	50.455	111.584	132.547	132.351	167.973	159.288	80.577	57.922	63.894	1170.940
-9900	55.377	90.926	89.195	49.765	70.364	146.005	94.325	139.119	153.333	73.955	57.169	64.016	1083.550
-10000	55.371	91.750	89.318	49.891	72.083	143.166	101.155	145.562	154.987	75.320	57.384	65.468	1101.455
-10100	55.324	91.220	89.153	49.780	70.657	145.473	95.685	140.502	153.755	74.295	57.248	64.308	1087.401
-10200	56.118	77.992	89.842	50.323	110.557	133.909	128.216	165.681	159.045	80.084	57.947	63.801	1173.515
-10300	55.520	73.497	89.584	50.163	87.405	137.404	116.940	158.099	157.657	78.095	57.715	66.201	1128.279
-10400	59.541	73.704	90.113	50.500	108.578	130.125	141.919	173.721	160.287	82.600	58.207	65.010	1194.306
-10500	61.566	75.189	90.163	50.533	99.404	129.303	145.168	175.491	160.532	83.248	58.262	65.940	1194.799
-10600	63.157	68.529	90.283	50.602	90.315	128.256	149.146	177.477	160.742	83.970	58.282	66.775	1187.534

Precipitation in mm [CHARLESTON, SC]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-10700	56.681	73.662	89.770	50.315	115.519	133.464	129.993	166.898	159.307	80.506	58.027	63.507	1177.650
-10800	61.702	88.688	89.968	50.413	105.426	130.659	140.480	173.172	160.327	82.554	58.266	65.380	1207.036
-10900	67.666	84.565	90.553	50.735	66.263	125.368	161.723	183.535	161.345	86.721	57.870	68.907	1205.251
-11000	62.103	82.911	90.925	50.966	62.102	123.693	172.009	187.651	161.417	89.099	56.220	69.233	1208.330
-11100	64.576	88.885	90.069	50.469	92.832	129.476	145.062	175.661	160.659	83.435	58.324	66.571	1206.018
-11200	61.982	88.135	90.079	50.209	116.631	133.443	130.995	167.920	159.691	81.085	58.212	64.030	1202.413
-11300	59.345	87.213	89.888	50.116	115.706	135.454	124.183	163.576	158.971	79.871	58.086	63.316	1185.723
-11400	56.674	89.326	89.537	49.999	96.462	138.375	114.961	157.073	157.740	78.190	57.880	64.712	1150.929
-11500	56.453	87.764	89.300	49.885	81.800	141.110	107.197	151.014	156.484	76.783	57.705	66.380	1121.875
-11600	59.490	89.687	89.646	50.181	117.289	134.513	127.134	165.419	159.239	80.314	58.108	63.409	1194.428
-11700	56.839	88.226	89.228	49.938	85.196	140.090	109.921	153.173	156.918	77.239	57.749	66.079	1130.595
-11800	60.023	88.801	89.586	50.190	117.142	134.452	127.288	165.494	159.239	80.318	58.101	63.408	1194.041
-11900	61.298	91.563	89.748	50.305	115.299	132.399	134.292	169.728	159.878	81.506	58.200	64.225	1208.441
-12000	56.354	92.969	89.500	50.164	104.562	135.996	121.841	161.743	158.488	79.189	57.922	64.100	1172.828
-12100	56.360	92.429	89.594	50.215	108.164	135.190	124.340	163.364	158.747	79.577	57.949	63.845	1179.774
-12200	68.451	92.401	90.451	50.708	71.594	126.540	157.396	181.526	161.020	85.711	58.162	68.464	1212.424
-12300	56.109	111.537	100.372	64.021	59.543	204.709	195.594	193.906	159.371	97.729	55.042	69.079	1367.013
-12400	56.126	111.397	100.611	64.208	59.519	204.175	195.851	193.873	159.275	97.903	54.891	69.087	1366.915
-12500	56.344	110.102	92.528	54.020	60.272	150.188	188.733	192.677	160.491	94.224	57.271	69.238	1286.089
-12600	56.107	112.033	95.692	60.236	59.751	197.301	194.107	193.545	159.595	96.804	56.402	69.184	1350.758
-12700	56.316	105.488	109.497	64.627	59.167	167.297	198.429	193.585	158.220	100.116	54.939	69.040	1336.719
-12800	58.833	102.227	91.666	51.656	60.881	127.564	181.767	190.869	161.085	91.767	54.992	69.273	1242.582
-12900	59.988	89.752	115.887	60.583	58.991	147.875	199.367	193.861	158.047	100.968	56.098	68.892	1310.308
-13000	57.632	107.842	102.649	64.836	59.452	201.539	196.385	193.891	159.120	98.279	54.594	69.073	1365.293
-13100	57.413	97.010	116.204	58.212	58.823	128.222	200.000	192.926	157.069	102.514	57.572	68.928	1294.893
-13200	57.184	105.635	108.816	64.944	59.186	169.015	198.336	193.509	158.204	100.056	54.851	69.064	1338.800

Precipitation in mm [CHARLESTON, SC]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-13300	58.020	94.887	97.196	52.549	58.122	113.596	198.835	188.441	153.118	121.036	59.591	68.639	1264.030
-13400	58.208	95.711	96.518	52.738	57.952	113.287	196.893	186.199	151.583	142.261	59.627	68.537	1279.512
-13500	58.380	95.262	96.677	52.801	57.918	113.212	196.242	185.538	151.175	145.823	59.629	68.522	1281.179
-13600	58.395	91.793	105.169	52.982	58.372	114.236	199.685	190.030	154.477	108.757	59.424	68.831	1262.151
-13700	59.835	88.043	97.974	52.610	58.110	113.457	198.254	187.803	152.748	123.855	59.580	68.678	1260.947
-13800	59.924	89.911	117.516	59.416	58.815	124.950	199.712	192.093	156.521	103.011	57.766	69.042	1288.677
-13900	59.964	86.631	106.531	53.048	58.356	113.965	199.232	189.427	154.107	109.764	59.434	68.874	1259.333
-14000	59.984	88.852	118.379	57.709	58.708	119.087	199.617	191.231	155.793	104.195	58.478	69.061	1281.095

Mean Temperature (°C) – [CHARLESTON, SC]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-3000	9.620	11.087	14.710	18.900	23.328	26.773	28.745	28.055	25.710	20.465	15.814	11.370	19.548
-3100	9.529	10.997	14.623	18.819	23.253	26.703	28.677	27.987	25.638	20.387	15.731	11.281	19.469
-3200	9.611	11.083	14.725	18.946	23.407	26.879	28.864	28.171	25.806	20.530	15.846	11.375	19.603
-3300	9.546	11.018	14.667	18.896	23.366	26.845	28.835	28.140	25.770	20.485	15.792	11.313	19.556
-3400	9.462	10.934	14.583	18.812	23.283	26.762	28.752	28.057	25.687	20.402	15.709	11.229	19.473
-3500	9.166	10.636	14.275	18.490	22.945	26.412	28.394	27.702	25.341	20.070	15.393	10.926	19.146
-3600	9.198	10.671	14.324	18.560	23.038	26.524	28.516	27.821	25.446	20.154	15.453	10.968	19.223
-3700	9.058	10.531	14.184	18.420	22.898	26.383	28.376	27.680	25.305	20.014	15.313	10.828	19.083
-3800	9.009	10.483	14.141	18.384	22.871	26.363	28.359	27.663	25.283	19.983	15.274	10.782	19.050
-3900	8.755	10.228	13.878	18.110	22.584	26.066	28.057	27.362	24.989	19.702	15.005	10.523	18.772
-4000	8.774	10.249	13.911	18.161	22.655	26.153	28.151	27.455	25.070	19.764	15.048	10.550	18.828
-4100	9.151	10.634	14.344	18.669	23.243	26.806	28.836	28.131	25.698	20.319	15.522	10.959	19.359
-4200	9.034	10.518	14.229	18.555	23.130	26.694	28.726	28.019	25.586	20.205	15.408	10.844	19.246
-4300	8.862	10.345	14.056	18.381	22.956	26.520	28.551	27.845	25.413	20.032	15.234	10.671	19.072
-4400	8.864	10.351	14.074	18.419	23.016	26.597	28.637	27.929	25.483	20.082	15.263	10.682	19.116
-4500	8.910	10.399	14.137	18.504	23.125	26.726	28.775	28.064	25.604	20.181	15.338	10.737	19.208
-4600	8.891	10.382	14.132	18.519	23.160	26.777	28.835	28.122	25.649	20.208	15.344	10.727	19.229
-4700	8.896	10.389	14.152	18.559	23.222	26.857	28.924	28.208	25.723	20.261	15.375	10.740	19.276
-4800	8.832	10.328	14.102	18.524	23.205	26.855	28.929	28.211	25.715	20.237	15.333	10.684	19.246
-4900	8.877	10.375	14.161	18.604	23.307	26.975	29.057	28.337	25.828	20.330	15.404	10.737	19.333
-5000	8.713	10.211	14.000	18.447	23.154	26.824	28.909	28.188	25.677	20.174	15.245	10.575	19.176
-5100	8.599	10.098	13.889	18.340	23.050	26.724	28.810	28.089	25.575	20.069	15.136	10.463	19.070
-5200	8.531	10.032	13.835	18.304	23.034	26.723	28.817	28.094	25.569	20.045	15.092	10.403	19.040
-5300	8.437	9.939	13.746	18.221	22.958	26.653	28.750	28.025	25.496	19.966	15.007	10.312	18.959
-5400	8.383	9.887	13.703	18.193	22.946	26.654	28.758	28.032	25.493	19.947	14.972	10.264	18.936
-5500	8.557	10.066	13.914	18.451	23.256	27.006	29.130	28.399	25.829	20.236	15.209	10.459	19.209

Mean Temperature (°C) – [CHARLESTON, SC]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-5600	8.742	10.257	14.139	18.730	23.592	27.388	29.536	28.798	26.193	20.548	15.463	10.667	19.504
-5700	8.778	10.297	14.199	18.820	23.716	27.539	29.700	28.958	26.334	20.658	15.540	10.716	19.605
-5800	8.828	10.352	14.274	18.928	23.858	27.710	29.885	29.139	26.494	20.786	15.633	10.781	19.722
-5900	8.639	10.162	14.081	18.729	23.654	27.501	29.673	28.928	26.287	20.583	15.436	10.589	19.522
-6000	8.634	10.159	14.094	18.764	23.714	27.582	29.764	29.016	26.360	20.634	15.461	10.594	19.565
-6100	8.648	10.176	14.123	18.813	23.783	27.667	29.858	29.108	26.439	20.694	15.501	10.617	19.619
-6200	8.644	10.174	14.133	18.843	23.834	27.736	29.935	29.182	26.501	20.736	15.522	10.621	19.655
-6300	8.376	9.905	13.855	18.550	23.527	27.416	29.609	28.858	26.186	20.435	15.236	10.347	19.358
-6400	8.632	10.169	14.164	18.928	23.979	27.929	30.152	29.393	26.676	20.856	15.583	10.633	19.758
-6500	8.527	10.064	14.064	18.836	23.895	27.851	30.078	29.318	26.596	20.769	15.487	10.531	19.668
-6600	8.332	9.869	13.864	18.629	23.681	27.631	29.854	29.095	26.378	20.557	15.283	10.333	19.459
-6700	8.293	9.832	13.837	18.618	23.687	27.650	29.881	29.120	26.392	20.556	15.265	10.301	19.453
-6800	8.263	9.804	13.818	18.613	23.697	27.673	29.910	29.147	26.411	20.561	15.254	10.278	19.452
-6900	8.239	9.781	13.805	18.615	23.716	27.706	29.949	29.185	26.438	20.573	15.250	10.260	19.460
-7000	8.204	9.748	13.783	18.609	23.728	27.732	29.982	29.215	26.459	20.577	15.236	10.232	19.459
-7100	8.163	9.709	13.754	18.595	23.730	27.748	30.005	29.236	26.470	20.573	15.215	10.198	19.450
-7200	8.136	9.684	13.734	18.583	23.728	27.752	30.013	29.244	26.471	20.566	15.200	10.175	19.440
-7300	8.043	9.591	13.645	18.501	23.652	27.683	29.946	29.176	26.400	20.488	15.115	10.085	19.361
-7400	7.937	9.485	13.542	18.401	23.555	27.588	29.853	29.083	26.304	20.390	15.013	9.980	19.261
-7500	7.924	9.475	13.544	18.422	23.598	27.648	29.921	29.148	26.357	20.423	15.026	9.975	19.288
-7600	7.857	9.409	13.485	18.376	23.564	27.625	29.903	29.129	26.330	20.384	14.974	9.913	19.246
-7700	7.913	9.469	13.564	18.484	23.705	27.791	30.083	29.305	26.487	20.511	15.069	9.982	19.364
-7800	7.982	9.542	13.657	18.608	23.862	27.976	30.281	29.499	26.661	20.655	15.179	10.065	19.497
-7900	8.001	9.563	13.693	18.667	23.946	28.080	30.395	29.610	26.758	20.728	15.228	10.094	19.564
-8000	7.826	9.388	13.513	18.478	23.748	27.874	30.185	29.402	26.555	20.534	15.042	9.916	19.372
-8100	7.748	9.310	13.439	18.411	23.687	27.819	30.133	29.349	26.498	20.471	14.972	9.840	19.306

Mean Temperature (°C) – [CHARLESTON, SC]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-8200	7.592	9.153	13.279	18.245	23.516	27.643	29.955	29.171	26.323	20.302	14.809	9.682	19.139
-8300	7.655	9.220	13.366	18.364	23.670	27.825	30.151	29.363	26.495	20.441	14.913	9.758	19.268
-8400	7.440	9.003	13.138	18.118	23.404	27.543	29.861	29.076	26.219	20.183	14.675	9.536	19.016
-8500	7.587	9.155	13.314	18.332	23.659	27.831	30.166	29.376	26.495	20.421	14.872	9.699	19.242
-8600	7.505	9.073	13.236	18.259	23.591	27.769	30.106	29.315	26.431	20.352	14.797	9.620	19.171
-8700	7.416	8.984	13.146	18.168	23.500	27.677	30.013	29.223	26.339	20.260	14.707	9.530	19.080
-8800	7.330	8.899	13.062	18.087	23.422	27.601	29.938	29.148	26.262	20.181	14.625	9.446	19.000
-8900	7.300	8.869	13.039	18.074	23.419	27.606	29.948	29.156	26.264	20.174	14.607	9.419	18.989
-9000	7.155	8.724	12.890	17.918	23.256	27.438	29.776	28.985	26.098	20.014	14.454	9.272	18.832
-9100	7.356	8.930	13.125	18.200	23.588	27.810	30.170	29.373	26.455	20.325	14.715	9.492	19.128
-9200	7.381	8.958	13.167	18.262	23.672	27.912	30.280	29.481	26.550	20.400	14.767	9.527	19.197
-9300	7.489	9.070	13.300	18.427	23.872	28.140	30.522	29.719	26.768	20.585	14.918	9.649	19.372
-9400	7.346	8.925	13.145	18.258	23.687	27.943	30.319	29.518	26.576	20.407	14.755	9.499	19.198
-9500	7.055	8.630	12.825	17.900	23.288	27.510	29.870	29.073	26.155	20.025	14.415	9.192	18.828
-9600	6.532	8.103	12.276	17.317	22.668	26.860	29.204	28.412	25.516	19.420	13.847	8.654	18.234
-9700	6.153	7.720	11.875	16.888	22.208	26.376	28.708	27.919	25.041	18.973	13.431	8.263	17.796
-9800	5.774	7.339	11.479	16.468	21.763	25.911	28.232	27.446	24.584	18.539	13.021	7.874	17.369
-9900	6.697	8.275	12.491	17.597	23.019	27.268	29.641	28.841	25.903	19.741	14.097	8.847	18.535
-10000	6.433	8.010	12.223	17.325	22.743	26.989	29.360	28.560	25.625	19.467	13.828	8.581	18.262
-10100	6.590	8.169	12.392	17.509	22.943	27.202	29.580	28.778	25.833	19.661	14.005	8.745	18.450
-10200	5.707	7.277	11.449	16.487	21.834	26.024	28.367	27.575	24.681	18.588	13.018	7.828	17.403
-10300	6.028	7.600	11.785	16.843	22.212	26.420	28.772	27.977	25.070	18.957	13.365	8.157	17.766
-10400	5.281	6.849	11.009	16.030	21.360	25.535	27.870	27.080	24.197	18.121	12.569	7.394	16.941
-10500	5.154	6.722	10.884	15.905	21.236	25.412	27.748	26.958	24.074	17.997	12.444	7.268	16.817
-10600	5.064	6.630	10.783	15.791	21.106	25.270	27.600	26.812	23.937	17.874	12.336	7.172	16.698
-10700	5.575	7.147	11.328	16.381	21.745	25.948	28.298	27.504	24.600	18.492	12.906	7.703	17.302

Mean Temperature (°C) – [CHARLESTON, SC]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-10800	5.157	6.730	10.916	15.977	21.349	25.559	27.912	27.117	24.209	18.093	12.498	7.288	16.900
-10900	4.522	6.089	10.247	15.263	20.588	24.759	27.092	26.303	23.423	17.351	11.804	6.633	16.173
-11000	4.164	5.728	9.870	14.861	20.159	24.308	26.630	25.844	22.980	16.933	11.414	6.264	15.763
-11100	5.001	6.574	10.758	15.815	21.184	25.391	27.742	26.948	24.042	17.929	12.338	7.131	16.738
-11200	5.245	6.824	11.048	16.166	21.601	25.861	28.240	27.438	24.492	18.318	12.661	7.401	17.108
-11300	5.440	7.022	11.252	16.382	21.829	26.099	28.482	27.679	24.726	18.541	12.872	7.601	17.327
-11400	5.738	7.320	11.556	16.694	22.151	26.429	28.816	28.012	25.053	18.860	13.181	7.902	17.643
-11500	5.970	7.554	11.799	16.950	22.422	26.712	29.104	28.299	25.331	19.124	13.431	8.141	17.903
-11600	5.417	6.996	11.215	16.326	21.753	26.007	28.382	27.581	24.640	18.473	12.824	7.570	17.265
-11700	5.920	7.503	11.740	16.880	22.338	26.617	29.005	28.200	25.241	19.046	13.365	8.086	17.828
-11800	5.431	7.009	11.225	16.331	21.754	26.004	28.378	27.577	24.639	18.477	12.832	7.581	17.270
-11900	5.278	6.853	11.055	16.139	21.537	25.768	28.131	27.333	24.410	18.270	12.650	7.419	17.070
-12000	5.711	7.287	11.491	16.580	21.982	26.216	28.582	27.783	24.857	18.713	13.088	7.854	17.512
-12100	5.681	7.255	11.451	16.525	21.914	26.136	28.495	27.699	24.781	18.651	13.040	7.818	17.454
-12200	4.727	6.294	10.448	15.459	20.778	24.945	27.276	26.487	23.611	17.544	12.003	6.836	16.367
-12300	2.856	4.410	8.498	13.405	18.612	22.688	24.974	24.198	21.388	15.425	9.995	4.920	14.281
-12400	2.844	4.397	8.481	13.383	18.583	22.653	24.937	24.161	21.355	15.398	9.975	4.905	14.256
-12500	3.449	5.005	9.102	14.024	19.247	23.336	25.628	24.850	22.031	16.053	10.608	5.519	14.904
-12600	3.079	4.631	8.708	13.599	18.788	22.848	25.127	24.353	21.554	15.607	10.196	5.135	14.469
-12700	2.540	4.090	8.153	13.023	18.190	22.233	24.503	23.731	20.945	15.019	9.630	4.587	13.887
-12800	3.800	5.360	9.476	14.429	19.685	23.800	26.106	25.324	22.485	16.477	10.999	5.884	15.319
-12900	2.288	3.841	7.924	12.826	18.025	22.095	24.379	23.603	20.797	14.841	9.419	4.349	13.699
-13000	2.785	4.338	8.420	13.318	18.515	22.583	24.865	24.090	21.286	15.332	9.912	4.845	14.191
-13100	2.159	3.707	7.761	12.617	17.768	21.798	24.061	23.291	20.515	14.603	9.230	4.200	13.476
-13200	2.572	4.121	8.180	13.044	18.203	22.240	24.507	23.736	20.955	15.035	9.654	4.617	13.905
-13300	1.131	2.672	6.690	11.490	16.579	20.560	22.799	22.036	19.296	13.440	8.128	3.148	12.331

Mean Temperature (°C) – [CHARLESTON, SC]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-13400	0.768	2.307	6.312	11.091	16.159	20.121	22.351	21.590	18.864	13.029	7.739	2.776	11.926
-13500	0.689	2.226	6.225	10.996	16.055	20.010	22.236	21.476	18.755	12.929	7.648	2.693	11.828
-13600	1.598	3.138	7.152	11.946	17.030	21.006	23.242	22.479	19.743	13.894	8.588	3.612	12.786
-13700	1.131	2.670	6.674	11.453	16.520	20.483	22.712	21.951	19.225	13.391	8.101	3.139	12.288
-13800	2.226	3.768	7.791	12.599	17.698	21.686	23.929	23.164	20.419	14.555	9.234	4.246	13.443
-13900	1.602	3.140	7.139	11.911	16.970	20.926	23.153	22.393	19.671	13.844	8.562	3.606	12.743
-14000	2.128	3.667	7.671	12.450	17.518	21.480	23.710	22.949	20.223	14.388	9.098	4.136	13.285

Appendix A, Section 3: Columbus, Georgia, MCM Outputs

Precipitation in mm [COLUMBUS, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-3000	105.221	112.953	140.815	100.498	94.603	95.934	120.462	95.440	80.021	52.436	90.151	114.321	1202.856
-3100	103.844	112.420	140.218	101.337	95.234	97.335	123.683	97.182	81.086	53.771	91.077	114.871	1212.059
-3200	105.471	112.802	140.519	100.212	94.226	94.782	116.091	93.472	78.863	50.955	89.450	113.960	1190.803
-3300	104.389	112.410	140.082	100.548	94.616	95.581	117.730	94.426	79.434	51.654	89.998	114.296	1195.163
-3400	102.875	111.870	139.619	101.565	95.265	97.072	121.533	96.419	80.620	53.139	90.979	114.866	1205.822
-3500	102.772	109.799	137.985	108.205	97.654	103.078	136.627	104.092	85.455	59.363	94.735	116.993	1256.759
-3600	102.160	110.084	138.035	106.809	97.141	101.542	132.284	102.069	84.102	57.572	93.842	116.510	1242.152
-3700	103.719	108.784	137.237	109.824	98.124	104.089	138.294	105.164	86.103	60.175	95.405	117.399	1264.316
-3800	104.819	108.101	136.916	110.545	98.361	104.640	139.324	105.773	86.483	60.659	95.759	117.610	1268.991
-3900	108.813	104.253	135.517	113.941	100.086	109.805	150.966	111.673	90.597	66.142	98.758	119.330	1309.880
-4000	108.663	104.535	135.524	113.534	99.779	108.632	148.103	110.357	89.568	64.729	98.134	118.987	1300.547
-4100	101.583	109.643	136.940	105.082	96.292	98.597	120.768	97.079	81.084	53.605	92.154	115.667	1208.495
-4200	103.169	108.569	136.334	107.675	97.122	100.611	126.076	99.844	82.697	55.640	93.452	116.396	1227.585
-4300	105.793	106.695	135.468	111.019	98.328	103.719	134.130	103.976	85.187	58.834	95.394	117.490	1256.031
-4400	105.507	106.753	135.342	110.489	98.058	102.813	130.916	102.556	84.314	57.678	94.876	117.219	1246.520
-4500	105.013	107.137	135.420	109.051	97.456	101.057	125.123	99.836	82.723	55.618	93.814	116.647	1228.896
-4600	105.074	106.942	135.170	108.892	97.344	100.604	122.842	98.880	82.200	54.932	93.556	116.524	1222.961
-4700	104.890	106.948	135.051	108.210	97.045	99.687	119.068	97.163	81.275	53.749	92.994	116.235	1212.316
-4800	105.315	106.343	134.615	109.023	97.282	100.129	119.325	97.496	81.496	54.006	93.305	116.426	1214.761
-4900	105.501	106.499	134.692	107.525	96.700	98.544	113.384	94.627	79.996	52.124	92.287	115.886	1197.765
-5000	107.862	104.105	133.957	110.519	97.809	101.245	121.063	98.691	82.209	54.871	94.061	116.871	1223.263
-5100	109.073	101.421	133.466	111.972	98.532	103.092	126.153	101.364	83.700	56.748	95.243	117.536	1238.301
-5200	109.030	100.367	133.013	112.358	98.758	103.538	126.352	101.692	83.914	56.996	95.552	117.728	1239.298
-5300	109.150	97.714	132.549	112.988	99.278	104.923	129.958	103.614	85.002	58.375	96.425	118.225	1248.200
-5400	108.997	96.452	132.198	113.123	99.442	105.260	130.051	103.849	85.154	58.549	96.658	118.369	1248.102

Precipitation in mm [COLUMBUS, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-5500	108.554	101.099	132.789	110.803	97.735	100.332	112.065	95.113	80.594	52.773	93.559	116.690	1202.108
-5600	105.504	104.975	133.033	105.971	95.730	95.298	91.486	84.472	75.600	46.772	90.070	114.850	1143.760
-5700	104.227	105.542	132.827	104.194	95.049	93.672	83.232	80.052	73.714	44.603	88.834	114.218	1120.165
-5800	102.754	106.113	132.583	102.092	94.228	91.847	73.957	74.813	71.526	42.165	87.366	113.462	1092.908
-5900	105.652	103.874	132.288	106.457	95.723	94.990	85.066	81.466	74.572	45.579	89.780	114.763	1130.210
-6000	104.854	104.078	132.078	105.865	95.456	94.317	80.527	79.046	73.621	44.500	89.235	114.498	1118.076
-6100	105.203	103.895	132.127	104.948	95.094	93.489	75.795	76.388	72.551	43.306	88.557	114.158	1105.513
-6200	105.442	103.629	132.054	104.440	94.869	92.966	72.008	74.254	71.739	42.418	88.094	113.934	1095.846
-6300	107.759	98.613	131.113	109.964	96.994	97.591	89.271	84.527	76.344	47.610	91.626	115.807	1147.218
-6400	103.445	104.130	131.398	102.987	94.225	91.584	61.466	68.001	69.409	39.938	86.765	113.293	1066.640
-6500	104.986	102.709	131.105	105.120	94.919	92.930	65.270	70.628	70.658	41.274	87.846	113.882	1081.327
-6600	107.012	98.977	130.475	109.076	96.427	96.063	76.888	77.977	73.896	44.822	90.351	115.202	1117.165
-6700	107.099	98.077	130.240	109.308	96.503	96.182	75.641	77.394	73.768	44.682	90.400	115.245	1114.539
-6800	107.221	97.023	130.071	109.428	96.535	96.213	74.233	76.683	73.573	44.468	90.382	115.250	1111.081
-6900	107.276	96.016	129.913	109.448	96.516	96.138	72.308	75.648	73.247	44.112	90.275	115.210	1106.108
-7000	107.225	95.019	129.682	109.583	96.558	96.195	70.733	74.834	73.032	43.881	90.263	115.221	1102.227
-7100	107.091	94.239	129.404	109.801	96.655	96.373	69.676	74.333	72.951	43.799	90.348	115.282	1099.952
-7200	107.054	93.171	129.251	109.960	96.737	96.533	69.309	74.195	72.968	43.821	90.443	115.341	1098.783
-7300	106.764	90.986	128.747	110.770	97.302	97.740	72.923	76.604	74.087	45.058	91.369	115.837	1108.188
-7400	106.357	89.246	128.166	111.416	97.979	99.248	77.998	79.846	75.542	46.689	92.516	116.451	1121.456
-7500	106.253	89.285	128.006	111.275	97.834	98.877	74.504	77.891	74.856	45.922	92.172	116.287	1113.163
-7600	105.941	89.171	127.568	111.457	98.139	99.545	75.591	78.730	75.331	46.457	92.645	116.551	1117.125
-7700	106.089	89.517	127.752	110.864	97.415	97.903	66.241	73.008	73.121	44.022	91.243	115.834	1093.008
-7800	106.170	91.924	127.943	109.858	96.567	96.155	56.396	66.541	70.624	41.367	89.628	115.019	1068.190
-7900	106.090	92.788	127.926	109.243	96.156	95.386	51.026	62.849	69.255	39.963	88.803	114.614	1054.098
-8000	105.592	89.695	127.056	110.841	97.457	97.986	61.247	70.132	72.331	43.195	91.083	115.795	1082.408

Precipitation in mm [COLUMBUS, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-8100	105.296	88.129	126.626	111.122	97.905	98.943	63.969	72.085	73.237	44.178	91.833	116.197	1089.521
-8200	104.678	87.057	125.814	111.472	98.962	101.343	73.487	78.341	75.869	47.080	93.754	117.206	1115.062
-8300	104.819	88.427	125.980	111.174	98.207	99.606	63.253	71.906	73.430	44.404	92.235	116.435	1089.877
-8400	104.013	86.414	124.952	111.431	99.718	103.199	78.813	81.917	77.532	48.966	95.109	117.895	1129.958
-8500	104.534	86.820	125.571	111.164	98.415	100.072	62.593	71.683	73.540	44.535	92.508	116.597	1088.033
-8600	104.180	86.526	125.106	111.219	98.873	101.102	65.782	73.939	74.554	45.645	93.313	117.022	1097.259
-8700	103.819	86.376	124.654	111.240	99.421	102.399	70.759	77.268	75.958	47.199	94.340	117.542	1110.975
-8800	103.453	86.417	124.196	111.195	99.886	103.574	74.901	80.008	77.144	48.532	95.230	117.964	1122.500
-8900	103.304	86.726	123.998	111.138	99.961	103.761	74.455	79.843	77.168	48.561	95.334	118.011	1122.259
-9000	102.704	87.844	123.290	111.026	100.752	106.074	84.146	85.878	79.661	51.419	97.066	118.632	1148.494
-9100	103.448	85.853	124.112	110.998	99.231	101.958	62.733	72.451	74.457	45.569	93.728	117.269	1091.805
-9200	103.503	85.709	124.153	110.901	98.856	101.142	57.159	68.708	73.096	44.114	92.924	116.877	1077.142
-9300	103.870	86.041	124.588	110.601	97.812	99.083	45.696	60.295	69.867	40.768	90.853	115.831	1045.305
-9400	103.323	85.758	123.899	110.820	98.881	101.236	55.284	67.533	72.797	43.810	92.879	116.868	1073.088
-9500	102.181	90.041	122.590	110.757	100.831	106.247	79.213	83.421	79.059	50.724	97.043	118.559	1140.665
-9600	99.977	88.271	120.279	109.948	100.539	115.316	119.071	106.020	88.490	62.101	103.152	116.387	1229.549
-9700	98.358	90.840	118.834	109.062	91.871	122.425	149.121	120.909	95.352	70.971	107.190	115.931	1290.864
-9800	96.680	92.410	117.570	107.946	78.038	129.477	175.955	133.344	101.927	79.799	110.712	120.538	1344.396
-9900	100.567	84.359	120.706	110.123	101.639	110.677	93.016	92.342	83.086	55.435	100.088	118.048	1170.087
-10000	99.423	83.505	119.534	109.608	100.678	114.839	110.383	102.249	87.262	60.513	102.812	116.168	1206.974
-10100	100.082	83.927	120.165	109.900	101.575	111.963	96.910	94.802	84.214	56.782	100.931	117.470	1178.722
-10200	96.258	87.854	117.087	107.698	78.551	128.701	170.171	131.416	100.841	78.226	110.406	120.308	1327.518
-10300	97.725	89.989	118.126	108.657	90.546	122.773	146.481	120.355	95.236	70.742	107.409	116.250	1284.289
-10400	93.438	89.320	115.902	106.215	79.332	136.174	196.374	143.287	107.823	87.755	113.778	122.506	1391.903
-10500	92.172	88.633	115.571	105.740	83.729	138.122	202.399	146.072	109.630	90.232	114.600	122.362	1409.264
-10600	91.246	91.492	115.440	105.389	88.584	140.055	208.549	148.709	111.536	92.890	115.368	122.181	1431.439

Precipitation in mm [COLUMBUS, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-10700	95.508	89.326	116.582	107.251	76.374	130.257	174.726	133.797	102.143	79.947	111.169	121.265	1338.346
-10800	92.012	83.184	115.342	105.755	80.818	136.601	196.081	143.770	107.949	87.826	114.024	122.320	1385.681
-10900	87.354	85.058	114.384	103.188	105.014	147.823	229.213	158.576	119.098	103.278	118.461	120.945	1492.392
-11000	88.202	86.201	114.190	101.611	108.279	153.102	241.365	164.643	125.341	111.892	120.604	120.228	1535.659
-11100	90.289	83.084	114.989	105.158	87.211	139.156	204.408	147.523	110.373	91.158	115.085	122.038	1410.472
-11200	92.091	82.954	115.127	106.076	75.910	133.050	180.524	137.583	104.208	82.589	112.546	122.106	1344.764
-11300	93.858	83.346	115.633	106.761	76.374	129.537	166.467	131.212	100.838	78.027	110.914	121.143	1314.108
-11400	95.986	82.867	116.587	107.719	85.574	124.506	145.797	121.363	96.048	71.668	108.374	117.838	1274.327
-11500	97.030	83.659	117.376	108.382	94.161	120.389	127.565	112.299	91.994	66.409	106.105	115.347	1240.716
-11600	93.765	82.604	115.744	106.689	75.671	130.591	171.906	133.452	101.978	79.596	111.398	121.541	1324.934
-11700	96.738	83.507	117.282	108.258	92.006	121.577	133.746	115.305	93.266	68.055	106.780	115.864	1252.383
-11800	93.644	82.957	115.822	106.735	75.730	130.537	172.008	133.430	101.962	79.584	111.368	121.515	1325.293
-11900	92.594	82.066	115.522	106.200	76.438	133.805	185.349	139.237	105.173	83.979	112.841	122.250	1355.453
-12000	96.090	81.975	116.832	107.676	81.409	126.742	159.087	126.996	98.610	75.139	109.495	119.237	1299.289
-12100	95.991	82.222	116.802	107.587	79.689	127.729	163.892	129.065	99.638	76.535	109.974	119.863	1308.987
-12200	87.863	82.270	114.747	104.032	100.777	145.023	222.013	155.557	115.979	99.543	117.331	121.394	1466.529
-12300	86.463	80.763	113.596	90.531	106.324	119.931	253.686	177.621	147.353	140.997	121.316	116.298	1554.878
-12400	86.453	80.905	113.621	90.403	106.260	120.240	253.250	177.641	147.762	141.524	121.633	116.240	1555.934
-12500	87.953	79.304	114.628	97.367	107.825	142.786	252.327	173.035	138.458	129.595	117.237	118.339	1558.855
-12600	87.082	80.091	114.673	93.107	106.855	122.013	252.351	175.864	144.934	138.001	118.906	117.067	1550.945
-12700	85.857	84.053	112.066	89.019	105.167	138.763	250.270	179.242	153.119	148.181	124.273	114.989	1584.998
-12800	88.223	80.534	114.313	99.805	108.450	154.253	249.133	169.531	132.196	121.246	120.553	119.366	1557.602
-12900	84.137	90.057	110.575	89.757	104.495	150.695	251.864	181.110	155.297	150.701	124.268	114.052	1607.010
-13000	85.921	82.115	113.175	89.896	106.074	121.610	253.003	178.010	148.692	142.689	122.387	116.012	1559.585
-13100	84.939	88.679	111.553	90.303	103.769	164.734	247.261	181.209	158.692	154.730	123.679	113.373	1622.921
-13200	85.725	83.952	112.257	89.013	105.235	137.764	249.831	178.966	152.946	147.990	124.236	115.099	1583.014

Precipitation in mm [COLUMBUS, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-13300	84.120	96.718	124.288	89.152	99.338	179.535	234.683	185.226	173.054	158.395	120.588	108.563	1653.661
-13400	84.216	99.699	127.710	88.140	97.679	179.784	230.016	186.398	177.529	149.247	119.283	106.797	1646.497
-13500	84.254	100.707	128.502	87.938	97.284	179.758	228.689	186.594	178.569	148.350	118.936	106.391	1645.972
-13600	84.281	94.613	118.753	90.455	101.209	178.274	237.889	183.131	167.878	162.300	121.797	110.684	1651.264
-13700	83.684	99.658	124.367	89.153	99.190	179.569	232.917	184.960	173.701	157.116	120.438	108.482	1653.236
-13800	84.493	91.461	111.466	90.064	103.716	167.157	243.446	180.225	159.607	155.860	123.531	113.504	1624.530
-13900	83.912	96.888	118.604	90.460	101.070	178.487	235.970	182.827	168.586	162.370	121.668	110.619	1651.462
-14000	84.465	92.741	111.983	90.440	103.173	172.418	240.307	180.367	161.912	158.331	123.047	112.990	1632.174

Mean Temperature (°C) [COLUMBUS, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-3000	8.100	9.871	13.767	18.201	22.813	26.675	28.146	27.819	24.895	18.933	13.289	9.126	18.470
-3100	8.012	9.783	13.683	18.122	22.740	26.607	28.080	27.753	24.825	18.858	13.208	9.040	18.393
-3200	8.092	9.866	13.782	18.245	22.889	26.778	28.261	27.931	24.988	18.997	13.320	9.131	18.523
-3300	8.029	9.804	13.725	18.197	22.849	26.745	28.233	27.902	24.953	18.954	13.268	9.072	18.477
-3400	7.947	9.723	13.643	18.116	22.768	26.665	28.152	27.821	24.873	18.873	13.187	8.990	18.397
-3500	7.660	9.434	13.346	17.804	22.441	26.325	27.806	27.477	24.537	18.552	12.881	8.697	18.080
-3600	7.691	9.467	13.392	17.871	22.531	26.434	27.924	27.592	24.639	18.633	12.939	8.737	18.154
-3700	7.556	9.332	13.257	17.736	22.396	26.298	27.788	27.456	24.504	18.497	12.804	8.602	18.019
-3800	7.508	9.285	13.215	17.701	22.369	26.278	27.772	27.439	24.482	18.468	12.766	8.557	17.987
-3900	7.262	9.038	12.961	17.436	22.091	25.990	27.479	27.148	24.197	18.195	12.506	8.307	17.717
-4000	7.280	9.058	12.992	17.485	22.160	26.075	27.571	27.238	24.276	18.256	12.547	8.333	17.773
-4100	7.645	9.431	13.411	17.976	22.729	26.706	28.235	27.893	24.885	18.793	13.007	8.729	18.287
-4200	7.532	9.319	13.300	17.865	22.619	26.598	28.127	27.785	24.777	18.684	12.896	8.617	18.177
-4300	7.365	9.152	13.132	17.697	22.451	26.430	27.959	27.617	24.608	18.516	12.728	8.450	18.009
-4400	7.368	9.156	13.149	17.734	22.509	26.504	28.042	27.698	24.677	18.565	12.756	8.461	18.052
-4500	7.412	9.203	13.210	17.816	22.614	26.629	28.176	27.829	24.794	18.661	12.829	8.514	18.141
-4600	7.394	9.187	13.205	17.829	22.648	26.679	28.234	27.885	24.838	18.687	12.835	8.504	18.160
-4700	7.398	9.193	13.225	17.868	22.708	26.756	28.320	27.969	24.910	18.738	12.866	8.517	18.206
-4800	7.336	9.134	13.175	17.835	22.691	26.754	28.325	27.972	24.902	18.715	12.825	8.463	18.177
-4900	7.379	9.179	13.233	17.912	22.790	26.870	28.449	28.094	25.012	18.805	12.894	8.514	18.261
-5000	7.221	9.021	13.077	17.760	22.641	26.724	28.305	27.950	24.866	18.655	12.740	8.357	18.110
-5100	7.111	8.911	12.969	17.655	22.541	26.627	28.209	27.853	24.767	18.553	12.634	8.249	18.007
-5200	7.044	8.847	12.917	17.620	22.525	26.626	28.217	27.859	24.761	18.530	12.592	8.190	17.977
-5300	6.954	8.757	12.831	17.540	22.452	26.558	28.151	27.793	24.691	18.454	12.509	8.102	17.899
-5400	6.901	8.706	12.789	17.513	22.440	26.560	28.159	27.799	24.688	18.436	12.475	8.056	17.877
-5500	7.069	8.879	12.992	17.763	22.740	26.900	28.520	28.155	25.014	18.716	12.705	8.245	18.142

Mean Temperature (°C) [COLUMBUS, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-5600	7.248	9.064	13.210	18.031	23.064	27.270	28.913	28.541	25.368	19.018	12.952	8.446	18.427
-5700	7.283	9.102	13.267	18.119	23.184	27.416	29.072	28.697	25.504	19.125	13.026	8.494	18.524
-5800	7.332	9.155	13.340	18.222	23.322	27.581	29.251	28.873	25.660	19.249	13.117	8.557	18.638
-5900	7.148	8.971	13.152	18.030	23.124	27.379	29.046	28.668	25.459	19.053	12.926	8.371	18.444
-6000	7.143	8.968	13.164	18.064	23.182	27.457	29.134	28.754	25.530	19.102	12.951	8.376	18.486
-6100	7.157	8.985	13.193	18.111	23.249	27.540	29.225	28.843	25.607	19.161	12.990	8.399	18.538
-6200	7.153	8.982	13.202	18.139	23.298	27.606	29.300	28.915	25.667	19.202	13.010	8.403	18.573
-6300	6.894	8.721	12.933	17.856	23.000	27.296	28.984	28.601	25.362	18.910	12.733	8.137	18.286
-6400	7.141	8.977	13.231	18.221	23.438	27.793	29.511	29.120	25.837	19.319	13.069	8.415	18.673
-6500	7.039	8.875	13.134	18.132	23.356	27.718	29.439	29.047	25.760	19.235	12.977	8.316	18.586
-6600	6.850	8.686	12.941	17.932	23.149	27.504	29.222	28.831	25.548	19.030	12.779	8.124	18.383
-6700	6.813	8.650	12.915	17.921	23.154	27.523	29.248	28.855	25.563	19.029	12.762	8.093	18.377
-6800	6.784	8.623	12.896	17.916	23.165	27.545	29.276	28.882	25.581	19.033	12.751	8.070	18.377
-6900	6.760	8.601	12.884	17.918	23.183	27.577	29.314	28.918	25.607	19.045	12.747	8.053	18.384
-7000	6.726	8.569	12.862	17.912	23.194	27.602	29.346	28.948	25.627	19.049	12.734	8.026	18.383
-7100	6.687	8.531	12.833	17.898	23.196	27.617	29.368	28.968	25.638	19.045	12.714	7.993	18.374
-7200	6.661	8.506	12.814	17.887	23.194	27.622	29.376	28.976	25.640	19.039	12.699	7.971	18.365
-7300	6.571	8.417	12.728	17.807	23.121	27.554	29.311	28.910	25.571	18.964	12.617	7.884	18.288
-7400	6.468	8.314	12.628	17.710	23.027	27.463	29.222	28.820	25.478	18.868	12.518	7.782	18.191
-7500	6.455	8.304	12.629	17.730	23.067	27.520	29.287	28.883	25.530	18.901	12.531	7.778	18.218
-7600	6.390	8.240	12.573	17.685	23.035	27.498	29.270	28.865	25.504	18.864	12.481	7.718	18.177
-7700	6.444	8.297	12.649	17.790	23.171	27.659	29.444	29.035	25.656	18.987	12.573	7.785	18.291
-7800	6.511	8.367	12.738	17.909	23.323	27.838	29.636	29.224	25.825	19.126	12.680	7.865	18.420
-7900	6.529	8.388	12.773	17.967	23.404	27.938	29.746	29.332	25.919	19.198	12.727	7.893	18.485
-8000	6.361	8.218	12.598	17.783	23.212	27.739	29.543	29.130	25.722	19.009	12.548	7.720	18.299
-8100	6.284	8.143	12.527	17.718	23.153	27.686	29.493	29.079	25.667	18.948	12.480	7.647	18.235

Mean Temperature (°C) [COLUMBUS, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-8200	6.134	7.991	12.372	17.558	22.987	27.515	29.320	28.906	25.498	18.784	12.322	7.494	18.073
-8300	6.194	8.055	12.456	17.673	23.136	27.691	29.510	29.093	25.665	18.920	12.423	7.568	18.199
-8400	5.986	7.846	12.235	17.435	22.879	27.419	29.229	28.814	25.397	18.670	12.193	7.353	17.955
-8500	6.129	7.992	12.405	17.641	23.125	27.698	29.525	29.105	25.665	18.901	12.383	7.511	18.173
-8600	6.049	7.913	12.329	17.571	23.060	27.637	29.466	29.046	25.603	18.834	12.311	7.434	18.104
-8700	5.963	7.827	12.243	17.483	22.972	27.548	29.377	28.957	25.513	18.745	12.223	7.347	18.016
-8800	5.880	7.744	12.161	17.404	22.896	27.474	29.304	28.884	25.439	18.668	12.144	7.265	17.939
-8900	5.850	7.716	12.139	17.391	22.893	27.479	29.313	28.892	25.441	18.661	12.126	7.240	17.929
-9000	5.710	7.575	11.994	17.240	22.735	27.316	29.148	28.727	25.280	18.506	11.978	7.097	17.776
-9100	5.904	7.774	12.222	17.513	23.056	27.677	29.528	29.103	25.627	18.808	12.232	7.311	18.063
-9200	5.929	7.801	12.262	17.572	23.138	27.776	29.636	29.208	25.719	18.881	12.283	7.344	18.129
-9300	6.034	7.909	12.390	17.732	23.331	27.997	29.870	29.439	25.930	19.061	12.429	7.463	18.299
-9400	5.894	7.769	12.241	17.568	23.152	27.806	29.674	29.244	25.744	18.888	12.271	7.318	18.131
-9500	5.613	7.483	11.931	17.222	22.766	27.387	29.238	28.812	25.336	18.518	11.941	7.020	17.772
-9600	5.107	6.973	11.400	16.658	22.165	26.757	28.593	28.172	24.717	17.932	11.391	6.499	17.197
-9700	4.740	6.603	11.012	16.243	21.721	26.288	28.113	27.694	24.257	17.499	10.987	6.120	16.773
-9800	4.373	6.234	10.628	15.836	21.290	25.838	27.652	27.236	23.813	17.078	10.591	5.743	16.359
-9900	5.266	7.139	11.607	16.928	22.505	27.152	29.017	28.588	25.093	18.244	11.634	6.686	17.488
-10000	5.010	6.883	11.348	16.665	22.237	26.881	28.744	28.316	24.823	17.978	11.373	6.428	17.224
-10100	5.162	7.037	11.511	16.843	22.431	27.088	28.957	28.527	25.025	18.165	11.544	6.587	17.407
-10200	4.308	6.174	10.599	15.854	21.358	25.947	27.783	27.361	23.909	17.126	10.588	5.699	16.392
-10300	4.618	6.486	10.924	16.199	21.724	26.331	28.175	27.751	24.286	17.483	10.924	6.018	16.743
-10400	3.895	5.759	10.173	15.412	20.899	25.474	27.302	26.882	23.440	16.673	10.153	5.279	15.945
-10500	3.772	5.636	10.052	15.291	20.779	25.355	27.183	26.764	23.321	16.553	10.032	5.156	15.825
-10600	3.685	5.547	9.954	15.180	20.654	25.217	27.040	26.622	23.188	16.433	9.927	5.063	15.709
-10700	4.180	6.048	10.482	15.751	21.272	25.874	27.715	27.292	23.830	17.033	10.479	5.577	16.294

Mean Temperature (°C) [COLUMBUS, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-10800	3.775	5.644	10.083	15.360	20.888	25.497	27.342	26.918	23.451	16.646	10.084	5.176	15.905
-10900	3.160	5.024	9.435	14.669	20.151	24.722	26.548	26.129	22.690	15.928	9.412	4.542	15.201
-11000	2.814	4.674	9.070	14.280	19.736	24.285	26.100	25.684	22.260	15.523	9.034	4.184	14.804
-11100	3.624	5.492	9.929	15.203	20.728	25.334	27.178	26.754	23.289	16.488	9.929	5.023	15.748
-11200	3.860	5.735	10.210	15.542	21.132	25.790	27.660	27.229	23.726	16.866	10.243	5.285	16.106
-11300	4.049	5.925	10.407	15.751	21.352	26.020	27.894	27.463	23.953	17.081	10.447	5.479	16.319
-11400	4.337	6.214	10.702	16.054	21.665	26.340	28.218	27.785	24.270	17.390	10.746	5.771	16.624
-11500	4.562	6.441	10.937	16.302	21.926	26.613	28.497	28.063	24.539	17.646	10.988	6.002	16.876
-11600	4.027	5.901	10.371	15.697	21.279	25.930	27.797	27.367	23.869	17.016	10.401	5.449	16.259
-11700	4.514	6.391	10.880	16.233	21.845	26.522	28.401	27.968	24.452	17.570	10.925	5.949	16.804
-11800	4.040	5.913	10.381	15.703	21.280	25.928	27.793	27.364	23.868	17.019	10.408	5.460	16.263
-11900	3.892	5.763	10.217	15.517	21.070	25.699	27.554	27.128	23.646	16.818	10.231	5.303	16.070
-12000	4.312	6.183	10.640	15.943	21.501	26.134	27.991	27.563	24.079	17.248	10.656	5.724	16.498
-12100	4.282	6.152	10.600	15.891	21.435	26.056	27.907	27.481	24.005	17.187	10.610	5.689	16.441
-12200	3.359	5.222	9.630	14.859	20.336	24.902	26.726	26.308	22.871	16.114	9.604	4.738	15.389
-12300	1.547	3.398	7.742	12.871	18.239	22.717	24.496	24.089	20.718	14.061	7.660	2.882	13.368
-12400	1.535	3.386	7.726	12.849	18.211	22.683	24.460	24.054	20.686	14.035	7.640	2.868	13.344
-12500	2.121	3.974	8.327	13.471	18.854	23.344	25.130	24.721	21.340	14.669	8.253	3.462	13.972
-12600	1.763	3.612	7.946	13.059	18.409	22.872	24.645	24.239	20.878	14.237	7.854	3.091	13.550
-12700	1.241	3.088	7.409	12.502	17.830	22.276	24.040	23.637	20.288	13.667	7.306	2.560	12.987
-12800	2.461	4.317	8.689	13.862	19.277	23.794	25.592	25.180	21.781	15.080	8.632	3.815	14.373
-12900	0.997	2.847	7.187	12.310	17.671	22.143	23.920	23.513	20.146	13.495	7.101	2.329	12.805
-13000	1.478	3.329	7.667	12.787	18.145	22.615	24.391	23.985	20.619	13.971	7.579	2.809	13.281
-13100	0.872	2.718	7.029	12.108	17.422	21.855	23.612	23.211	19.872	13.265	6.918	2.185	12.589
-13200	1.272	3.119	7.435	12.522	17.843	22.283	24.044	23.642	20.297	13.683	7.328	2.588	13.005
-13300	-0.123	1.716	5.993	11.017	16.271	20.656	22.389	21.994	18.690	12.138	5.850	1.165	11.480

Mean Temperature (°C) [COLUMBUS, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-13400	-0.474	1.363	5.627	10.631	15.864	20.232	21.956	21.563	18.272	11.739	5.473	0.805	11.087
-13500	-0.552	1.285	5.543	10.540	15.763	20.124	21.844	21.452	18.166	11.642	5.385	0.724	10.993
-13600	0.329	2.168	6.441	11.460	16.708	21.088	22.819	22.424	19.123	12.577	6.295	1.615	11.920
-13700	-0.123	1.714	5.978	10.982	16.214	20.581	22.305	21.913	18.621	12.089	5.824	1.157	11.438
-13800	0.937	2.777	7.059	12.092	17.355	21.747	23.484	23.088	19.778	13.218	6.921	2.229	12.557
-13900	0.333	2.169	6.428	11.425	16.650	21.011	22.732	22.340	19.053	12.528	6.270	1.609	11.879
-14000	0.843	2.680	6.943	11.948	17.180	21.548	23.272	22.879	19.588	13.055	6.790	2.122	12.404

Appendix A, Section 4: Experiment, Georgia, MCM Outputs

Precipitation in mm [EXPERIMENT, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-3000	123.929	119.861	142.283	113.602	110.060	99.513	111.473	106.624	77.169	73.207	88.061	117.386	1283.169
-3100	123.573	119.599	142.014	113.907	110.691	100.579	113.937	107.702	77.671	74.338	88.722	117.830	1290.563
-3200	123.915	119.757	142.132	113.430	109.642	98.520	107.574	105.487	76.707	71.949	87.573	117.125	1273.812
-3300	123.631	119.558	141.930	113.591	110.026	99.114	108.763	106.121	76.985	72.547	87.967	117.400	1277.634
-3400	123.258	119.311	141.718	113.928	110.684	100.271	111.779	107.372	77.529	73.809	88.666	117.855	1286.177
-3500	123.081	118.435	140.984	115.492	113.138	104.908	123.676	111.722	79.754	78.996	91.339	119.536	1321.063
-3600	122.928	118.507	140.991	115.161	112.589	103.682	120.082	110.740	79.157	77.520	90.710	119.172	1311.240
-3700	123.174	118.008	140.623	115.788	113.605	105.615	124.673	112.434	80.100	79.665	91.826	119.874	1325.386
-3800	123.368	117.765	140.468	115.923	113.845	106.010	125.352	112.811	80.295	80.063	92.081	120.046	1328.026
-3900	124.136	116.578	139.827	116.680	115.730	109.899	134.044	115.639	82.266	84.497	94.228	121.381	1354.905
-4000	124.083	116.628	139.814	116.552	115.365	108.985	131.786	115.180	81.790	83.366	93.787	121.126	1348.461
-4100	122.601	118.176	140.463	114.632	111.622	101.145	109.825	108.075	77.949	74.216	89.539	118.575	1286.818
-4200	122.869	117.756	140.168	115.185	112.475	102.699	114.006	109.821	78.688	75.925	90.464	119.156	1299.210
-4300	123.335	117.084	139.744	115.876	113.731	105.083	120.300	112.289	79.838	78.576	91.850	120.018	1317.723
-4400	123.236	117.062	139.675	115.731	113.427	104.331	117.521	111.542	79.472	77.624	91.487	119.821	1310.930
-4500	123.117	117.168	139.706	115.395	112.776	102.908	112.649	109.946	78.790	75.913	90.737	119.389	1298.494
-4600	123.084	117.061	139.582	115.329	112.638	102.494	110.570	109.383	78.593	75.341	90.560	119.308	1293.942
-4700	123.008	117.029	139.518	115.152	112.305	101.710	107.275	108.292	78.220	74.349	90.167	119.095	1286.121
-4800	123.031	116.772	139.299	115.291	112.533	101.997	107.238	108.537	78.357	74.568	90.394	119.260	1287.277
-4900	123.068	116.826	139.334	114.945	111.904	100.680	102.206	106.589	77.732	72.979	89.677	118.849	1274.789
-5000	123.515	116.052	138.948	115.558	113.057	102.783	108.267	109.368	78.732	75.298	90.941	119.630	1292.149
-5100	123.766	115.300	138.690	115.863	113.818	104.206	112.239	111.126	79.414	76.867	91.785	120.151	1303.226
-5200	123.692	114.943	138.459	115.920	114.041	104.489	112.124	111.376	79.550	77.075	92.012	120.314	1303.997
-5300	123.696	114.238	138.227	116.067	114.600	105.539	114.868	112.620	80.058	78.218	92.639	120.704	1311.473
-5400	123.613	113.865	138.047	116.084	114.766	105.748	114.715	112.807	80.159	78.364	92.810	120.828	1311.806

Precipitation in mm [EXPERIMENT, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-5500	123.459	114.994	138.305	115.460	112.875	101.725	99.784	106.913	78.224	73.543	90.616	119.559	1275.457
-5600	122.713	116.005	138.473	114.359	110.703	97.460	82.747	98.663	76.167	68.386	88.154	118.146	1231.976
-5700	122.385	116.128	138.406	113.924	109.948	95.979	75.881	94.909	75.426	66.481	87.287	117.667	1214.421
-5800	122.022	116.272	138.347	113.391	109.040	94.300	68.292	90.274	74.556	64.309	86.258	117.090	1194.150
-5900	122.578	115.502	138.056	114.360	110.614	96.924	77.008	95.975	75.872	67.347	87.969	118.125	1220.330
-6000	122.345	115.499	137.952	114.195	110.299	96.250	73.213	93.831	75.520	66.397	87.590	117.933	1211.024
-6100	122.403	115.437	137.952	113.967	109.890	95.461	69.345	91.453	75.105	65.338	87.116	117.677	1201.144
-6200	122.422	115.330	137.895	113.823	109.622	94.916	66.235	89.484	74.803	64.544	86.795	117.514	1193.385
-6300	122.894	113.886	137.375	115.007	111.888	98.810	79.727	98.306	76.769	69.133	89.296	118.991	1232.082
-6400	121.846	115.328	137.606	113.409	108.853	93.425	57.722	83.545	73.928	62.306	85.872	117.047	1170.887
-6500	122.127	114.843	137.394	113.860	109.575	94.516	60.542	85.887	74.499	63.522	86.642	117.524	1180.931
-6600	122.542	113.764	137.025	114.698	111.186	97.179	69.433	92.432	75.895	66.696	88.416	118.569	1207.834
-6700	122.525	113.484	136.894	114.720	111.244	97.189	68.331	91.839	75.882	66.575	88.456	118.615	1205.752
-6800	122.531	113.187	136.795	114.721	111.256	97.133	67.127	91.139	75.835	66.387	88.448	118.631	1203.192
-6900	122.522	112.905	136.703	114.699	111.214	96.980	65.531	90.141	75.736	66.074	88.377	118.611	1199.493
-7000	122.476	112.612	136.577	114.700	111.234	96.930	64.201	89.325	75.687	65.871	88.375	118.633	1196.619
-7100	122.399	112.359	136.430	114.721	111.314	96.987	63.277	88.788	75.693	65.800	88.440	118.692	1194.902
-7200	122.377	112.079	136.349	114.742	111.389	97.069	62.932	88.614	75.724	65.821	88.510	118.745	1194.350
-7300	122.258	111.479	136.101	114.919	111.988	98.044	65.580	90.712	76.227	66.919	89.169	119.138	1202.534
-7400	122.089	110.966	135.817	115.086	112.717	99.284	69.352	93.526	76.865	68.354	89.984	119.616	1213.657
-7500	122.020	110.917	135.724	115.018	112.532	98.860	66.559	91.709	76.621	67.684	89.747	119.503	1206.894
-7600	121.863	110.782	135.499	115.061	112.847	99.346	67.262	92.373	76.859	68.156	90.086	119.715	1209.849
-7700	121.897	110.863	135.567	114.845	112.014	97.780	60.094	87.109	75.983	66.010	89.101	119.183	1190.446
-7800	121.879	111.399	135.637	114.551	111.043	96.081	52.686	80.992	74.974	63.634	87.968	118.570	1169.414
-7900	121.817	111.560	135.613	114.374	110.558	95.255	48.668	77.387	74.429	62.361	87.391	118.270	1157.683
-8000	121.616	110.694	135.192	114.775	111.988	97.547	56.121	84.202	75.764	65.280	89.003	119.186	1181.367

Precipitation in mm [EXPERIMENT, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-8100	121.489	110.249	134.977	114.856	112.469	98.319	58.055	85.937	76.176	66.157	89.538	119.501	1187.723
-8200	121.214	109.843	134.579	115.037	113.652	100.386	65.045	91.568	77.299	68.712	90.898	120.277	1208.510
-8300	121.232	110.141	134.638	114.856	112.762	98.704	57.355	85.599	76.333	66.362	89.831	119.703	1187.515
-8400	120.889	109.497	134.140	115.098	114.499	101.855	68.828	94.608	78.052	70.352	91.865	120.847	1220.529
-8500	121.098	109.673	134.422	114.846	112.962	98.965	56.747	85.263	76.435	66.481	90.031	119.841	1186.766
-8600	120.925	109.502	134.186	114.898	113.467	99.807	59.008	87.271	76.889	67.462	90.604	120.175	1194.194
-8700	120.762	109.368	133.962	114.967	114.093	100.914	62.606	90.257	77.492	68.824	91.332	120.590	1205.168
-8800	120.583	109.274	133.730	115.011	114.635	101.888	65.584	92.661	78.009	69.984	91.966	120.951	1214.278
-8900	120.504	109.285	133.625	114.996	114.711	101.984	65.182	92.455	78.045	70.011	92.043	121.004	1213.844
-9000	120.215	109.384	133.272	115.089	115.725	103.963	72.286	97.728	79.093	72.465	93.273	121.670	1234.163
-9100	120.536	109.072	133.654	114.825	113.797	100.181	56.486	85.577	76.989	67.403	90.914	120.411	1189.845
-9200	120.539	109.026	133.660	114.735	113.338	99.330	52.416	82.010	76.454	66.119	90.351	120.115	1178.093
-9300	120.682	109.153	133.855	114.520	112.112	97.283	44.220	73.918	75.117	63.119	88.894	119.329	1152.201
-9400	120.443	108.956	133.521	114.697	113.338	99.276	51.003	80.800	76.373	65.851	90.325	120.120	1174.704
-9500	119.918	109.653	132.886	114.982	115.770	103.820	68.284	95.325	78.963	71.878	93.271	121.703	1226.454
-9600	118.814	108.871	131.730	115.131	118.748	111.444	97.998	113.954	82.901	81.355	97.641	123.316	1301.904
-9700	117.972	109.240	131.009	115.035	119.154	117.159	121.143	124.586	85.865	88.444	100.575	124.242	1354.424
-9800	117.069	109.465	130.379	114.765	117.993	122.616	141.874	132.084	88.873	95.295	103.188	125.488	1399.089
-9900	119.074	108.008	131.906	114.972	117.465	107.324	77.972	102.729	80.759	75.870	95.454	122.668	1254.200
-10000	118.480	107.611	131.309	114.962	118.649	110.758	90.729	110.793	82.526	80.070	97.411	123.214	1286.513
-10100	118.815	107.796	131.622	114.945	117.882	108.324	80.686	104.708	81.266	76.995	96.062	122.857	1261.958
-10200	116.815	108.293	130.099	114.628	117.986	121.886	136.680	131.182	88.436	94.094	102.969	125.377	1388.447
-10300	117.601	108.866	130.615	114.868	119.034	117.260	118.397	124.215	85.906	88.270	100.747	124.319	1350.099
-10400	115.475	108.550	129.515	114.141	119.544	127.526	156.519	137.389	91.789	101.333	105.534	125.977	1433.292
-10500	114.967	108.381	129.352	113.962	120.772	128.959	160.883	138.671	92.699	103.187	106.174	126.004	1444.011
-10600	114.620	109.061	129.300	113.839	122.018	130.402	165.484	139.646	93.662	105.163	106.773	126.042	1456.012

Precipitation in mm [EXPERIMENT, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-10700	116.414	108.533	129.831	114.468	117.851	123.020	139.856	132.617	89.073	95.418	103.546	125.576	1396.203
-10800	114.890	107.076	129.207	113.932	119.957	127.749	155.654	137.939	91.895	101.392	105.732	125.915	1431.339
-10900	112.936	107.698	128.809	112.925	125.931	136.028	179.330	143.207	97.697	112.790	109.206	126.033	1492.588
-11000	112.760	108.199	128.789	112.243	126.980	140.146	186.501	144.224	101.227	119.001	110.965	126.018	1517.052
-11100	114.244	107.058	129.038	113.706	121.651	129.643	161.785	139.653	93.107	103.883	106.559	125.942	1446.269
-11200	114.961	106.875	129.066	113.993	118.335	124.939	143.071	135.031	90.152	97.444	104.605	125.725	1404.199
-11300	115.674	106.973	129.308	114.219	117.766	122.230	132.293	131.291	88.591	93.955	103.370	125.456	1381.125
-11400	116.643	106.953	129.780	114.504	118.561	118.299	116.583	124.842	86.436	89.011	101.477	124.676	1347.766
-11500	117.191	107.210	130.172	114.656	119.137	114.984	102.770	118.305	84.685	84.846	99.814	123.901	1317.671
-11600	115.639	106.855	129.369	114.215	117.811	123.096	136.718	132.610	89.089	95.158	103.731	125.573	1389.862
-11700	117.056	107.179	130.129	114.645	119.055	115.984	107.543	120.552	85.211	86.156	100.304	124.114	1327.930
-11800	115.622	106.947	129.409	114.235	117.810	123.068	136.867	132.584	89.075	95.148	103.707	125.571	1390.044
-11900	115.171	106.781	129.276	114.072	118.562	125.603	147.282	135.780	90.566	98.495	104.824	125.805	1412.217
-12000	116.706	106.878	129.933	114.558	118.203	120.223	127.429	128.585	87.493	91.715	102.298	125.071	1369.090
-12100	116.658	106.955	129.927	114.548	118.051	121.026	131.291	129.863	87.940	92.795	102.653	125.231	1376.937
-12200	113.327	107.052	128.972	113.291	124.906	133.982	174.751	142.373	95.991	110.069	108.312	126.054	1479.082
-12300	111.221	108.839	129.538	108.146	127.083	144.407	185.469	144.049	115.143	139.491	114.807	124.845	1553.040
-12400	111.218	108.916	129.579	108.103	127.064	144.590	184.984	143.940	115.430	139.857	114.872	124.825	1553.379
-12500	112.107	107.592	129.298	110.452	127.433	144.799	188.714	143.834	109.289	131.530	113.216	125.601	1543.865
-12600	111.592	108.397	129.654	109.004	127.251	143.909	185.626	143.480	113.558	137.402	114.261	125.162	1549.295
-12700	110.885	110.303	129.722	107.419	126.666	149.337	180.752	143.793	119.158	144.485	115.455	124.315	1562.290
-12800	112.437	107.375	128.981	111.447	127.379	143.683	189.399	144.154	105.338	125.654	112.484	125.884	1534.214
-12900	110.150	111.989	129.668	107.282	126.377	151.833	181.035	144.687	120.608	146.252	115.548	123.884	1569.315
-13000	110.991	109.294	129.549	107.917	127.002	145.135	184.407	143.948	116.064	140.667	115.028	124.734	1554.735
-13100	110.417	112.204	130.306	107.268	126.063	154.652	176.896	144.322	123.113	149.107	115.553	123.597	1573.496
-13200	110.854	110.245	129.744	107.458	126.696	149.118	180.518	143.634	119.052	144.351	115.439	124.367	1561.476

Precipitation in mm [EXPERIMENT, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-13300	110.070	117.221	136.000	105.997	123.804	159.227	166.742	147.194	133.902	158.948	115.347	121.274	1595.726
-13400	110.203	119.311	138.066	105.455	122.874	159.711	164.138	148.736	137.463	160.318	115.041	120.368	1601.685
-13500	110.255	119.889	138.570	105.350	122.649	159.779	163.485	149.119	138.323	160.800	114.945	120.157	1603.321
-13600	110.145	115.283	133.432	106.752	124.810	158.271	169.089	145.450	129.987	156.186	115.509	122.340	1587.253
-13700	109.967	117.947	136.113	106.004	123.725	159.287	165.731	147.198	134.461	159.196	115.311	121.240	1596.180
-13800	110.364	112.857	130.364	107.292	126.049	155.136	174.178	143.644	123.884	149.923	115.534	123.681	1572.904
-13900	110.065	115.864	133.489	106.761	124.741	158.391	167.871	145.367	130.580	156.685	115.490	122.316	1587.622
-14000	110.360	113.502	130.790	107.276	125.799	156.319	171.631	143.663	125.623	151.798	115.526	123.455	1575.741

Mean Temperature (°C) [EXPERIMENT, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-3000	4.842	6.810	11.544	16.233	20.551	24.551	26.134	25.722	22.655	16.576	11.814	6.925	16.196
-3100	4.751	6.719	11.457	16.152	20.475	24.480	26.066	25.653	22.583	16.498	11.731	6.836	16.117
-3200	4.834	6.805	11.559	16.279	20.629	24.657	26.253	25.837	22.750	16.641	11.846	6.930	16.252
-3300	4.769	6.741	11.500	16.229	20.589	24.623	26.223	25.807	22.714	16.596	11.792	6.869	16.204
-3400	4.684	6.657	11.416	16.145	20.505	24.540	26.141	25.724	22.631	16.513	11.709	6.785	16.121
-3500	4.388	6.358	11.108	15.823	20.167	24.189	25.783	25.368	22.285	16.181	11.393	6.482	15.794
-3600	4.420	6.393	11.157	15.893	20.261	24.302	25.905	25.488	22.390	16.265	11.453	6.523	15.871
-3700	4.281	6.254	11.017	15.753	20.120	24.161	25.765	25.347	22.250	16.125	11.313	6.384	15.731
-3800	4.231	6.205	10.974	15.718	20.093	24.141	25.748	25.329	22.227	16.094	11.274	6.338	15.698
-3900	3.977	5.950	10.711	15.443	19.806	23.844	25.445	25.028	21.934	15.813	11.005	6.079	15.420
-4000	3.996	5.971	10.744	15.494	19.877	23.931	25.540	25.121	22.015	15.875	11.048	6.106	15.477
-4100	4.373	6.357	11.178	16.002	20.465	24.583	26.225	25.797	22.643	16.430	11.522	6.515	16.007
-4200	4.257	6.240	11.062	15.888	20.352	24.472	26.114	25.686	22.531	16.316	11.408	6.399	15.894
-4300	4.084	6.068	10.889	15.715	20.179	24.298	25.940	25.512	22.357	16.143	11.234	6.226	15.720
-4400	4.087	6.073	10.907	15.753	20.238	24.375	26.026	25.595	22.427	16.193	11.263	6.238	15.765
-4500	4.132	6.121	10.970	15.837	20.347	24.503	26.164	25.731	22.549	16.292	11.338	6.293	15.857
-4600	4.113	6.105	10.966	15.852	20.382	24.555	26.224	25.788	22.594	16.319	11.344	6.282	15.877
-4700	4.118	6.112	10.986	15.892	20.444	24.635	26.313	25.875	22.667	16.372	11.375	6.296	15.924
-4800	4.055	6.050	10.935	15.858	20.428	24.633	26.318	25.878	22.660	16.348	11.333	6.240	15.894
-4900	4.099	6.097	10.995	15.938	20.530	24.752	26.446	26.004	22.773	16.441	11.404	6.293	15.981
-5000	3.935	5.934	10.834	15.780	20.376	24.602	26.297	25.855	22.621	16.286	11.245	6.131	15.825
-5100	3.821	5.820	10.723	15.673	20.272	24.502	26.199	25.755	22.519	16.180	11.136	6.018	15.718
-5200	3.753	5.754	10.668	15.637	20.256	24.501	26.206	25.761	22.513	16.156	11.092	5.958	15.688
-5300	3.660	5.662	10.580	15.554	20.180	24.431	26.138	25.692	22.441	16.077	11.007	5.867	15.607
-5400	3.605	5.609	10.537	15.526	20.169	24.432	26.146	25.698	22.437	16.059	10.972	5.819	15.584
-5500	3.779	5.789	10.748	15.785	20.479	24.784	26.519	26.065	22.773	16.347	11.209	6.014	15.858

Mean Temperature (°C) [EXPERIMENT, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-5600	3.964	5.980	10.973	16.063	20.814	25.166	26.925	26.464	23.138	16.659	11.463	6.222	16.153
-5700	4.000	6.020	11.032	16.153	20.938	25.317	27.089	26.625	23.278	16.769	11.540	6.272	16.253
-5800	4.051	6.074	11.108	16.261	21.080	25.488	27.274	26.806	23.439	16.897	11.633	6.336	16.370
-5900	3.861	5.884	10.914	16.062	20.876	25.278	27.062	26.595	23.231	16.694	11.436	6.145	16.170
-6000	3.856	5.882	10.927	16.098	20.936	25.359	27.153	26.683	23.304	16.745	11.461	6.150	16.213
-6100	3.871	5.899	10.956	16.146	21.005	25.445	27.247	26.775	23.384	16.805	11.501	6.173	16.267
-6200	3.866	5.896	10.967	16.176	21.056	25.513	27.324	26.849	23.446	16.847	11.522	6.177	16.303
-6300	3.598	5.627	10.688	15.883	20.749	25.194	26.998	26.525	23.130	16.546	11.236	5.903	16.006
-6400	3.854	5.891	10.997	16.261	21.202	25.707	27.541	27.060	23.621	16.968	11.583	6.189	16.406
-6500	3.749	5.787	10.897	16.169	21.117	25.629	27.467	26.984	23.541	16.880	11.487	6.087	16.316
-6600	3.554	5.591	10.697	15.962	20.903	25.408	27.243	26.762	23.322	16.669	11.283	5.889	16.107
-6700	3.515	5.554	10.670	15.951	20.909	25.428	27.270	26.786	23.337	16.667	11.265	5.857	16.101
-6800	3.485	5.526	10.651	15.946	20.919	25.451	27.299	26.814	23.355	16.672	11.254	5.833	16.101
-6900	3.461	5.503	10.639	15.949	20.938	25.484	27.338	26.851	23.383	16.684	11.250	5.815	16.108
-7000	3.426	5.470	10.616	15.942	20.950	25.509	27.371	26.882	23.403	16.688	11.236	5.788	16.107
-7100	3.385	5.431	10.587	15.929	20.952	25.525	27.394	26.903	23.414	16.684	11.215	5.753	16.098
-7200	3.359	5.406	10.567	15.917	20.950	25.530	27.402	26.910	23.416	16.677	11.200	5.730	16.089
-7300	3.266	5.314	10.479	15.835	20.875	25.461	27.335	26.843	23.344	16.599	11.115	5.640	16.009
-7400	3.159	5.208	10.375	15.734	20.778	25.366	27.242	26.750	23.249	16.501	11.013	5.535	15.909
-7500	3.146	5.197	10.377	15.756	20.820	25.425	27.310	26.815	23.302	16.534	11.026	5.531	15.937
-7600	3.079	5.131	10.319	15.709	20.786	25.402	27.292	26.796	23.275	16.495	10.974	5.469	15.894
-7700	3.135	5.191	10.397	15.818	20.927	25.569	27.472	26.971	23.432	16.623	11.069	5.538	16.012
-7800	3.204	5.264	10.490	15.941	21.084	25.753	27.670	27.166	23.606	16.766	11.179	5.620	16.145
-7900	3.223	5.285	10.527	16.001	21.168	25.857	27.784	27.277	23.702	16.839	11.228	5.649	16.212
-8000	3.049	5.110	10.346	15.811	20.970	25.652	27.574	27.069	23.499	16.645	11.042	5.471	16.020
-8100	2.970	5.032	10.272	15.744	20.909	25.597	27.522	27.016	23.442	16.582	10.972	5.395	15.955

Mean Temperature (°C) [EXPERIMENT, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-8200	2.814	4.876	10.112	15.579	20.738	25.421	27.344	26.838	23.268	16.413	10.809	5.237	15.787
-8300	2.877	4.942	10.199	15.698	20.892	25.603	27.540	27.030	23.439	16.552	10.913	5.314	15.916
-8400	2.662	4.725	9.971	15.451	20.626	25.321	27.250	26.743	23.164	16.294	10.675	5.091	15.665
-8500	2.809	4.877	10.147	15.665	20.881	25.609	27.555	27.043	23.439	16.532	10.872	5.255	15.890
-8600	2.727	4.796	10.069	15.592	20.814	25.547	27.494	26.982	23.375	16.463	10.797	5.175	15.819
-8700	2.638	4.706	9.979	15.502	20.722	25.454	27.402	26.889	23.283	16.372	10.707	5.086	15.728
-8800	2.552	4.621	9.896	15.421	20.644	25.379	27.327	26.814	23.206	16.292	10.625	5.001	15.648
-8900	2.522	4.592	9.872	15.407	20.641	25.384	27.337	26.823	23.208	16.285	10.607	4.975	15.638
-9000	2.377	4.446	9.723	15.251	20.478	25.215	27.165	26.652	23.042	16.125	10.454	4.828	15.480
-9100	2.578	4.652	9.959	15.533	20.810	25.588	27.558	27.040	23.400	16.436	10.715	5.048	15.776
-9200	2.604	4.680	10.000	15.595	20.894	25.690	27.669	27.148	23.495	16.511	10.767	5.083	15.845
-9300	2.712	4.792	10.133	15.760	21.094	25.918	27.911	27.386	23.712	16.696	10.918	5.205	16.020
-9400	2.568	4.647	9.978	15.591	20.910	25.721	27.708	27.185	23.520	16.518	10.755	5.055	15.846
-9500	2.277	4.352	9.659	15.233	20.510	25.288	27.259	26.740	23.100	16.136	10.415	4.748	15.476
-9600	1.754	3.825	9.109	14.650	19.890	24.638	26.593	26.078	22.461	15.531	9.847	4.210	14.882
-9700	1.375	3.442	8.709	14.221	19.430	24.154	26.097	25.585	21.986	15.084	9.431	3.818	14.444
-9800	0.997	3.061	8.312	13.801	18.986	23.688	25.621	25.113	21.528	14.650	9.021	3.430	14.017
-9900	1.919	3.997	9.324	14.930	20.241	25.046	27.030	26.508	22.847	15.852	10.097	4.403	15.183
-10000	1.655	3.732	9.057	14.658	19.965	24.767	26.749	26.227	22.569	15.578	9.828	4.137	14.910
-10100	1.812	3.892	9.225	14.842	20.165	24.980	26.969	26.445	22.777	15.772	10.005	4.301	15.099
-10200	0.930	3.000	8.282	13.820	19.057	23.802	25.756	25.242	21.626	14.699	9.018	3.384	14.051
-10300	1.250	3.322	8.618	14.176	19.435	24.198	26.161	25.644	22.015	15.068	9.365	3.713	14.414
-10400	0.503	2.571	7.843	13.363	18.582	23.313	25.259	24.747	21.142	14.232	8.569	2.950	13.589
-10500	0.376	2.444	7.717	13.239	18.458	23.190	25.137	24.625	21.019	14.108	8.444	2.824	13.465
-10600	0.286	2.352	7.616	13.124	18.329	23.048	24.989	24.478	20.882	13.985	8.336	2.727	13.346
-10700	0.797	2.869	8.162	13.714	18.967	23.726	25.687	25.170	21.545	14.603	8.906	3.258	13.950

Mean Temperature (°C) [EXPERIMENT, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-10800	0.380	2.452	7.750	13.310	18.571	23.337	25.301	24.784	21.153	14.204	8.498	2.844	13.549
-10900	-0.256	1.812	7.080	12.596	17.810	22.536	24.481	23.969	20.367	13.462	7.804	2.189	12.821
-11000	-0.614	1.451	6.703	12.194	17.381	22.085	24.019	23.510	19.924	13.044	7.414	1.820	12.411
-11100	0.224	2.296	7.591	13.148	18.406	23.169	25.131	24.615	20.986	14.040	8.338	2.686	13.386
-11200	0.467	2.547	7.881	13.499	18.823	23.639	25.629	25.104	21.436	14.430	8.661	2.956	13.756
-11300	0.663	2.744	8.086	13.715	19.051	23.877	25.871	25.346	21.670	14.652	8.872	3.157	13.975
-11400	0.960	3.042	8.390	14.028	19.374	24.207	26.205	25.679	21.998	14.971	9.181	3.458	14.291
-11500	1.192	3.276	8.632	14.284	19.644	24.489	26.493	25.965	22.276	15.235	9.431	3.696	14.551
-11600	0.640	2.718	8.048	13.659	18.975	23.785	25.771	25.247	21.584	14.585	8.824	3.126	13.913
-11700	1.143	3.225	8.573	14.213	19.560	24.395	26.394	25.867	22.185	15.157	9.365	3.641	14.476
-11800	0.653	2.731	8.058	13.665	18.976	23.782	25.766	25.244	21.583	14.588	8.832	3.137	13.918
-11900	0.500	2.576	7.888	13.472	18.759	23.546	25.520	25.000	21.354	14.381	8.650	2.974	13.718
-12000	0.933	3.009	8.325	13.913	19.204	23.994	25.970	25.450	21.801	14.824	9.088	3.410	14.160
-12100	0.903	2.977	8.284	13.859	19.136	23.914	25.884	25.365	21.725	14.762	9.040	3.373	14.102
-12200	-0.051	2.016	7.281	12.793	18.001	22.723	24.665	24.154	20.555	13.655	8.003	2.392	13.015
-12300	-1.922	0.132	5.331	10.739	15.835	20.466	22.363	21.864	18.332	11.536	5.995	0.475	10.929
-12400	-1.934	0.120	5.314	10.716	15.805	20.431	22.325	21.827	18.300	11.509	5.975	0.461	10.904
-12500	-1.329	0.727	5.935	11.357	16.469	21.113	23.017	22.517	18.975	12.164	6.608	1.075	11.552
-12600	-1.699	0.353	5.541	10.932	16.010	20.626	22.516	22.020	18.498	11.719	6.196	0.691	11.117
-12700	-2.238	-0.188	4.986	10.357	15.412	20.011	21.892	21.397	17.890	11.130	5.630	0.143	10.535
-12800	-0.978	1.082	6.310	11.762	16.907	21.578	23.495	22.990	19.429	12.588	6.999	1.439	11.967
-12900	-2.490	-0.437	4.758	10.159	15.248	19.873	21.768	21.270	17.742	10.952	5.419	-0.096	10.347
-13000	-1.993	0.060	5.253	10.652	15.737	20.361	22.254	21.756	18.230	11.443	5.912	0.400	10.839
-13100	-2.619	-0.571	4.594	9.950	14.990	19.576	21.450	20.958	17.459	10.715	5.230	-0.244	10.124
-13200	-2.206	-0.157	5.013	10.377	15.425	20.018	21.896	21.402	17.899	11.146	5.654	0.172	10.553
-13300	-3.647	-1.606	3.523	8.823	13.802	18.338	20.188	19.702	16.240	9.552	4.128	-1.297	8.979

Mean Temperature (°C) [EXPERIMENT, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-13400	-4.009	-1.971	3.145	8.424	13.381	17.899	19.740	19.257	15.808	9.140	3.739	-1.668	8.574
-13500	-4.089	-2.051	3.059	8.329	13.277	17.788	19.625	19.143	15.700	9.040	3.648	-1.752	8.476
-13600	-3.180	-1.139	3.986	9.280	14.252	18.784	20.631	20.146	16.688	10.005	4.588	-0.832	9.434
-13700	-3.646	-1.608	3.507	8.786	13.742	18.260	20.101	19.618	16.170	9.502	4.101	-1.306	8.936
-13800	-2.552	-0.510	4.624	9.932	14.920	19.464	21.318	20.831	17.364	10.667	5.234	-0.198	10.091
-13900	-3.176	-1.138	3.972	9.244	14.192	18.704	20.542	20.059	16.616	9.955	4.562	-0.838	9.391
-14000	-2.650	-0.611	4.504	9.784	14.740	19.258	21.099	20.616	17.167	10.499	5.098	-0.309	9.933

Appendix A, Section 5: Sapelo Island, Georgia, MCM Outputs

Precipitation in mm [SAPELO ISLAND, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-3000	92.475	94.663	101.062	75.490	80.052	130.088	141.756	185.204	166.641	80.322	69.188	86.319	1303.261
-3100	94.586	95.021	101.147	74.797	79.792	129.582	143.094	185.749	166.514	80.480	69.235	86.358	1306.356
-3200	91.563	94.376	101.239	75.481	80.309	131.162	138.905	184.124	166.852	80.089	69.185	86.247	1299.531
-3300	93.200	94.573	101.241	75.210	80.161	130.960	139.430	184.378	166.803	80.162	69.217	86.268	1301.602
-3400	95.700	95.151	101.132	74.375	79.873	130.302	141.169	185.105	166.656	80.347	69.261	86.313	1305.385
-3500	94.254	97.920	101.082	69.096	78.806	127.559	148.528	187.749	165.923	81.159	69.434	86.325	1307.836
-3600	95.426	97.073	101.108	69.991	79.076	128.532	145.915	186.936	166.193	80.897	69.407	86.328	1306.881
-3700	91.441	99.092	101.067	67.882	78.661	127.510	148.684	187.875	165.885	81.232	69.490	86.217	1305.036
-3800	88.865	100.199	101.015	67.402	78.582	127.423	148.930	187.983	165.848	81.283	69.516	86.153	1303.199
-3900	79.264	107.513	101.035	66.153	77.902	125.324	154.624	189.580	165.106	82.021	69.681	85.453	1303.656
-4000	79.522	106.661	101.025	66.129	78.045	126.022	152.768	189.155	165.353	81.807	69.660	85.591	1301.738
-4100	95.247	96.061	101.985	70.773	79.682	131.373	138.252	184.202	166.810	80.253	69.404	86.205	1300.247
-4200	91.349	97.717	101.797	68.794	79.315	130.496	140.606	185.211	166.615	80.510	69.469	86.171	1298.051
-4300	85.074	100.844	101.443	66.710	78.790	129.160	144.246	186.644	166.278	80.922	69.571	85.982	1295.663
-4400	85.435	100.356	101.501	66.885	78.954	129.891	142.247	185.944	166.450	80.741	69.562	86.001	1293.968
-4500	86.456	99.400	101.620	67.615	79.277	131.065	139.048	184.700	166.707	80.441	69.526	86.059	1291.914
-4600	86.006	99.366	101.695	67.608	79.377	131.621	137.533	184.101	166.809	80.323	69.530	86.037	1290.007
-4700	86.170	99.018	101.737	67.937	79.568	132.435	135.335	183.161	166.953	80.139	69.520	86.032	1288.004
-4800	84.743	99.648	101.665	67.316	79.505	132.544	135.024	183.071	166.960	80.145	69.551	85.975	1286.147
-4900	84.446	99.285	101.776	68.187	79.831	133.712	131.915	181.606	167.145	79.872	69.519	85.993	1283.286
-5000	78.578	103.605	101.173	66.339	79.329	132.479	135.170	183.225	166.929	80.218	69.612	85.839	1282.495
-5100	74.961	108.984	100.608	65.723	79.012	131.689	137.298	184.222	166.769	80.456	69.678	85.627	1285.027
-5200	74.216	110.620	100.479	65.558	78.959	131.829	136.905	184.109	166.782	80.459	69.712	85.494	1285.122
-5300	72.741	116.145	100.113	65.502	78.748	131.313	138.310	184.759	166.666	80.630	69.766	85.224	1289.919
-5400	72.290	118.522	99.944	65.500	78.716	131.441	137.951	184.654	166.681	80.629	69.794	85.083	1291.205
-5500	74.822	107.834	100.302	65.762	79.613	134.754	129.038	180.419	167.234	79.800	69.669	85.661	1274.909
-5600	81.935	99.147	101.617	68.398	80.760	138.679	119.232	174.611	167.584	78.944	69.548	85.782	1266.239
-5700	84.327	97.504	102.140	69.556	81.213	140.404	115.213	171.855	167.641	78.617	69.521	85.730	1263.721
-5800	87.154	95.928	102.885	71.056	81.761	142.398	110.830	168.526	167.640	78.254	69.487	85.649	1261.567
-5900	80.335	99.902	101.070	67.700	80.958	140.270	115.434	172.116	167.630	78.693	69.587	85.688	1259.384
-6000	81.628	98.943	101.156	67.980	81.178	141.276	113.158	170.463	167.642	78.516	69.584	85.655	1257.179

Precipitation in mm [SAPELO ISLAND, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-6100	80.827	99.169	100.890	68.538	81.437	142.308	110.912	168.722	167.638	78.331	69.571	85.624	1253.967
-6200	80.109	99.425	100.668	68.802	81.630	143.182	109.061	167.226	167.620	78.184	69.569	85.590	1251.066
-6300	73.291	109.468	99.314	65.373	80.461	139.875	116.189	172.842	167.602	78.869	69.718	85.485	1258.488
-6400	83.356	97.099	101.278	69.591	82.196	145.720	104.021	162.761	167.499	77.772	69.563	85.484	1246.339
-6500	79.563	99.542	100.398	67.903	81.841	144.973	105.389	164.110	167.547	77.927	69.615	85.493	1244.301
-6600	73.929	107.014	99.234	65.446	80.994	142.637	110.018	168.238	167.625	78.390	69.721	85.434	1248.680
-6700	73.193	108.576	98.991	65.257	81.008	142.984	109.264	167.649	167.618	78.344	69.737	85.395	1248.019
-6800	72.421	110.612	98.710	65.135	81.041	143.352	108.482	167.017	167.610	78.292	69.749	85.364	1247.785
-6900	71.808	112.567	98.454	65.054	81.106	143.830	107.490	166.186	167.597	78.219	69.758	85.338	1247.406
-7000	71.342	114.423	98.244	64.923	81.141	144.249	106.627	165.455	167.583	78.160	69.773	85.300	1247.220
-7100	71.061	115.745	98.116	64.771	81.143	144.562	105.984	164.909	167.571	78.122	69.791	85.255	1247.030
-7200	70.683	118.020	97.942	64.681	81.128	144.692	105.714	164.682	167.565	78.110	69.803	85.224	1248.245
-7300	70.221	122.709	97.783	64.476	80.839	144.030	106.974	165.876	167.589	78.258	69.853	85.079	1253.687
-7400	70.021	126.371	97.748	64.517	80.481	143.094	108.827	167.544	167.607	78.464	69.912	84.833	1259.419
-7500	69.981	125.804	97.688	64.450	80.624	143.883	107.203	166.163	167.591	78.330	69.913	84.846	1256.476
-7600	70.040	125.401	97.786	64.517	80.498	143.759	107.416	166.396	167.592	78.379	69.947	84.683	1256.415
-7700	69.905	124.319	97.524	64.301	81.003	145.781	103.513	162.769	167.515	78.010	69.905	84.902	1249.447
-7800	70.339	118.120	97.554	64.305	81.604	148.065	99.504	158.585	167.347	77.610	69.858	85.055	1237.945
-7900	70.586	115.690	97.500	64.395	81.935	149.438	97.284	156.042	167.208	77.387	69.841	85.079	1232.385
-8000	69.983	122.390	97.489	64.212	81.144	147.113	101.065	160.358	167.433	77.820	69.939	84.785	1243.730
-8100	69.734	125.782	97.406	64.330	80.911	146.589	101.954	161.330	167.471	77.937	69.982	84.588	1248.013
-8200	69.790	127.686	97.637	64.839	80.299	144.673	105.455	164.828	167.562	78.327	70.074	83.982	1255.153
-8300	69.915	123.863	97.516	64.429	80.833	146.910	101.338	160.756	167.452	77.919	70.026	84.371	1245.326
-8400	69.827	128.150	97.769	65.252	79.937	143.778	107.150	166.462	167.580	78.552	70.160	83.314	1257.933
-8500	69.572	127.253	97.287	64.515	80.784	147.177	100.839	160.277	167.437	77.900	70.058	84.199	1247.298
-8600	69.644	127.398	97.412	64.754	80.541	146.559	101.889	161.424	167.478	78.037	70.104	83.880	1249.121
-8700	69.622	127.253	97.477	65.058	80.232	145.572	103.650	163.242	167.528	78.244	70.157	83.446	1251.482
-8800	69.690	126.567	97.607	65.311	79.990	144.803	105.068	164.653	167.554	78.416	70.208	83.010	1252.876
-8900	69.666	125.371	97.586	65.343	79.980	144.951	104.768	164.393	167.549	78.403	70.223	82.906	1251.140
-9000	69.844	121.739	97.888	65.763	79.575	143.154	108.278	167.646	167.573	78.798	70.316	82.120	1252.693
-9100	69.468	127.234	97.262	64.918	80.514	147.516	100.151	159.689	167.420	77.935	70.173	83.448	1245.728
-9200	69.423	127.372	97.123	64.699	80.802	148.831	97.993	157.246	167.315	77.706	70.150	83.686	1242.346
-9300	69.217	126.533	96.736	64.127	81.552	151.709	93.770	151.854	166.988	77.206	70.077	84.252	1234.021

Precipitation in mm [SAPELO ISLAND, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-9400	69.293	126.664	97.017	64.700	80.852	149.359	97.149	156.267	167.269	77.633	70.164	83.615	1239.983
-9500	69.739	114.672	97.753	65.748	79.675	144.343	105.826	165.547	167.557	78.624	70.357	81.899	1241.741
-9600	70.529	117.406	99.066	66.824	81.506	137.712	120.540	177.124	167.264	80.247	70.728	83.291	1272.236
-9700	71.170	110.160	100.030	67.529	93.753	133.350	132.353	183.902	166.606	81.557	71.027	84.712	1296.149
-9800	72.115	105.808	100.978	68.228	118.427	129.697	143.473	188.787	165.703	82.898	71.344	82.330	1329.787
-9900	70.067	127.056	98.372	66.275	79.713	142.184	110.095	169.500	167.533	79.214	70.575	81.515	1262.100
-10000	70.430	128.355	98.976	66.710	81.461	139.440	116.223	174.333	167.389	79.926	70.760	83.188	1277.190
-10100	70.154	127.525	98.531	66.399	80.034	141.628	111.256	170.514	167.511	79.382	70.642	81.884	1265.458
-10200	72.201	116.249	100.816	68.121	117.464	130.868	139.855	187.496	165.988	82.594	71.356	82.242	1335.251
-10300	71.181	111.007	99.995	67.525	95.905	134.073	130.262	182.983	166.708	81.456	71.088	84.328	1296.510
-10400	75.914	112.527	101.828	68.892	116.210	127.469	150.934	191.531	164.887	84.084	71.711	83.818	1349.805
-10500	77.894	114.294	102.094	69.098	107.940	126.741	153.440	192.292	164.587	84.476	71.802	84.838	1349.497
-10600	79.446	107.344	102.365	69.312	99.707	125.834	156.512	193.078	164.205	84.921	71.862	85.752	1340.339
-10700	72.881	111.959	100.987	68.268	122.124	130.437	141.243	188.135	165.849	82.833	71.450	82.049	1338.216
-10800	77.958	127.862	101.894	68.921	113.383	127.903	149.635	191.268	164.999	84.044	71.774	84.243	1363.886
-10900	84.176	124.934	103.520	70.208	77.986	123.375	165.561	195.000	162.815	86.647	71.706	88.391	1354.320
-11000	79.902	123.864	104.445	71.006	74.562	122.055	172.427	195.594	161.420	88.201	70.403	89.200	1353.078
-11100	80.709	128.331	102.256	69.197	101.997	126.863	153.213	192.366	164.586	84.580	71.882	85.551	1361.532
-11200	77.997	127.086	101.769	68.519	123.409	130.324	141.749	188.591	165.740	83.149	71.660	82.777	1362.769
-11300	75.366	125.823	101.250	68.148	122.290	132.132	136.038	186.138	166.216	82.435	71.493	81.892	1349.220
-11400	72.539	127.312	100.415	67.630	104.340	134.809	128.136	182.122	166.772	81.473	71.250	83.012	1319.810
-11500	71.993	125.355	99.780	67.206	90.664	137.343	121.298	178.032	167.144	80.686	71.062	84.455	1295.019
-11600	75.552	128.287	101.117	68.267	123.807	131.303	138.597	187.228	166.024	82.700	71.527	82.024	1356.435
-11700	72.425	125.913	99.828	67.336	93.841	136.410	123.750	179.546	167.028	80.943	71.108	84.212	1302.341
-11800	76.011	127.416	101.049	68.264	123.666	131.254	138.746	187.278	166.016	82.704	71.520	82.016	1355.940
-11900	77.392	130.375	101.478	68.615	122.226	129.429	144.594	189.579	165.503	83.410	71.663	82.978	1367.241
-12000	72.348	130.902	100.485	67.892	111.875	132.701	134.275	185.142	166.393	82.060	71.311	82.481	1337.865
-12100	72.414	130.472	100.630	68.000	115.229	131.982	136.445	186.121	166.237	82.288	71.346	82.268	1343.434
-12200	84.534	132.261	103.091	69.894	82.738	124.356	162.552	194.482	163.198	86.003	71.884	87.736	1362.728
-12300	76.435	152.616	114.125	85.721	74.092	191.965	184.274	192.014	155.890	94.252	70.425	91.090	1482.900
-12400	76.475	152.531	114.337	85.926	74.103	191.544	184.317	191.828	155.752	94.381	70.297	91.130	1482.620
-12500	75.803	150.476	106.944	75.217	73.916	144.981	181.706	194.102	158.112	91.716	72.118	90.329	1415.421
-12600	76.142	152.728	110.080	81.836	74.015	185.456	183.760	192.402	156.377	93.572	71.617	90.891	1468.875

Precipitation in mm [SAPELO ISLAND, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-12700	77.110	147.940	121.729	86.910	74.299	160.582	184.584	189.874	154.223	96.044	70.631	91.628	1455.553
-12800	77.549	143.009	105.671	72.301	73.955	125.534	178.222	195.187	159.722	90.003	69.562	89.804	1380.518
-12900	80.841	133.400	126.925	83.498	74.426	144.258	184.849	189.636	153.874	96.699	71.890	91.812	1432.109
-13000	77.968	149.609	116.030	86.615	74.133	189.374	184.438	191.541	155.504	94.660	70.058	91.213	1481.144
-13100	78.677	140.652	127.390	81.529	74.589	127.877	184.208	187.835	152.710	97.899	73.500	92.163	1419.029
-13200	77.889	148.038	121.165	87.160	74.287	162.030	184.527	189.831	154.223	95.998	70.532	91.616	1457.297
-13300	80.657	139.760	113.807	77.699	75.718	117.184	179.964	181.208	148.498	112.673	76.670	93.737	1397.576
-13400	81.305	140.891	113.613	78.498	76.213	117.632	177.728	178.746	147.103	129.572	77.212	94.316	1412.830
-13500	81.574	140.527	113.817	78.700	76.338	117.751	177.072	178.076	146.751	132.431	77.342	94.463	1414.842
-13600	80.420	136.285	119.672	77.402	75.217	117.019	181.573	183.350	149.867	102.886	75.981	93.147	1392.819
-13700	82.390	132.982	114.449	77.796	75.768	117.160	179.352	180.558	148.168	114.913	76.718	93.830	1394.083
-13800	80.984	133.728	128.326	82.664	74.612	125.186	183.538	186.775	152.151	98.287	73.725	92.281	1412.257
-13900	81.909	131.125	120.751	77.500	75.260	116.876	181.009	182.682	149.517	103.690	76.046	93.240	1389.605
-14000	81.210	132.813	129.138	81.234	74.742	120.443	182.782	185.468	151.349	99.224	74.559	92.528	1405.489

Mean Temperature (°C) [SAPELO ISLAND, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-3000	10.162	11.508	15.161	18.957	22.881	25.999	27.659	27.369	25.438	20.781	14.745	11.850	19.376
-3100	10.087	11.432	15.089	18.889	22.819	25.940	27.603	27.312	25.379	20.717	14.676	11.777	19.310
-3200	10.155	11.502	15.171	18.992	22.945	26.085	27.758	27.466	25.519	20.837	14.773	11.855	19.421
-3300	10.101	11.448	15.122	18.950	22.911	26.058	27.734	27.441	25.490	20.801	14.729	11.804	19.382
-3400	10.031	11.379	15.052	18.881	22.842	25.989	27.665	27.373	25.421	20.732	14.660	11.735	19.313
-3500	9.786	11.133	14.799	18.616	22.563	25.699	27.369	27.078	25.134	20.457	14.398	11.484	19.043
-3600	9.812	11.160	14.837	18.672	22.639	25.792	27.471	27.178	25.223	20.527	14.449	11.519	19.107
-3700	9.697	11.045	14.722	18.556	22.523	25.676	27.354	27.062	25.107	20.412	14.334	11.403	18.991
-3800	9.656	11.005	14.686	18.526	22.500	25.659	27.341	27.047	25.089	20.387	14.302	11.365	18.964
-3900	9.446	10.794	14.469	18.300	22.264	25.413	27.090	26.798	24.845	20.153	14.079	11.151	18.734
-4000	9.461	10.811	14.495	18.341	22.321	25.485	27.169	26.876	24.914	20.206	14.115	11.174	18.781
-4100	9.771	11.125	14.848	18.755	22.803	26.023	27.737	27.439	25.439	20.670	14.511	11.514	19.220
-4200	9.675	11.029	14.752	18.661	22.710	25.931	27.646	27.347	25.346	20.577	14.417	11.418	19.126
-4300	9.532	10.886	14.609	18.517	22.566	25.787	27.502	27.203	25.203	20.433	14.273	11.275	18.982
-4400	9.534	10.889	14.623	18.547	22.614	25.850	27.573	27.273	25.262	20.477	14.299	11.285	19.019
-4500	9.571	10.928	14.673	18.615	22.703	25.956	27.688	27.387	25.364	20.560	14.362	11.331	19.095
-4600	9.555	10.913	14.667	18.626	22.731	25.998	27.737	27.435	25.403	20.584	14.368	11.323	19.112
-4700	9.559	10.918	14.683	18.658	22.781	26.064	27.812	27.508	25.466	20.629	14.395	11.334	19.150
-4800	9.506	10.866	14.639	18.628	22.766	26.062	27.816	27.511	25.460	20.611	14.361	11.288	19.126
-4900	9.542	10.904	14.687	18.692	22.849	26.160	27.923	27.617	25.555	20.689	14.421	11.332	19.198
-5000	9.407	10.768	14.554	18.562	22.722	26.036	27.800	27.493	25.430	20.561	14.290	11.198	19.068
-5100	9.312	10.674	14.462	18.473	22.636	25.953	27.718	27.412	25.347	20.474	14.200	11.106	18.980
-5200	9.256	10.619	14.415	18.442	22.622	25.952	27.725	27.417	25.343	20.455	14.164	11.056	18.955
-5300	9.178	10.542	14.341	18.373	22.559	25.894	27.669	27.361	25.283	20.391	14.094	10.981	18.889
-5400	9.133	10.497	14.305	18.349	22.548	25.895	27.676	27.367	25.282	20.377	14.066	10.942	18.870
-5500	9.276	10.643	14.475	18.558	22.802	26.185	27.985	27.673	25.564	20.619	14.264	11.104	19.096
-5600	9.427	10.798	14.657	18.784	23.076	26.499	28.321	28.006	25.869	20.881	14.478	11.277	19.340
-5700	9.456	10.829	14.704	18.857	23.177	26.623	28.458	28.140	25.988	20.974	14.543	11.319	19.422
-5800	9.498	10.872	14.764	18.943	23.293	26.764	28.611	28.292	26.123	21.083	14.621	11.373	19.520
-5900	9.341	10.715	14.604	18.779	23.124	26.591	28.436	28.117	25.951	20.915	14.459	11.214	19.354
-6000	9.336	10.712	14.613	18.807	23.173	26.657	28.512	28.192	26.013	20.958	14.481	11.219	19.389
-6100	9.348	10.725	14.635	18.845	23.229	26.728	28.590	28.269	26.080	21.010	14.515	11.238	19.434
-6200	9.344	10.722	14.642	18.868	23.270	26.784	28.654	28.331	26.133	21.046	14.533	11.242	19.464

Mean Temperature (°C) [SAPELO ISLAND, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-6300	9.123	10.500	14.413	18.628	23.016	26.520	28.384	28.062	25.871	20.796	14.296	11.015	19.219
-6400	9.333	10.715	14.663	18.934	23.387	26.943	28.835	28.509	26.282	21.150	14.587	11.253	19.549
-6500	9.245	10.628	14.580	18.858	23.317	26.878	28.774	28.447	26.217	21.078	14.508	11.168	19.475
-6600	9.084	10.466	14.415	18.687	23.140	26.696	28.589	28.262	26.036	20.903	14.339	11.005	19.302
-6700	9.052	10.435	14.392	18.677	23.144	26.712	28.611	28.284	26.049	20.903	14.325	10.979	19.297
-6800	9.027	10.411	14.375	18.672	23.152	26.731	28.635	28.307	26.065	20.908	14.317	10.960	19.297
-6900	9.006	10.391	14.363	18.672	23.166	26.757	28.668	28.339	26.089	20.919	14.314	10.945	19.303
-7000	8.977	10.363	14.344	18.666	23.175	26.778	28.696	28.365	26.107	20.924	14.304	10.922	19.302
-7100	8.943	10.330	14.318	18.653	23.176	26.791	28.715	28.384	26.117	20.921	14.287	10.894	19.294
-7200	8.921	10.308	14.301	18.643	23.174	26.795	28.722	28.390	26.120	20.917	14.275	10.876	19.287
-7300	8.844	10.232	14.227	18.575	23.111	26.737	28.667	28.335	26.061	20.853	14.205	10.801	19.221
-7400	8.756	10.144	14.141	18.491	23.031	26.659	28.590	28.258	25.982	20.771	14.121	10.714	19.138
-7500	8.745	10.134	14.142	18.507	23.064	26.708	28.646	28.313	26.028	20.801	14.132	10.711	19.161
-7600	8.689	10.079	14.092	18.468	23.036	26.689	28.632	28.298	26.006	20.770	14.090	10.660	19.126
-7700	8.735	10.126	14.155	18.555	23.151	26.826	28.781	28.445	26.138	20.877	14.171	10.718	19.223
-7800	8.791	10.185	14.230	18.655	23.279	26.977	28.945	28.607	26.285	20.998	14.263	10.787	19.333
-7900	8.806	10.201	14.258	18.702	23.347	27.063	29.040	28.700	26.366	21.061	14.305	10.811	19.388
-8000	8.662	10.057	14.109	18.547	23.184	26.893	28.867	28.528	26.198	20.899	14.151	10.664	19.230
-8100	8.597	9.992	14.047	18.490	23.133	26.848	28.824	28.485	26.151	20.847	14.093	10.601	19.176
-8200	8.468	9.863	13.916	18.354	22.992	26.702	28.676	28.337	26.007	20.707	13.958	10.470	19.038
-8300	8.519	9.916	13.985	18.450	23.117	26.852	28.839	28.498	26.151	20.825	14.047	10.534	19.144
-8400	8.342	9.738	13.798	18.248	22.898	26.619	28.599	28.259	25.922	20.611	13.849	10.350	18.936
-8500	8.463	9.861	13.940	18.422	23.107	26.857	28.852	28.509	26.152	20.810	14.014	10.486	19.123
-8600	8.395	9.794	13.875	18.361	23.051	26.805	28.802	28.459	26.100	20.753	13.952	10.420	19.064
-8700	8.322	9.720	13.801	18.286	22.976	26.729	28.726	28.383	26.024	20.678	13.877	10.346	18.989
-8800	8.251	9.649	13.732	18.219	22.911	26.666	28.664	28.321	25.960	20.612	13.809	10.276	18.923
-8900	8.225	9.624	13.712	18.207	22.908	26.670	28.672	28.328	25.963	20.607	13.795	10.255	18.914
-9000	8.106	9.504	13.589	18.079	22.773	26.531	28.530	28.187	25.825	20.474	13.668	10.133	18.783
-9100	8.270	9.672	13.780	18.308	23.045	26.838	28.856	28.510	26.124	20.735	13.887	10.316	19.029
-9200	8.291	9.694	13.813	18.358	23.114	26.922	28.948	28.601	26.204	20.798	13.931	10.345	19.085
-9300	8.380	9.785	13.920	18.492	23.277	27.110	29.149	28.800	26.387	20.954	14.058	10.447	19.230
-9400	8.261	9.665	13.793	18.353	23.125	26.948	28.981	28.632	26.227	20.806	13.923	10.323	19.086
-9500	8.022	9.424	13.532	18.060	22.797	26.590	28.608	28.262	25.876	20.487	13.639	10.068	18.780

Mean Temperature (°C) [SAPELO ISLAND, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-9600	7.591	8.990	13.081	17.580	22.286	26.053	28.057	27.714	25.345	19.984	13.167	9.622	18.289
-9700	7.278	8.675	12.752	17.228	21.908	25.654	27.646	27.304	24.950	19.613	12.822	9.298	17.927
-9800	6.965	8.361	12.426	16.883	21.542	25.269	27.253	26.912	24.570	19.252	12.482	8.976	17.574
-9900	7.725	9.128	13.253	17.807	22.573	26.390	28.420	28.072	25.670	20.255	13.378	9.783	18.538
-10000	7.507	8.910	13.032	17.583	22.345	26.159	28.187	27.840	25.440	20.028	13.155	9.563	18.312
-10100	7.636	9.041	13.171	17.733	22.509	26.335	28.369	28.021	25.613	20.189	13.302	9.699	18.468
-10200	6.909	8.308	12.397	16.894	21.598	25.362	27.365	27.022	24.655	19.296	12.482	8.939	17.602
-10300	7.173	8.574	12.673	17.187	21.909	25.689	27.700	27.355	24.978	19.603	12.770	9.212	17.902
-10400	6.556	7.955	12.035	16.518	21.206	24.958	26.954	26.612	24.253	18.909	12.110	8.580	17.221
-10500	6.452	7.850	11.931	16.415	21.104	24.857	26.853	26.511	24.152	18.806	12.006	8.476	17.118
-10600	6.377	7.775	11.849	16.321	20.998	24.740	26.731	26.389	24.037	18.703	11.916	8.396	17.019
-10700	6.799	8.199	12.296	16.806	21.523	25.299	27.308	26.963	24.589	19.218	12.390	8.836	17.519
-10800	6.453	7.854	11.955	16.471	21.195	24.977	26.990	26.644	24.266	18.888	12.053	8.493	17.187
-10900	5.929	7.327	11.405	15.885	20.568	24.317	26.311	25.968	23.612	18.272	11.477	7.951	16.585
-11000	5.634	7.030	11.095	15.554	20.215	23.944	25.928	25.588	23.244	17.924	11.153	7.646	16.246
-11100	6.325	7.725	11.824	16.338	21.059	24.838	26.849	26.504	24.127	18.753	11.921	8.363	17.052
-11200	6.524	7.929	12.059	16.623	21.400	25.226	27.262	26.913	24.505	19.080	12.191	8.588	17.358
-11300	6.686	8.091	12.227	16.800	21.588	25.423	27.462	27.113	24.699	19.265	12.366	8.754	17.539
-11400	6.931	8.337	12.478	17.058	21.854	25.695	27.739	27.389	24.970	19.529	12.622	9.003	17.800
-11500	7.123	8.530	12.677	17.269	22.077	25.928	27.977	27.627	25.201	19.748	12.829	9.200	18.016
-11600	6.667	8.071	12.198	16.756	21.526	25.347	27.379	27.031	24.626	19.207	12.326	8.727	17.488
-11700	7.082	8.488	12.630	17.211	22.008	25.851	27.895	27.545	25.125	19.683	12.775	9.154	17.954
-11800	6.678	8.082	12.206	16.761	21.527	25.345	27.375	27.027	24.625	19.210	12.332	8.737	17.492
-11900	6.552	7.955	12.068	16.603	21.349	25.150	27.171	26.825	24.434	19.037	12.180	8.602	17.327
-12000	6.911	8.313	12.428	16.967	21.717	25.520	27.544	27.197	24.804	19.404	12.543	8.962	17.692
-12100	6.886	8.287	12.396	16.924	21.661	25.454	27.472	27.126	24.740	19.351	12.502	8.931	17.644
-12200	6.099	7.496	11.572	16.047	20.726	24.471	26.463	26.121	23.767	18.431	11.641	8.119	16.746
-12300	4.554	5.945	9.967	14.357	18.941	22.607	24.557	24.222	21.922	16.671	9.976	6.532	15.021
-12400	4.544	5.935	9.954	14.339	18.917	22.578	24.526	24.191	21.894	16.648	9.959	6.520	15.000
-12500	5.044	6.436	10.466	14.868	19.465	23.142	25.098	24.762	22.454	17.191	10.483	7.028	15.536
-12600	4.739	6.129	10.143	14.519	19.087	22.740	24.683	24.349	22.058	16.820	10.141	6.710	15.176
-12700	4.294	5.682	9.686	14.045	18.594	22.231	24.167	23.834	21.552	16.332	9.672	6.257	14.695
-12800	5.334	6.727	10.773	15.200	19.825	23.525	25.494	25.155	22.832	17.544	10.808	7.330	15.879

Mean Temperature (°C) [SAPELO ISLAND, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-12900	4.085	5.475	9.494	13.879	18.456	22.117	24.065	23.730	21.433	16.187	9.498	6.060	14.540
-13000	4.496	5.886	9.904	14.286	18.862	22.520	24.467	24.132	21.836	16.593	9.906	6.470	14.946
-13100	3.979	5.367	9.362	13.710	18.246	21.872	23.802	23.469	21.196	15.988	9.340	5.936	14.356
-13200	4.320	5.709	9.708	14.062	18.605	22.237	24.170	23.837	21.560	16.345	9.691	6.281	14.710
-13300	3.130	4.515	8.481	12.782	17.267	20.850	22.757	22.428	20.183	15.022	8.426	5.065	13.409
-13400	2.831	4.214	8.170	12.454	16.920	20.488	22.386	22.059	19.825	14.680	8.103	4.757	13.074
-13500	2.765	4.148	8.100	12.376	16.834	20.396	22.291	21.964	19.734	14.596	8.027	4.688	12.993
-13600	3.517	4.900	8.864	13.160	17.640	21.218	23.123	22.795	20.553	15.396	8.805	5.449	13.785
-13700	3.131	4.514	8.470	12.753	17.219	20.786	22.684	22.357	20.123	14.979	8.402	5.057	13.373
-13800	4.035	5.420	9.391	13.699	18.191	21.781	23.691	23.362	21.113	15.944	9.341	5.973	14.328
-13900	3.520	4.903	8.855	13.132	17.591	21.153	23.048	22.722	20.491	15.353	8.783	5.443	13.750
-14000	3.955	5.338	9.294	13.578	18.044	21.611	23.509	23.182	20.948	15.803	9.227	5.881	14.198

Appendix A, Section 6: Savannah, Georgia, MCM Outputs

Precipitation in mm [SAVANNAH, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-3000	88.284	78.529	93.048	75.870	104.747	145.012	136.312	170.196	107.511	54.558	54.232	74.389	1182.688
-3100	87.995	77.831	92.187	75.775	105.023	146.262	141.053	174.444	109.149	56.075	54.939	74.817	1195.549
-3200	87.995	78.312	92.895	75.688	104.786	144.885	129.427	164.658	105.661	52.888	53.696	74.069	1164.960
-3300	87.795	77.791	92.260	75.629	104.989	145.738	131.692	166.819	106.536	53.680	54.113	74.327	1171.369
-3400	87.615	77.197	91.460	75.539	105.235	146.917	137.280	171.750	108.380	55.364	54.862	74.775	1186.376
-3500	85.606	75.261	88.736	74.830	105.983	151.232	160.779	191.778	115.791	62.459	57.744	76.386	1246.583
-3600	85.899	75.333	88.975	74.866	105.932	150.575	153.480	185.928	113.723	60.415	57.057	76.012	1228.194
-3700	84.478	74.488	87.681	74.492	106.245	152.531	162.971	194.024	116.753	63.395	58.259	76.635	1251.952
-3800	83.790	74.202	87.196	74.352	106.359	153.148	164.445	195.418	117.318	63.953	58.531	76.763	1255.474
-3900	80.825	73.094	84.903	73.955	106.804	156.807	184.088	211.715	123.419	70.267	60.847	77.814	1304.539
-4000	80.943	73.082	85.025	73.906	106.805	156.349	178.699	207.539	121.909	68.641	60.366	77.589	1290.853
-4100	85.305	74.536	88.395	74.520	106.160	150.596	134.764	171.289	108.951	55.913	55.759	75.278	1181.464
-4200	84.053	73.828	87.298	74.190	106.432	152.160	142.506	178.104	111.455	58.231	56.755	75.810	1200.823
-4300	82.101	72.860	85.676	73.776	106.787	154.498	154.625	188.571	115.283	61.883	58.250	76.555	1230.865
-4400	82.115	72.757	85.654	73.717	106.820	154.336	149.401	184.460	113.922	60.564	57.851	76.347	1217.944
-4500	82.485	72.918	86.022	73.755	106.774	153.615	140.481	177.138	111.434	58.216	57.033	75.928	1195.797
-4600	82.253	72.705	85.809	73.657	106.850	153.787	136.916	174.373	110.589	57.438	56.834	75.816	1187.026
-4700	82.248	72.630	85.801	73.613	106.884	153.665	131.277	169.776	109.108	56.094	56.402	75.585	1173.082
-4800	81.606	72.162	85.171	73.410	107.049	154.451	131.444	170.245	109.425	56.390	56.641	75.695	1173.691
-4900	81.790	72.384	85.532	73.467	107.006	153.857	122.956	163.021	107.023	54.254	55.858	75.286	1152.434
-5000	79.929	71.607	83.972	73.073	107.333	155.941	133.613	172.643	110.500	57.381	57.222	75.961	1179.174
-5100	78.676	71.302	82.875	72.860	107.538	157.386	140.820	179.071	112.824	59.526	58.133	76.376	1197.387
-5200	78.087	70.897	82.204	72.688	107.696	158.218	140.865	179.477	113.128	59.814	58.372	76.459	1197.903
-5300	77.256	70.728	81.316	72.539	107.850	159.386	145.983	184.072	114.811	61.395	59.047	76.731	1211.115
-5400	76.804	70.502	80.775	72.410	107.969	160.046	145.906	184.314	115.025	61.599	59.227	76.780	1211.358

Precipitation in mm [SAVANNAH, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-5500	78.179	70.568	82.239	72.468	107.860	157.922	120.280	162.455	107.774	55.009	56.835	75.701	1147.291
-5600	80.197	70.842	83.899	72.734	107.690	156.000	93.220	137.865	99.635	48.220	54.154	74.342	1078.797
-5700	80.659	70.825	84.200	72.759	107.717	155.861	82.907	128.105	96.492	45.783	53.208	73.831	1052.347
-5800	81.252	70.915	84.650	72.811	107.721	155.676	71.701	116.987	92.837	43.054	52.087	73.213	1022.904
-5900	79.187	69.964	82.766	72.316	108.087	157.688	85.049	130.782	97.809	46.882	53.931	74.207	1058.666
-6000	79.272	69.744	82.669	72.244	108.183	158.009	79.478	125.490	96.196	45.672	53.513	73.982	1044.452
-6100	79.199	69.810	82.718	72.237	108.228	158.102	73.786	119.855	94.395	44.334	52.994	73.705	1029.364
-6200	79.019	69.736	82.601	72.177	108.315	158.435	69.293	115.374	93.012	43.340	52.640	73.513	1017.456
-6300	76.447	68.860	80.126	71.589	108.717	161.086	90.030	136.711	100.548	49.178	55.346	74.878	1073.514
-6400	79.239	69.211	82.419	72.011	108.573	159.521	57.123	102.669	89.031	40.574	51.624	72.960	984.955
-6500	78.064	68.677	81.371	71.707	108.801	160.698	61.423	107.718	91.050	42.065	52.449	73.400	997.424
-6600	76.100	68.058	79.554	71.270	109.085	162.512	74.909	122.404	96.361	46.041	54.367	74.367	1035.027
-6700	75.719	67.881	79.151	71.144	109.214	163.161	73.409	121.086	96.103	45.885	54.404	74.374	1031.533
-6800	75.393	67.819	78.827	71.042	109.323	163.702	71.733	119.534	95.741	45.646	54.390	74.358	1027.508
-6900	75.118	67.779	78.548	70.945	109.431	164.224	69.464	117.338	95.162	45.247	54.307	74.309	1021.873
-7000	74.801	67.653	78.185	70.828	109.559	164.870	67.616	115.591	94.759	44.988	54.298	74.293	1017.441
-7100	74.474	67.434	77.782	70.705	109.689	165.564	66.378	114.486	94.578	44.897	54.363	74.312	1014.663
-7200	74.238	67.428	77.514	70.633	109.766	165.987	65.945	114.151	94.580	44.922	54.436	74.338	1013.937
-7300	73.581	67.175	76.687	70.478	109.904	166.980	70.106	118.874	96.390	46.314	55.149	74.648	1026.286
-7400	72.881	66.738	75.774	70.337	110.026	168.035	76.027	125.353	98.760	48.155	56.032	75.012	1043.130
-7500	72.758	66.534	75.615	70.242	110.143	168.541	71.907	121.259	97.578	47.290	55.768	74.882	1032.519
-7600	72.321	65.988	75.031	70.117	110.267	169.404	73.155	122.840	98.318	47.895	56.132	75.012	1036.479
-7700	72.596	66.184	75.402	70.057	110.391	169.584	62.368	111.337	94.603	45.152	55.051	74.541	1007.267
-7800	73.023	66.007	75.915	70.022	110.511	169.813	51.358	98.816	90.408	42.176	53.810	73.975	975.835
-7900	73.126	65.840	76.013	69.963	110.634	170.331	45.505	91.854	88.088	40.607	53.177	73.671	958.809
-8000	71.982	65.260	74.568	69.770	110.738	171.483	56.722	105.525	93.159	44.225	54.929	74.441	992.802

Precipitation in mm [SAVANNAH, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-8100	71.444	64.993	73.889	69.655	110.834	172.298	59.764	109.222	94.626	45.332	55.507	74.664	1002.226
-8200	70.482	64.112	72.643	69.495	110.882	173.439	70.609	121.464	98.960	48.606	56.991	75.209	1032.891
-8300	70.839	64.101	73.070	69.441	111.058	173.774	58.945	108.719	94.855	45.587	55.817	74.745	1000.953
-8400	69.498	63.084	71.387	69.227	111.021	175.045	76.777	128.484	101.643	50.745	58.041	75.517	1050.470
-8500	70.335	63.870	72.446	69.282	111.222	174.868	58.196	108.176	94.969	45.736	56.029	74.793	999.921
-8600	69.819	63.312	71.779	69.159	111.287	175.652	61.770	112.469	96.618	46.989	56.651	74.999	1010.504
-8700	69.253	62.709	71.066	69.038	111.304	176.319	67.418	118.939	98.927	48.745	57.446	75.255	1026.419
-8800	68.712	62.078	70.385	68.892	111.334	177.063	72.172	124.313	100.866	50.258	58.137	75.455	1039.664
-8900	68.501	61.746	70.117	68.808	111.401	177.558	71.647	123.914	100.874	50.291	58.218	75.458	1038.533
-9000	67.606	60.529	69.017	68.554	111.356	178.529	82.970	136.075	104.982	53.543	59.564	75.836	1068.561
-9100	68.773	62.137	70.441	68.757	111.675	178.301	58.326	109.314	96.289	46.906	56.974	75.012	1002.905
-9200	68.899	62.252	70.588	68.718	111.819	178.784	52.157	102.152	93.983	45.266	56.352	74.779	985.750
-9300	69.495	62.794	71.345	68.725	112.037	179.236	39.820	86.633	88.569	41.511	54.754	74.173	949.091
-9400	68.630	61.900	70.252	68.602	111.956	179.641	50.107	99.882	93.430	44.925	56.318	74.737	980.379
-9500	66.893	59.142	68.117	68.210	111.660	180.507	77.113	130.717	103.852	52.756	59.549	75.726	1054.242
-9600	63.625	56.331	64.359	66.872	111.575	183.845	126.003	178.928	119.261	65.836	64.320	77.218	1178.172
-9700	61.227	53.700	61.791	65.584	112.898	186.570	166.480	214.281	130.121	76.176	67.481	77.940	1274.250
-9800	58.859	51.451	59.356	64.072	115.512	189.513	206.042	246.544	140.099	86.577	70.233	77.828	1366.086
-9900	64.587	57.870	65.370	67.248	111.803	184.001	93.392	148.605	110.350	58.153	61.927	76.302	1099.608
-10000	62.919	56.431	63.489	66.465	111.886	185.879	114.705	169.707	117.143	64.011	64.059	76.993	1153.687
-10100	63.896	57.235	64.567	66.923	111.870	185.063	98.066	153.621	112.159	59.705	62.587	76.483	1112.175
-10200	58.422	51.798	58.792	63.788	115.615	190.570	196.455	240.047	138.470	84.737	70.002	77.641	1346.338
-10300	60.388	52.953	60.820	65.080	113.352	188.246	162.344	211.916	129.884	75.923	67.659	77.760	1266.324
-10400	56.090	49.540	56.231	61.869	113.932	193.786	237.761	272.648	148.677	96.065	72.615	77.619	1436.833
-10500	55.498	49.110	55.492	61.268	112.300	194.764	247.823	280.537	151.232	99.031	73.242	77.596	1457.894
-10600	55.090	48.228	55.018	60.817	110.591	195.334	258.936	288.784	153.859	102.211	73.816	77.606	1480.290

Precipitation in mm [SAVANNAH, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-10700	57.641	50.760	57.918	63.219	116.013	191.799	203.006	245.807	140.413	86.783	70.600	77.531	1361.491
-10800	55.527	49.996	55.402	61.314	113.472	195.090	236.216	272.525	148.895	96.172	72.811	77.457	1434.878
-10900	52.176	47.344	52.110	58.076	104.743	199.178	297.590	318.644	163.949	114.753	75.908	76.889	1561.357
-11000	49.564	46.100	50.472	56.129	101.950	201.282	326.079	339.937	171.605	125.205	76.973	76.035	1621.330
-11100	54.832	49.358	54.529	60.559	111.183	196.203	250.142	283.302	152.321	100.162	73.616	77.420	1463.625
-11200	56.093	50.131	55.781	61.761	115.738	195.112	210.583	253.772	143.475	89.954	71.683	77.240	1381.321
-11300	57.052	50.913	56.915	62.646	116.336	193.846	189.671	236.993	138.419	84.541	70.414	77.224	1334.969
-11400	58.638	52.457	58.730	63.902	114.672	191.813	160.661	212.608	131.035	77.040	68.427	77.366	1267.350
-11500	60.077	53.473	60.200	64.803	113.144	190.382	136.367	191.281	124.619	70.881	66.649	77.382	1209.258
-11600	56.926	51.048	56.801	62.539	116.294	193.746	197.859	243.221	140.149	86.393	70.789	77.284	1353.050
-11700	59.811	53.292	59.893	64.622	113.464	190.497	144.523	198.370	126.661	72.802	67.177	77.438	1228.550
-11800	57.065	51.061	56.887	62.596	116.278	193.591	198.074	243.281	140.127	86.377	70.764	77.302	1353.402
-11900	56.237	50.638	56.034	61.894	115.361	194.448	218.621	259.263	144.892	91.592	71.905	77.373	1398.258
-12000	58.455	52.758	58.674	63.802	115.277	191.199	179.642	227.477	135.056	81.110	69.298	77.492	1310.238
-12100	58.267	52.618	58.518	63.674	115.556	191.248	186.699	233.011	136.633	82.753	69.671	77.512	1326.161
-12200	53.491	48.666	53.177	59.122	106.449	198.100	283.828	308.767	159.832	110.207	75.207	77.269	1534.117
-12300	42.033	44.918	46.313	49.852	91.970	217.888	386.061	389.828	194.052	160.855	78.455	71.022	1773.246
-12400	41.978	44.921	46.313	49.784	91.791	217.771	386.274	390.148	194.359	161.497	78.418	70.948	1774.201
-12500	45.064	46.017	47.792	52.305	96.446	208.833	368.542	373.276	185.698	146.826	78.643	73.553	1722.996
-12600	43.136	45.440	46.797	50.730	93.382	216.360	380.868	384.696	191.708	157.140	78.682	71.955	1760.894
-12700	40.563	44.311	46.066	48.020	88.999	212.549	390.550	396.107	198.585	169.677	78.091	69.411	1782.930
-12800	47.198	46.386	49.031	54.105	99.177	203.869	351.255	359.112	179.282	136.606	77.791	74.882	1678.693
-12900	39.721	42.941	45.658	46.368	87.471	209.960	394.948	400.828	200.631	172.853	78.019	68.297	1787.697
-13000	41.824	44.657	46.265	49.496	91.301	217.465	387.439	391.467	195.148	162.930	78.339	70.669	1776.997
-13100	38.965	43.498	45.572	45.334	85.758	206.005	393.076	401.520	202.691	177.883	77.792	67.455	1785.547
-13200	40.787	44.396	46.140	48.208	89.151	212.714	389.849	395.455	198.377	169.431	78.095	69.541	1782.145

Precipitation in mm [SAVANNAH, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-13300	35.089	43.515	43.388	39.438	76.444	198.536	383.910	405.763	210.614	199.465	74.757	61.639	1772.557
-13400	33.949	43.973	43.301	37.720	73.138	195.626	376.778	404.311	212.172	208.004	73.148	59.487	1761.607
-13500	33.729	44.090	43.346	37.348	72.355	194.804	374.455	403.493	212.408	209.718	72.725	58.988	1757.459
-13600	36.802	43.265	44.313	41.761	80.226	200.859	386.949	403.742	207.879	191.099	76.252	64.189	1777.335
-13700	35.244	43.220	43.533	39.394	76.130	198.006	381.233	404.302	210.627	200.709	74.568	61.528	1768.493
-13800	39.473	43.380	45.976	45.667	85.573	204.831	389.114	399.109	202.804	179.278	77.708	67.587	1780.499
-13900	36.952	43.069	44.492	41.728	79.918	200.361	384.430	402.419	207.987	192.182	76.096	64.097	1773.730
-14000	39.070	43.390	45.935	44.910	84.346	203.169	386.811	399.018	204.037	182.613	77.436	66.952	1777.687

Mean Temperature (°C) [SAVANNAH, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-3000	12.338	14.083	19.502	23.482	27.864	30.848	31.867	31.427	28.702	23.806	18.952	14.468	23.112
-3100	12.255	14.000	19.423	23.407	27.795	30.784	31.804	31.364	28.636	23.735	18.875	14.386	23.039
-3200	12.330	14.079	19.517	23.524	27.937	30.945	31.976	31.532	28.789	23.865	18.981	14.472	23.162
-3300	12.271	14.021	19.463	23.479	27.899	30.915	31.948	31.504	28.756	23.824	18.931	14.416	23.119
-3400	12.194	13.944	19.386	23.402	27.823	30.839	31.873	31.428	28.680	23.748	18.854	14.339	23.042
-3500	11.922	13.670	19.104	23.106	27.513	30.517	31.545	31.103	28.363	23.444	18.565	14.061	22.743
-3600	11.951	13.702	19.149	23.171	27.599	30.620	31.657	31.212	28.459	23.520	18.620	14.099	22.813
-3700	11.824	13.575	19.021	23.043	27.471	30.492	31.528	31.083	28.331	23.392	18.492	13.971	22.685
-3800	11.779	13.530	18.982	23.011	27.446	30.473	31.513	31.067	28.310	23.364	18.456	13.929	22.655
-3900	11.546	13.296	18.741	22.759	27.183	30.201	31.236	30.791	28.041	23.106	18.210	13.692	22.400
-4000	11.563	13.316	18.771	22.806	27.248	30.281	31.323	30.876	28.115	23.163	18.249	13.717	22.452
-4100	11.909	13.670	19.170	23.273	27.788	30.879	31.950	31.494	28.689	23.669	18.682	14.091	22.939
-4200	11.803	13.564	19.064	23.168	27.684	30.777	31.848	31.392	28.586	23.566	18.577	13.985	22.835
-4300	11.644	13.406	18.906	23.009	27.525	30.617	31.689	31.233	28.427	23.407	18.419	13.827	22.676
-4400	11.647	13.411	18.923	23.045	27.580	30.688	31.767	31.309	28.491	23.453	18.445	13.837	22.716
-4500	11.689	13.455	18.981	23.123	27.680	30.806	31.893	31.432	28.601	23.543	18.513	13.887	22.800
-4600	11.672	13.440	18.977	23.136	27.712	30.853	31.948	31.485	28.642	23.566	18.518	13.878	22.819
-4700	11.676	13.447	18.996	23.174	27.770	30.927	32.029	31.564	28.709	23.615	18.547	13.890	22.862
-4800	11.618	13.391	18.950	23.143	27.755	30.924	32.034	31.566	28.702	23.592	18.508	13.838	22.835
-4900	11.659	13.434	19.005	23.216	27.848	31.034	32.151	31.681	28.805	23.677	18.573	13.887	22.914
-5000	11.509	13.285	18.858	23.072	27.708	30.896	32.015	31.544	28.666	23.535	18.427	13.738	22.771
-5100	11.405	13.181	18.756	22.974	27.613	30.804	31.924	31.453	28.573	23.438	18.327	13.636	22.674
-5200	11.342	13.121	18.707	22.941	27.598	30.804	31.931	31.458	28.567	23.415	18.286	13.580	22.646
-5300	11.257	13.036	18.626	22.866	27.529	30.740	31.869	31.395	28.500	23.343	18.208	13.497	22.572
-5400	11.207	12.988	18.586	22.840	27.518	30.741	31.876	31.401	28.497	23.326	18.176	13.453	22.551
-5500	11.367	13.154	18.781	23.078	27.803	31.064	32.218	31.736	28.804	23.589	18.392	13.631	22.801

Mean Temperature (°C) [SAVANNAH, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-5600	11.536	13.329	18.988	23.334	28.111	31.414	32.588	32.101	29.136	23.874	18.624	13.821	23.071
-5700	11.569	13.366	19.043	23.417	28.225	31.552	32.739	32.247	29.265	23.974	18.694	13.867	23.163
-5800	11.616	13.417	19.113	23.517	28.356	31.709	32.908	32.412	29.411	24.090	18.778	13.926	23.271
-5900	11.442	13.242	18.936	23.334	28.169	31.517	32.714	32.219	29.221	23.905	18.599	13.750	23.087
-6000	11.438	13.241	18.948	23.368	28.225	31.591	32.797	32.300	29.287	23.951	18.621	13.755	23.127
-6100	11.451	13.257	18.975	23.412	28.288	31.670	32.883	32.383	29.360	24.006	18.657	13.775	23.176
-6200	11.447	13.255	18.985	23.440	28.335	31.733	32.953	32.451	29.416	24.044	18.676	13.779	23.210
-6300	11.202	13.008	18.729	23.172	28.053	31.440	32.655	32.155	29.127	23.768	18.415	13.528	22.938
-6400	11.437	13.251	19.014	23.519	28.469	31.910	33.152	32.644	29.575	24.153	18.731	13.790	23.304
-6500	11.340	13.155	18.923	23.435	28.392	31.839	33.084	32.574	29.501	24.072	18.643	13.696	23.221
-6600	11.161	12.976	18.739	23.245	28.195	31.637	32.879	32.371	29.302	23.879	18.457	13.515	23.030
-6700	11.126	12.942	18.715	23.235	28.201	31.655	32.904	32.393	29.315	23.878	18.440	13.486	23.024
-6800	11.099	12.917	18.698	23.231	28.211	31.676	32.930	32.418	29.331	23.881	18.429	13.464	23.024
-6900	11.076	12.896	18.687	23.234	28.229	31.706	32.966	32.452	29.356	23.892	18.425	13.448	23.031
-7000	11.045	12.867	18.666	23.229	28.239	31.730	32.996	32.480	29.374	23.895	18.413	13.422	23.030
-7100	11.007	12.831	18.640	23.216	28.242	31.744	33.017	32.499	29.384	23.891	18.393	13.391	23.021
-7200	10.983	12.808	18.622	23.206	28.240	31.749	33.024	32.505	29.386	23.885	18.379	13.370	23.013
-7300	10.898	12.723	18.541	23.131	28.171	31.685	32.963	32.443	29.320	23.814	18.301	13.287	22.940
-7400	10.800	12.626	18.446	23.039	28.082	31.599	32.878	32.358	29.232	23.723	18.208	13.191	22.848
-7500	10.789	12.617	18.448	23.059	28.121	31.653	32.940	32.417	29.280	23.754	18.219	13.187	22.874
-7600	10.727	12.557	18.395	23.016	28.091	31.632	32.923	32.399	29.256	23.718	18.171	13.130	22.835
-7700	10.779	12.612	18.468	23.116	28.220	31.785	33.088	32.560	29.398	23.834	18.258	13.193	22.942
-7800	10.842	12.679	18.554	23.230	28.364	31.954	33.269	32.737	29.557	23.964	18.358	13.268	23.065
-7900	10.860	12.699	18.588	23.285	28.441	32.049	33.373	32.839	29.645	24.031	18.402	13.295	23.126
-8000	10.700	12.538	18.422	23.111	28.260	31.861	33.182	32.648	29.460	23.853	18.233	13.132	22.950
-8100	10.628	12.467	18.354	23.050	28.204	31.811	33.134	32.600	29.407	23.795	18.168	13.062	22.890

Mean Temperature (°C) [SAVANNAH, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-8200	10.485	12.324	18.208	22.898	28.047	31.649	32.970	32.437	29.248	23.640	18.019	12.917	22.737
-8300	10.543	12.385	18.288	23.008	28.189	31.816	33.149	32.612	29.404	23.767	18.114	12.987	22.855
-8400	10.346	12.186	18.079	22.782	27.945	31.558	32.884	32.350	29.152	23.532	17.897	12.784	22.625
-8500	10.481	12.326	18.241	22.979	28.179	31.822	33.163	32.624	29.403	23.749	18.076	12.933	22.831
-8600	10.406	12.251	18.169	22.912	28.118	31.765	33.108	32.568	29.345	23.685	18.007	12.860	22.766
-8700	10.324	12.170	18.087	22.829	28.034	31.680	33.023	32.483	29.260	23.602	17.925	12.778	22.683
-8800	10.246	12.091	18.010	22.755	27.962	31.611	32.955	32.415	29.190	23.529	17.849	12.701	22.609
-8900	10.218	12.065	17.989	22.743	27.959	31.616	32.963	32.422	29.192	23.522	17.833	12.676	22.600
-9000	10.085	11.932	17.852	22.600	27.810	31.461	32.806	32.266	29.039	23.375	17.693	12.542	22.455
-9100	10.269	12.121	18.069	22.859	28.115	31.803	33.166	32.620	29.366	23.660	17.931	12.743	22.727
-9200	10.293	12.147	18.108	22.916	28.192	31.896	33.268	32.719	29.453	23.728	17.979	12.775	22.789
-9300	10.392	12.250	18.230	23.068	28.376	32.106	33.489	32.937	29.651	23.897	18.117	12.887	22.950
-9400	10.260	12.117	18.088	22.913	28.207	31.925	33.303	32.752	29.475	23.734	17.968	12.750	22.791
-9500	9.994	11.846	17.794	22.584	27.840	31.528	32.892	32.345	29.091	23.385	17.656	12.468	22.452
-9600	9.515	11.362	17.291	22.049	27.272	30.932	32.282	31.740	28.507	22.831	17.137	11.976	21.908
-9700	9.167	11.012	16.923	21.656	26.850	30.489	31.828	31.289	28.072	22.423	16.756	11.617	21.507
-9800	8.820	10.662	16.559	21.271	26.442	30.063	31.392	30.856	27.653	22.025	16.381	11.261	21.116
-9900	9.666	11.521	17.489	22.307	27.594	31.307	32.682	32.132	28.859	23.124	17.365	12.152	22.183
-10000	9.424	11.279	17.244	22.058	27.341	31.051	32.424	31.875	28.605	22.873	17.118	11.909	21.933
-10100	9.568	11.425	17.399	22.227	27.525	31.246	32.626	32.074	28.795	23.050	17.280	12.059	22.106
-10200	8.759	10.607	16.533	21.289	26.508	30.167	31.515	30.974	27.742	22.069	16.378	11.219	21.147
-10300	9.053	10.903	16.841	21.615	26.855	30.530	31.886	31.342	28.098	22.407	16.695	11.521	21.479
-10400	8.368	10.214	16.130	20.870	26.073	29.718	31.061	30.521	27.299	21.642	15.967	10.822	20.724
-10500	8.252	10.098	16.015	20.756	25.960	29.606	30.949	30.409	27.186	21.528	15.852	10.706	20.610
-10600	8.170	10.013	15.922	20.651	25.841	29.476	30.813	30.275	27.061	21.415	15.753	10.618	20.501
-10700	8.638	10.487	16.423	21.192	26.427	30.097	31.452	30.908	27.667	21.981	16.274	11.104	21.054

Mean Temperature (°C) [SAVANNAH, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-10800	8.256	10.106	16.046	20.822	26.064	29.741	31.098	30.554	27.308	21.615	15.901	10.724	20.686
-10900	7.673	9.518	15.432	20.168	25.366	29.007	30.348	29.809	26.589	20.937	15.266	10.125	20.020
-11000	7.345	9.187	15.086	19.799	24.973	28.594	29.925	29.389	26.184	20.554	14.909	9.787	19.644
-11100	8.113	9.962	15.900	20.674	25.913	29.587	30.943	30.399	27.155	21.465	15.754	10.580	20.537
-11200	8.336	10.193	16.167	20.997	26.296	30.018	31.398	30.847	27.567	21.821	16.049	10.827	20.876
-11300	8.515	10.374	16.355	21.195	26.505	30.236	31.620	31.068	27.781	22.024	16.242	11.011	21.077
-11400	8.788	10.647	16.633	21.481	26.800	30.539	31.926	31.373	28.080	22.316	16.525	11.286	21.366
-11500	9.000	10.861	16.856	21.716	27.048	30.797	32.190	31.635	28.335	22.558	16.754	11.505	21.605
-11600	8.494	10.350	16.320	21.143	26.435	30.151	31.528	30.978	27.702	21.963	16.199	10.982	21.020
-11700	8.955	10.814	16.802	21.651	26.971	30.711	32.099	31.545	28.252	22.486	16.694	11.454	21.536
-11800	8.506	10.362	16.329	21.148	26.436	30.149	31.525	30.975	27.701	21.966	16.206	10.993	21.025
-11900	8.366	10.219	16.173	20.971	26.237	29.932	31.299	30.752	27.492	21.777	16.039	10.844	20.842
-12000	8.763	10.616	16.573	21.375	26.645	30.343	31.712	31.164	27.902	22.183	16.441	11.242	21.247
-12100	8.735	10.587	16.535	21.325	26.581	30.270	31.633	31.086	27.832	22.126	16.397	11.209	21.193
-12200	7.861	9.705	15.616	20.347	25.541	29.178	30.516	29.978	26.762	21.114	15.448	10.311	20.198
-12300	6.146	7.978	13.827	18.464	23.555	27.110	28.408	27.882	24.728	19.174	13.611	8.556	18.287
-12400	6.135	7.966	13.811	18.443	23.528	27.078	28.374	27.849	24.698	19.150	13.593	8.542	18.264
-12500	6.690	8.523	14.380	19.031	24.137	27.704	29.007	28.479	25.316	19.749	14.171	9.104	18.858
-12600	6.351	8.180	14.019	18.640	23.715	27.257	28.549	28.025	24.880	19.342	13.795	8.753	18.459
-12700	5.857	7.684	13.510	18.113	23.167	26.693	27.977	27.455	24.323	18.804	13.277	8.251	17.926
-12800	7.011	8.849	14.724	19.402	24.538	28.129	29.444	28.913	25.732	20.137	14.529	9.438	19.237
-12900	5.626	7.457	13.302	17.932	23.017	26.567	27.863	27.338	24.187	18.640	13.083	8.033	17.754
-13000	6.081	7.912	13.755	18.384	23.466	27.014	28.308	27.783	24.635	19.089	13.535	8.487	18.204
-13100	5.508	7.333	13.151	17.740	22.780	26.295	27.573	27.053	23.929	18.423	12.911	7.897	17.549
-13200	5.886	7.713	13.535	18.132	23.179	26.700	27.981	27.460	24.332	18.819	13.299	8.278	17.943
-13300	4.566	6.384	12.169	16.707	21.691	25.160	26.416	25.903	22.814	17.359	11.902	6.933	16.500

Mean Temperature (°C) [SAVANNAH, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-13400	4.234	6.050	11.822	16.341	21.305	24.758	26.007	25.496	22.418	16.983	11.546	6.593	16.129
-13500	4.160	5.976	11.742	16.254	21.210	24.656	25.901	25.391	22.319	16.891	11.463	6.516	16.040
-13600	4.993	6.811	12.592	17.125	22.104	25.569	26.822	26.310	23.224	17.774	12.323	7.358	16.917
-13700	4.566	6.382	12.154	16.673	21.637	25.089	26.337	25.827	22.749	17.314	11.878	6.925	16.461
-13800	5.569	7.388	13.177	17.723	22.716	26.192	27.451	26.937	23.843	18.380	12.915	7.939	17.519
-13900	4.997	6.812	12.579	17.092	22.049	25.496	26.741	26.231	23.158	17.729	12.300	7.353	16.878
-14000	5.479	7.295	13.067	17.586	22.550	26.003	27.251	26.741	23.663	18.228	12.791	7.838	17.374

Appendix A, Section 7: Tifton, Georgia, MCM Outputs

Precipitation in mm [TIFTON, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-3000	107.878	106.852	113.528	81.937	92.100	108.410	111.183	116.798	78.772	52.182	60.064	98.562	1128.265
-3100	108.207	106.567	113.018	82.232	92.522	109.595	114.436	119.220	79.866	53.546	60.707	99.025	1138.941
-3200	107.421	106.546	113.518	81.711	91.907	107.736	106.561	113.737	77.503	50.649	59.592	98.233	1115.114
-3300	107.689	106.297	113.110	81.823	92.177	108.458	108.153	114.996	78.080	51.358	59.975	98.515	1120.632
-3400	108.186	106.180	112.541	82.192	92.600	109.669	111.992	117.801	79.315	52.877	60.655	98.997	1133.004
-3500	106.573	106.108	110.765	84.762	94.122	114.400	127.772	128.995	84.329	59.276	63.256	100.639	1180.998
-3600	107.013	105.794	110.933	84.104	93.825	113.339	122.997	125.809	82.903	57.419	62.645	100.279	1167.059
-3700	105.130	106.007	110.081	85.451	94.457	115.387	129.327	130.318	84.955	60.099	63.732	100.865	1185.807
-3800	104.025	106.183	109.742	85.802	94.620	115.895	130.341	131.119	85.329	60.593	63.982	100.973	1188.604
-3900	99.298	107.650	108.279	88.224	95.719	119.948	143.131	140.042	89.515	66.270	66.069	101.658	1225.804
-4000	99.448	107.366	108.357	87.814	95.542	119.151	139.738	137.827	88.452	64.794	65.643	101.531	1215.663
-4100	106.459	104.751	110.967	83.123	93.427	111.731	110.601	117.825	79.602	53.292	61.513	99.560	1132.853
-4200	104.706	104.933	110.187	84.174	93.957	113.357	115.923	121.699	81.277	55.377	62.415	100.093	1148.098
-4300	101.820	105.384	108.991	85.855	94.721	115.840	124.146	127.588	83.852	58.659	63.767	100.766	1171.388
-4400	101.904	105.120	108.998	85.497	94.581	115.289	120.694	125.346	82.913	57.457	63.415	100.584	1161.799
-4500	102.388	104.858	109.276	84.681	94.238	114.086	114.687	121.280	81.219	55.327	62.687	100.205	1144.931
-4600	102.093	104.674	109.166	84.547	94.198	113.894	112.297	119.764	80.635	54.612	62.516	100.100	1138.497
-4700	102.108	104.468	109.167	84.161	94.045	113.349	108.456	117.198	79.627	53.386	62.135	99.881	1127.981
-4800	101.286	104.350	108.727	84.504	94.222	113.853	108.624	117.513	79.822	53.639	62.359	99.985	1128.885
-4900	101.296	104.318	108.989	83.734	93.893	112.784	102.742	113.411	78.205	51.702	61.661	99.594	1112.329
-5000	98.286	105.111	107.729	85.258	94.591	114.961	110.208	118.952	80.515	54.509	62.896	100.218	1133.231
-5100	96.035	106.301	106.751	86.234	95.045	116.456	115.209	122.626	82.062	56.433	63.721	100.544	1147.418
-5200	95.288	106.402	106.254	86.528	95.215	116.977	115.302	122.912	82.246	56.675	63.945	100.582	1148.325
-5300	93.924	107.555	105.488	87.153	95.546	118.126	118.845	125.536	83.364	58.088	64.558	100.725	1158.907
-5400	93.336	107.904	105.047	87.326	95.671	118.530	118.846	125.720	83.491	58.257	64.727	100.715	1159.570
-5500	95.615	105.323	106.165	85.230	94.702	115.113	101.108	113.323	78.618	52.304	62.589	99.964	1110.055
-5600	99.376	102.989	107.771	82.589	93.576	111.696	81.690	98.955	73.207	46.155	60.188	98.675	1056.868
-5700	100.312	102.388	108.136	81.768	93.224	110.745	74.097	93.134	71.123	43.936	59.345	98.156	1036.363
-5800	101.395	101.841	108.656	80.870	92.794	109.665	65.691	86.396	68.708	41.450	58.343	97.515	1013.323
-5900	98.181	102.544	106.781	82.617	93.692	112.076	75.741	94.797	71.968	44.908	60.013	98.552	1041.870
-6000	98.598	102.069	106.735	82.285	93.580	111.805	71.606	91.624	70.896	43.801	59.646	98.328	1030.972

Precipitation in mm [TIFTON, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-6100	98.292	102.127	106.637	81.839	93.403	111.372	67.330	88.208	69.705	42.581	59.184	98.047	1018.725
-6200	97.936	102.109	106.452	81.569	93.311	111.187	63.930	85.475	68.789	41.670	58.872	97.853	1009.154
-6300	93.715	104.228	104.271	84.338	94.556	114.633	79.526	98.450	73.731	46.939	61.317	99.200	1054.903
-6400	98.952	100.950	106.531	80.818	93.055	110.759	54.562	77.618	66.156	39.136	57.975	97.290	983.802
-6500	97.085	101.351	105.512	81.646	93.487	111.897	57.934	80.792	67.470	40.477	58.728	97.756	994.134
-6600	93.766	102.961	103.845	83.623	94.365	114.244	68.292	89.872	70.943	44.067	60.463	98.720	1025.161
-6700	93.172	103.182	103.462	83.730	94.445	114.521	67.174	89.084	70.765	43.915	60.504	98.726	1022.679
-6800	92.569	103.575	103.107	83.775	94.494	114.713	65.914	88.147	70.519	43.690	60.498	98.710	1019.712
-6900	92.054	103.946	102.790	83.755	94.517	114.840	64.198	86.812	70.131	43.320	60.431	98.662	1015.457
-7000	91.572	104.235	102.442	83.812	94.578	115.080	62.798	85.750	69.859	43.076	60.430	98.645	1012.279
-7100	91.185	104.351	102.113	83.937	94.669	115.404	61.864	85.082	69.731	42.983	60.496	98.660	1010.474
-7200	90.779	104.818	101.843	84.039	94.735	115.630	61.540	84.884	69.727	43.000	60.566	98.682	1010.243
-7300	89.995	105.676	101.220	84.714	95.075	116.629	64.753	87.815	70.904	44.248	61.213	98.940	1021.182
-7400	89.348	106.223	100.613	85.435	95.470	117.816	69.277	91.803	72.448	45.899	62.013	99.200	1035.544
-7500	89.259	105.915	100.480	85.267	95.428	117.772	66.163	89.313	71.664	45.109	61.783	99.094	1027.247
-7600	89.022	105.475	100.169	85.543	95.627	118.425	67.133	90.300	72.139	45.644	62.118	99.159	1030.753
-7700	89.145	105.246	100.256	84.790	95.282	117.558	58.853	83.205	69.700	43.159	61.154	98.814	1007.161
-7800	89.798	103.687	100.606	83.807	94.873	116.641	50.210	75.343	66.950	40.460	60.045	98.332	980.753
-7900	90.046	102.984	100.638	83.295	94.697	116.368	45.526	70.909	65.428	39.032	59.482	98.051	966.457
-8000	88.840	104.144	99.710	84.781	95.408	118.213	54.481	79.601	68.733	42.295	61.064	98.702	995.972
-8100	88.278	104.718	99.228	85.196	95.673	119.015	56.880	81.931	69.683	43.284	61.590	98.843	1004.319
-8200	87.641	104.671	98.574	86.005	96.249	120.735	65.286	89.541	72.507	46.227	62.927	99.073	1029.435
-8300	88.037	103.703	98.776	85.396	95.901	119.862	56.269	81.639	69.817	43.496	61.882	98.846	1003.621
-8400	87.004	104.163	97.863	86.346	96.698	122.295	70.019	93.875	74.244	48.132	63.880	98.988	1043.506
-8500	87.436	104.259	98.246	85.503	96.060	120.476	55.704	81.315	69.879	43.616	62.082	98.828	1003.401
-8600	87.143	103.964	97.899	85.782	96.322	121.309	58.512	84.012	70.947	44.735	62.646	98.870	1012.141
-8700	86.725	103.605	97.489	86.065	96.620	122.255	62.900	88.039	72.448	46.310	63.362	98.869	1024.687
-8800	86.406	103.101	97.139	86.235	96.881	123.155	66.564	91.365	73.707	47.662	63.986	98.775	1034.976
-8900	86.252	102.621	96.959	86.220	96.941	123.420	66.174	91.130	73.706	47.685	64.063	98.716	1033.887
-9000	85.764	101.206	96.455	86.423	97.369	125.032	74.779	98.569	76.383	50.596	65.273	98.346	1056.196
-9100	86.338	103.103	96.971	85.795	96.629	122.639	55.873	82.078	70.701	44.625	62.959	98.692	1006.403
-9200	86.421	103.124	96.982	85.546	96.473	122.329	51.007	77.570	69.192	43.141	62.408	98.621	992.813
-9300	86.716	103.121	97.233	84.794	95.991	121.295	41.032	67.622	65.660	39.747	60.978	98.339	962.529

Precipitation in mm [TIFTON, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-9400	86.150	102.709	96.708	85.498	96.527	122.654	49.386	76.138	68.823	42.822	62.385	98.560	988.360
-9500	85.245	98.763	95.816	86.209	97.501	125.766	70.407	95.357	75.615	49.857	65.279	98.075	1043.891
-9600	83.552	98.174	94.324	86.057	97.800	131.918	106.402	124.077	85.713	61.539	69.561	95.417	1134.536
-9700	82.349	95.530	93.417	85.592	95.403	136.767	134.764	144.240	92.946	70.752	72.409	95.412	1199.581
-9800	81.374	93.747	92.646	84.926	91.998	141.671	161.430	162.057	99.719	80.008	74.911	98.353	1262.840
-9900	83.939	100.758	94.496	85.967	98.092	129.378	82.709	106.256	79.819	54.645	67.434	96.469	1079.962
-10000	83.054	100.408	93.728	85.718	97.933	132.314	98.376	118.804	84.261	59.861	69.352	95.177	1118.984
-10100	83.538	100.520	94.103	85.833	98.148	130.442	86.199	109.282	80.989	56.018	68.032	95.947	1089.051
-10200	81.149	96.194	92.203	84.669	92.175	141.584	155.240	158.673	98.529	78.321	74.718	98.107	1251.563
-10300	81.820	95.237	92.818	85.243	95.122	137.510	132.049	143.042	92.727	70.481	72.588	95.486	1194.123
-10400	81.419	94.809	91.503	83.721	92.140	146.844	182.356	176.319	105.568	88.392	77.123	101.907	1322.102
-10500	81.773	95.167	91.302	83.400	93.085	148.270	188.826	180.539	107.350	91.025	77.705	102.635	1341.077
-10600	82.048	93.300	91.262	83.188	94.174	149.558	195.794	184.851	109.230	93.869	78.230	103.195	1358.699
-10700	81.019	94.780	91.827	84.348	91.667	142.859	159.690	161.896	99.824	80.119	75.272	99.026	1262.328
-10800	81.766	98.369	91.081	83.340	92.485	147.514	181.582	176.430	105.638	88.439	77.319	102.140	1326.102
-10900	81.628	97.781	90.705	81.675	98.581	155.309	219.748	200.520	116.465	105.025	79.972	103.966	1431.375
-11000	78.877	97.916	90.772	80.671	99.511	159.243	236.347	211.350	122.251	114.409	80.087	103.680	1475.116
-11100	82.205	98.408	90.889	82.944	93.890	149.331	190.527	182.176	108.035	91.985	78.062	102.949	1351.402
-11200	82.064	97.855	91.062	83.449	91.538	145.515	165.027	166.509	101.797	82.855	76.294	100.719	1284.684
-11300	81.719	97.675	91.326	83.880	91.756	143.126	151.019	157.310	98.348	78.045	75.129	98.887	1248.221
-11400	81.481	98.436	91.814	84.484	93.985	139.644	131.118	143.665	93.388	71.388	73.318	96.218	1198.939
-11500	82.142	98.276	92.256	84.874	96.202	136.877	114.056	131.493	89.122	65.914	71.710	94.806	1157.728
-11600	81.728	98.399	91.244	83.868	91.554	143.685	156.480	160.689	99.548	79.707	75.467	99.413	1261.783
-11700	82.196	98.396	92.131	84.822	95.613	137.578	119.809	135.547	90.484	67.629	72.183	95.109	1171.497
-11800	81.995	98.219	91.260	83.906	91.565	143.604	156.608	160.707	99.540	79.698	75.443	99.369	1261.914
-11900	81.991	98.960	91.113	83.594	91.607	145.723	170.198	169.367	102.828	84.347	76.487	100.996	1297.211
-12000	81.261	99.642	91.898	84.556	92.915	140.694	144.046	151.876	96.146	75.049	74.092	97.216	1229.391
-12100	81.174	99.566	91.912	84.525	92.488	141.261	148.802	154.913	97.228	76.520	74.428	97.701	1240.519
-12200	82.523	99.672	90.884	82.272	97.287	153.322	211.275	195.449	113.522	100.992	79.445	103.953	1410.596
-12300	73.431	109.451	95.257	81.180	96.548	158.064	267.000	236.851	141.047	146.990	78.760	100.562	1585.139
-12400	73.431	109.522	95.388	81.191	96.481	158.197	266.961	237.022	141.364	147.597	78.940	100.520	1586.614
-12500	74.756	106.904	91.964	79.796	98.217	160.757	258.727	228.115	133.729	134.058	76.835	102.244	1546.101
-12600	73.885	108.918	93.676	80.796	97.112	157.739	264.242	234.049	139.059	143.578	77.588	101.220	1571.862

Precipitation in mm [TIFTON, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-12700	73.086	109.552	98.393	80.305	95.366	163.424	268.020	240.437	145.528	155.302	81.616	99.507	1610.535
-12800	76.724	103.694	91.260	79.848	99.073	161.874	250.025	220.958	128.364	124.730	78.484	103.057	1518.090
-12900	74.237	106.367	100.154	78.353	94.700	166.963	270.531	243.123	147.283	158.234	82.664	98.692	1621.301
-13000	74.071	108.803	96.037	81.169	96.288	158.713	267.413	237.749	142.102	148.936	79.420	100.333	1591.034
-13100	73.147	109.443	101.064	77.204	93.998	171.224	268.380	243.876	149.745	163.023	83.477	98.169	1632.749
-13200	73.587	109.514	98.218	80.494	95.434	163.113	267.567	240.077	145.378	155.083	81.501	99.606	1609.570
-13300	72.964	116.627	101.940	72.370	89.886	177.657	261.437	249.278	159.815	175.194	83.070	94.195	1654.433
-13400	73.199	120.307	104.194	71.732	88.400	177.706	257.402	250.128	162.696	175.933	82.293	92.736	1656.726
-13500	73.349	121.060	104.884	71.620	88.051	177.641	256.123	250.148	163.333	176.639	82.081	92.405	1657.333
-13600	73.286	112.339	101.682	73.667	91.596	176.851	263.304	246.835	156.230	173.363	83.690	95.979	1648.824
-13700	73.795	115.059	102.392	72.402	89.756	177.612	259.793	248.795	160.172	175.266	82.973	94.148	1652.165
-13800	74.413	107.795	101.514	77.785	93.951	171.888	265.478	242.778	150.296	164.397	83.540	98.328	1632.164
-13900	74.001	111.220	102.204	73.704	91.472	176.905	261.663	246.380	156.649	173.878	83.622	95.947	1647.644
-14000	74.414	108.399	102.304	76.931	93.436	173.878	263.602	243.148	151.909	167.428	83.774	97.927	1637.152

Mean Temperature (°C) [TIFTON, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-3000	8.756	10.441	14.328	18.665	22.880	26.088	27.694	27.288	24.651	19.647	13.265	10.334	18.670
-3100	8.674	10.359	14.249	18.592	22.812	26.025	27.633	27.226	24.586	19.577	13.190	10.255	18.598
-3200	8.748	10.436	14.340	18.705	22.950	26.183	27.802	27.392	24.738	19.706	13.294	10.339	18.719
-3300	8.690	10.378	14.287	18.660	22.913	26.153	27.775	27.365	24.706	19.666	13.246	10.284	18.677
-3400	8.614	10.302	14.212	18.585	22.838	26.079	27.701	27.290	24.631	19.591	13.171	10.208	18.602
-3500	8.347	10.034	13.935	18.295	22.534	25.763	27.379	26.970	24.319	19.292	12.887	9.936	18.308
-3600	8.376	10.065	13.978	18.357	22.618	25.864	27.489	27.078	24.414	19.368	12.941	9.973	18.377
-3700	8.251	9.940	13.853	18.232	22.492	25.738	27.362	26.951	24.288	19.242	12.816	9.848	18.251
-3800	8.206	9.896	13.813	18.199	22.467	25.719	27.347	26.936	24.268	19.215	12.781	9.806	18.221
-3900	7.978	9.666	13.577	17.953	22.209	25.452	27.075	26.665	24.004	18.961	12.538	9.573	17.971
-4000	7.995	9.685	13.606	17.998	22.273	25.530	27.161	26.748	24.077	19.018	12.577	9.598	18.022
-4100	8.333	10.030	13.994	18.453	22.800	26.117	27.778	27.358	24.645	19.519	13.005	9.966	18.500
-4200	8.228	9.926	13.890	18.350	22.698	26.016	27.678	27.258	24.544	19.418	12.902	9.862	18.398
-4300	8.073	9.770	13.735	18.194	22.542	25.860	27.521	27.102	24.387	19.261	12.747	9.707	18.242
-4400	8.075	9.774	13.750	18.227	22.595	25.929	27.599	27.177	24.451	19.307	12.773	9.717	18.281
-4500	8.116	9.817	13.806	18.303	22.693	26.044	27.723	27.300	24.561	19.397	12.841	9.767	18.364
-4600	8.099	9.802	13.801	18.315	22.724	26.090	27.777	27.352	24.602	19.422	12.847	9.758	18.382
-4700	8.103	9.808	13.819	18.351	22.779	26.162	27.857	27.430	24.669	19.470	12.875	9.770	18.425
-4800	8.046	9.752	13.772	18.320	22.764	26.160	27.862	27.433	24.663	19.449	12.838	9.719	18.398
-4900	8.085	9.794	13.826	18.391	22.855	26.268	27.978	27.547	24.765	19.533	12.902	9.767	18.476
-5000	7.938	9.647	13.681	18.249	22.717	26.132	27.844	27.413	24.629	19.394	12.759	9.622	18.335
-5100	7.836	9.545	13.581	18.152	22.624	26.042	27.755	27.324	24.538	19.299	12.661	9.521	18.240
-5200	7.774	9.485	13.531	18.119	22.608	26.041	27.762	27.329	24.532	19.278	12.622	9.467	18.212
-5300	7.690	9.401	13.451	18.045	22.540	25.978	27.701	27.267	24.467	19.207	12.545	9.385	18.140
-5400	7.641	9.353	13.412	18.019	22.529	25.979	27.708	27.273	24.465	19.191	12.514	9.342	18.119
-5500	7.797	9.514	13.600	18.250	22.807	26.296	28.044	27.605	24.769	19.452	12.729	9.518	18.365
-5600	7.963	9.685	13.801	18.499	23.108	26.639	28.409	27.965	25.098	19.734	12.959	9.705	18.630
-5700	7.995	9.720	13.854	18.579	23.218	26.774	28.557	28.110	25.226	19.834	13.028	9.750	18.720
-5800	8.040	9.768	13.921	18.675	23.346	26.927	28.724	28.273	25.371	19.950	13.113	9.808	18.826
-5900	7.870	9.597	13.747	18.496	23.162	26.739	28.533	28.083	25.184	19.768	12.936	9.636	18.646
-6000	7.865	9.595	13.757	18.527	23.216	26.812	28.615	28.163	25.251	19.814	12.959	9.641	18.685
-6100	7.878	9.609	13.783	18.570	23.277	26.889	28.700	28.246	25.323	19.869	12.995	9.661	18.733
-6200	7.874	9.607	13.792	18.597	23.323	26.950	28.769	28.314	25.379	19.907	13.015	9.665	18.766

Mean Temperature (°C) [TIFTON, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-6300	7.633	9.365	13.542	18.334	23.047	26.663	28.476	28.022	25.095	19.636	12.757	9.419	18.499
-6400	7.862	9.601	13.817	18.672	23.452	27.123	28.965	28.505	25.538	20.017	13.070	9.677	18.858
-6500	7.767	9.507	13.727	18.588	23.376	27.053	28.898	28.437	25.467	19.939	12.984	9.585	18.777
-6600	7.592	9.331	13.547	18.402	23.183	26.855	28.697	28.237	25.270	19.748	12.801	9.407	18.589
-6700	7.557	9.297	13.523	18.392	23.188	26.873	28.721	28.259	25.284	19.748	12.785	9.378	18.584
-6800	7.530	9.272	13.505	18.387	23.197	26.893	28.748	28.284	25.301	19.752	12.775	9.357	18.584
-6900	7.508	9.251	13.493	18.389	23.214	26.922	28.783	28.318	25.326	19.764	12.772	9.341	18.590
-7000	7.477	9.221	13.473	18.383	23.224	26.945	28.813	28.346	25.345	19.768	12.760	9.316	18.589
-7100	7.440	9.185	13.446	18.370	23.226	26.960	28.833	28.365	25.355	19.765	12.741	9.286	18.581
-7200	7.416	9.162	13.428	18.359	23.224	26.964	28.841	28.372	25.357	19.759	12.728	9.265	18.573
-7300	7.332	9.079	13.348	18.285	23.156	26.901	28.781	28.312	25.293	19.689	12.652	9.184	18.501
-7400	7.236	8.984	13.254	18.194	23.068	26.816	28.697	28.228	25.207	19.600	12.560	9.089	18.411
-7500	7.225	8.974	13.256	18.213	23.106	26.870	28.758	28.287	25.255	19.631	12.572	9.086	18.436
-7600	7.164	8.914	13.203	18.171	23.076	26.849	28.743	28.270	25.231	19.597	12.525	9.030	18.398
-7700	7.214	8.967	13.273	18.267	23.201	26.998	28.904	28.429	25.373	19.712	12.612	9.092	18.504
-7800	7.276	9.032	13.355	18.378	23.342	27.164	29.083	28.604	25.531	19.842	12.711	9.167	18.624
-7900	7.293	9.051	13.387	18.430	23.417	27.257	29.185	28.705	25.619	19.909	12.756	9.193	18.683
-8000	7.136	8.893	13.225	18.260	23.239	27.072	28.997	28.518	25.436	19.734	12.589	9.033	18.511
-8100	7.065	8.823	13.158	18.200	23.184	27.023	28.950	28.470	25.385	19.677	12.526	8.965	18.452
-8200	6.925	8.683	13.015	18.051	23.030	26.865	28.789	28.310	25.228	19.525	12.379	8.822	18.302
-8300	6.981	8.741	13.092	18.157	23.168	27.028	28.966	28.483	25.383	19.651	12.474	8.891	18.418
-8400	6.788	8.547	12.887	17.936	22.929	26.775	28.706	28.225	25.134	19.419	12.259	8.691	18.191
-8500	6.920	8.682	13.044	18.127	23.158	27.034	28.980	28.495	25.383	19.634	12.437	8.839	18.394
-8600	6.846	8.609	12.974	18.061	23.097	26.977	28.926	28.441	25.326	19.572	12.369	8.767	18.330
-8700	6.766	8.529	12.893	17.980	23.015	26.894	28.842	28.357	25.243	19.490	12.288	8.686	18.249
-8800	6.689	8.452	12.818	17.907	22.944	26.826	28.775	28.290	25.174	19.418	12.214	8.610	18.177
-8900	6.661	8.425	12.797	17.894	22.941	26.831	28.784	28.298	25.176	19.412	12.198	8.587	18.167
-9000	6.532	8.295	12.663	17.755	22.795	26.679	28.630	28.144	25.026	19.268	12.061	8.454	18.025
-9100	6.711	8.479	12.873	18.007	23.093	27.014	28.984	28.494	25.350	19.549	12.297	8.653	18.292
-9200	6.734	8.504	12.910	18.062	23.168	27.106	29.083	28.592	25.436	19.617	12.345	8.684	18.353
-9300	6.831	8.604	13.028	18.209	23.347	27.311	29.302	28.807	25.633	19.785	12.481	8.795	18.511
-9400	6.702	8.473	12.890	18.058	23.181	27.134	29.119	28.625	25.459	19.625	12.334	8.660	18.355
-9500	6.441	8.209	12.603	17.737	22.823	26.744	28.714	28.224	25.080	19.279	12.027	8.383	18.022

Mean Temperature (°C) [TIFTON, GA]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-9600	5.971	7.735	12.110	17.213	22.266	26.160	28.115	27.629	24.504	18.734	11.515	7.899	17.488
-9700	5.630	7.392	11.751	16.828	21.853	25.724	27.668	27.184	24.076	18.331	11.140	7.546	17.094
-9800	5.290	7.049	11.395	16.451	21.453	25.306	27.240	26.759	23.663	17.940	10.771	7.196	16.710
-9900	6.118	7.889	12.301	17.463	22.580	26.527	28.509	28.016	24.854	19.025	11.742	8.073	17.758
-10000	5.881	7.651	12.061	17.219	22.332	26.275	28.256	27.763	24.603	18.779	11.499	7.834	17.513
-10100	6.022	7.794	12.212	17.384	22.511	26.467	28.453	27.960	24.791	18.953	11.659	7.981	17.682
-10200	5.229	6.993	11.366	16.467	21.516	25.408	27.362	26.876	23.753	17.986	10.770	7.156	16.740
-10300	5.517	7.283	11.668	16.786	21.856	25.764	27.726	27.238	24.103	18.318	11.082	7.452	17.066
-10400	4.846	6.608	10.971	16.057	21.090	24.968	26.915	26.430	23.317	17.565	10.365	6.765	16.325
-10500	4.732	6.494	10.858	15.944	20.978	24.857	26.805	26.320	23.206	17.454	10.253	6.652	16.213
-10600	4.650	6.412	10.768	15.842	20.862	24.730	26.672	26.188	23.082	17.342	10.155	6.565	16.106
-10700	5.110	6.876	11.257	16.371	21.435	25.339	27.300	26.812	23.680	17.900	10.669	7.043	16.649
-10800	4.734	6.500	10.886	16.007	21.079	24.989	26.953	26.464	23.328	17.541	10.302	6.670	16.288
-10900	4.163	5.925	10.286	15.367	20.395	24.270	26.215	25.731	22.620	16.872	9.677	6.081	15.633
-11000	3.841	5.601	9.947	15.006	20.010	23.864	25.799	25.317	22.221	16.496	9.325	5.749	15.265
-11100	4.594	6.360	10.744	15.862	20.931	24.838	26.800	26.312	23.178	17.393	10.158	6.528	16.142
-11200	4.812	6.584	11.003	16.176	21.304	25.261	27.248	26.754	23.585	17.746	10.450	6.772	16.475
-11300	4.988	6.761	11.186	16.369	21.509	25.474	27.466	26.971	23.796	17.946	10.640	6.952	16.672
-11400	5.255	7.029	11.460	16.650	21.799	25.772	27.767	27.271	24.091	18.233	10.918	7.223	16.956
-11500	5.464	7.239	11.677	16.880	22.042	26.025	28.026	27.529	24.341	18.472	11.143	7.438	17.190
-11600	4.968	6.739	11.154	16.320	21.441	25.392	27.376	26.883	23.718	17.885	10.597	6.924	16.616
-11700	5.420	7.193	11.625	16.817	21.967	25.940	27.937	27.441	24.259	18.401	11.084	7.388	17.123
-11800	4.979	6.750	11.163	16.325	21.442	25.389	27.372	26.879	23.717	17.888	10.604	6.934	16.620
-11900	4.842	6.611	11.010	16.152	21.248	25.177	27.150	26.660	23.510	17.701	10.439	6.788	16.441
-12000	5.232	7.001	11.403	16.549	21.648	25.580	27.555	27.064	23.912	18.100	10.834	7.179	16.838
-12100	5.205	6.972	11.367	16.500	21.587	25.508	27.478	26.988	23.844	18.043	10.790	7.147	16.786
-12200	4.347	6.109	10.467	15.543	20.567	24.437	26.380	25.897	22.789	17.046	9.856	6.263	15.808
-12300	2.665	4.417	8.716	13.699	18.621	22.408	24.309	23.835	20.786	15.136	8.048	4.538	13.931
-12400	2.655	4.406	8.701	13.679	18.594	22.377	24.275	23.801	20.756	15.112	8.029	4.525	13.909
-12500	3.198	4.952	9.259	14.255	19.191	22.990	24.897	24.422	21.365	15.701	8.599	5.078	14.492
-12600	2.866	4.616	8.905	13.874	18.779	22.552	24.446	23.974	20.935	15.300	8.228	4.732	14.101
-12700	2.381	4.130	8.407	13.357	18.242	21.999	23.884	23.414	20.386	14.770	7.718	4.239	13.577
-12800	3.514	5.270	9.595	14.618	19.584	23.408	25.327	24.849	21.774	16.084	8.951	5.406	14.865

Mean Temperature (°C) [TIFTON, GA]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-12900	2.154	3.906	8.200	13.178	18.093	21.875	23.773	23.299	20.255	14.610	7.529	4.025	13.408
-13000	2.602	4.353	8.646	13.621	18.534	22.313	24.210	23.737	20.694	15.052	7.973	4.471	13.850
-13100	2.039	3.786	8.055	12.992	17.862	21.608	23.487	23.018	19.999	14.396	7.358	3.891	13.207
-13200	2.410	4.158	8.431	13.375	18.254	22.005	23.888	23.418	20.395	14.784	7.739	4.265	13.594
-13300	1.115	2.856	7.093	11.979	16.795	20.495	22.351	21.887	18.901	13.348	6.366	2.943	12.177
-13400	0.789	2.529	6.753	11.621	16.417	20.100	21.948	21.486	18.511	12.977	6.015	2.609	11.813
-13500	0.717	2.456	6.676	11.536	16.323	20.000	21.845	21.383	18.413	12.886	5.933	2.534	11.725
-13600	1.535	3.276	7.509	12.390	17.200	20.896	22.750	22.286	19.303	13.755	6.779	3.361	12.587
-13700	1.115	2.855	7.080	11.947	16.742	20.425	22.273	21.811	18.836	13.302	6.341	2.935	12.138
-13800	2.099	3.842	8.083	12.977	17.801	21.508	23.368	22.903	19.911	14.351	7.360	3.931	13.178
-13900	1.538	3.277	7.498	12.359	17.147	20.824	22.669	22.208	19.237	13.710	6.755	3.356	12.548
-14000	2.012	3.752	7.976	12.844	17.639	21.322	23.171	22.708	19.734	14.199	7.238	3.832	13.036

Appendix A, Section 8: Union, South Carolina, MCM Outputs

Precipitation in mm [UNION, SC]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-3000	124.227	109.712	138.633	87.604	94.968	104.802	108.096	111.029	101.111	95.286	92.251	104.701	1272.419
-3100	125.257	110.005	138.693	87.994	95.084	105.029	108.283	111.170	101.273	95.558	92.330	104.766	1275.442
-3200	123.674	109.465	138.800	87.479	94.913	104.648	107.949	110.923	100.911	94.955	92.186	104.594	1270.497
-3300	124.459	109.628	138.787	87.618	94.986	104.785	108.064	111.007	100.993	95.095	92.231	104.627	1272.282
-3400	125.684	110.080	138.663	88.107	95.104	105.023	108.270	111.159	101.177	95.404	92.315	104.703	1275.689
-3500	125.227	112.063	138.528	92.014	95.547	105.955	109.005	111.735	101.951	96.679	92.649	104.866	1286.218
-3600	125.676	111.481	138.573	91.094	95.458	105.739	108.852	111.602	101.719	96.305	92.564	104.821	1283.886
-3700	123.861	112.764	138.489	93.248	95.648	106.139	109.154	111.846	102.040	96.827	92.706	104.786	1287.508
-3800	122.592	113.386	138.423	93.861	95.698	106.235	109.230	111.904	102.095	96.918	92.737	104.738	1287.818
-3900	117.363	117.135	138.339	97.708	96.016	107.026	109.765	112.379	102.778	98.002	93.023	104.184	1293.716
-4000	117.470	116.683	138.355	97.153	95.972	106.868	109.683	112.286	102.594	97.715	92.959	104.297	1292.034
-4100	125.273	110.699	139.369	90.071	95.335	105.363	108.509	111.342	101.182	95.434	92.398	104.600	1279.574
-4200	123.483	111.783	139.193	91.751	95.494	105.689	108.799	111.551	101.432	95.852	92.512	104.621	1282.162
-4300	120.418	113.619	138.843	94.451	95.730	106.187	109.219	111.865	101.826	96.500	92.687	104.531	1285.876
-4400	120.536	113.310	138.895	93.998	95.686	106.064	109.113	111.783	101.672	96.253	92.636	104.518	1284.466
-4500	120.963	112.712	139.002	92.821	95.578	105.804	108.872	111.608	101.405	95.818	92.536	104.516	1281.636
-4600	120.671	112.659	139.058	92.722	95.564	105.749	108.803	111.563	101.310	95.664	92.510	104.477	1280.750
-4700	120.680	112.416	139.083	92.225	95.514	105.618	108.652	111.464	101.152	95.406	92.456	104.439	1279.104
-4800	119.907	112.757	139.005	92.878	95.568	105.705	108.714	111.512	101.174	95.447	92.481	104.394	1279.542
-4900	119.652	112.478	139.088	91.763	95.463	105.460	108.428	111.330	100.928	95.041	92.387	104.358	1276.376
-5000	116.293	114.730	138.541	94.239	95.682	105.911	108.879	111.634	101.266	95.609	92.543	104.293	1279.621
-5100	113.683	117.179	137.976	95.842	95.828	106.218	109.171	111.837	101.496	95.992	92.649	104.148	1282.019
-5200	113.022	117.858	137.835	96.435	95.881	106.309	109.235	111.887	101.516	96.030	92.674	104.031	1282.712
-5300	111.571	120.129	137.423	97.498	95.987	106.543	109.449	112.038	101.682	96.306	92.754	103.805	1285.185
-5400	111.047	121.052	137.230	97.883	96.026	106.614	109.498	112.076	101.695	96.331	92.773	103.671	1285.896
-5500	113.396	116.442	137.673	94.755	95.707	105.833	108.608	111.502	100.950	95.109	92.481	104.073	1276.529
-5600	117.838	112.119	138.812	90.818	95.334	104.998	107.386	110.793	100.165	93.784	92.169	104.010	1268.226
-5700	119.008	111.141	139.178	89.689	95.216	104.721	106.838	110.501	99.869	93.281	92.059	103.899	1265.400
-5800	120.307	110.141	139.665	88.464	95.073	104.397	106.144	110.137	99.535	92.705	91.932	103.755	1262.254
-5900	116.782	112.424	138.308	91.210	95.355	104.963	107.040	110.648	99.974	93.477	92.134	103.888	1266.201
-6000	117.449	111.881	138.353	90.816	95.311	104.848	106.730	110.494	99.821	93.219	92.084	103.825	1264.831

Precipitation in mm [UNION, SC]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-6100	116.923	111.931	138.114	90.214	95.249	104.700	106.375	110.312	99.655	92.935	92.024	103.761	1262.193
-6200	116.446	112.009	137.911	89.898	95.213	104.604	106.082	110.168	99.527	92.717	91.982	103.703	1260.260
-6300	111.831	116.756	136.671	94.283	95.623	105.442	107.466	110.947	100.197	93.887	92.283	103.767	1269.154
-6400	118.067	110.671	138.329	89.027	95.109	104.338	105.169	109.724	99.164	92.099	91.863	103.532	1257.091
-6500	115.983	111.988	137.629	90.393	95.243	104.592	105.564	109.954	99.332	92.404	91.950	103.579	1258.611
-6600	112.253	115.550	136.587	93.548	95.536	105.177	106.618	110.539	99.793	93.217	92.161	103.637	1264.614
-6700	111.614	116.182	136.343	93.816	95.557	105.199	106.541	110.514	99.763	93.173	92.162	103.598	1264.463
-6800	110.897	116.988	136.057	93.977	95.568	105.205	106.443	110.477	99.725	93.114	92.158	103.564	1264.173
-6900	110.278	117.737	135.791	94.038	95.570	105.190	106.298	110.414	99.668	93.021	92.146	103.530	1263.681
-7000	109.775	118.443	135.567	94.229	95.584	105.199	106.182	110.370	99.626	92.956	92.142	103.490	1263.564
-7100	109.456	118.945	135.426	94.525	95.609	105.230	106.110	110.349	99.604	92.925	92.147	103.448	1263.775
-7200	109.007	119.823	135.231	94.743	95.629	105.259	106.090	110.348	99.600	92.924	92.153	103.421	1264.229
-7300	108.403	121.708	135.022	95.885	95.747	105.487	106.439	110.551	99.753	93.197	92.231	103.332	1267.757
-7400	108.100	123.240	134.941	97.097	95.889	105.771	106.899	110.813	99.959	93.558	92.330	103.160	1271.756
-7500	108.059	122.963	134.891	96.940	95.866	105.700	106.625	110.684	99.846	93.373	92.297	103.151	1270.394
-7600	108.149	122.833	134.998	97.479	95.935	105.825	106.745	110.766	99.905	93.482	92.336	103.018	1271.470
-7700	107.984	122.248	134.747	96.408	95.794	105.504	105.908	110.340	99.570	92.913	92.209	103.146	1266.772
-7800	108.572	119.663	134.836	94.982	95.629	105.147	104.895	109.825	99.200	92.279	92.067	103.198	1260.294
-7900	108.853	118.623	134.800	94.286	95.552	104.977	104.279	109.520	98.997	91.932	91.994	103.173	1256.985
-8000	108.114	121.427	134.728	96.678	95.819	105.502	105.457	110.154	99.426	92.688	92.187	103.019	1265.201
-8100	107.760	122.817	134.610	97.416	95.916	105.688	105.757	110.327	99.548	92.907	92.251	102.872	1267.869
-8200	107.812	123.759	134.819	98.798	96.140	106.158	106.689	110.834	99.924	93.560	92.420	102.367	1273.281
-8300	108.027	122.070	134.737	97.932	95.990	105.807	105.721	110.345	99.555	92.937	92.281	102.680	1268.081
-8400	107.857	124.060	134.939	99.579	96.307	106.513	107.200	111.135	100.152	93.963	92.539	101.686	1275.930
-8500	107.542	123.415	134.469	98.254	96.042	105.890	105.680	110.350	99.555	92.950	92.301	102.524	1268.972
-8600	107.642	123.543	134.594	98.799	96.143	106.092	106.025	110.546	99.693	93.196	92.371	102.241	1270.885
-8700	107.592	123.583	134.638	99.346	96.261	106.348	106.524	110.818	99.893	93.542	92.462	101.818	1272.827
-8800	107.682	123.394	134.765	99.743	96.361	106.578	106.925	111.042	100.060	93.834	92.542	101.331	1274.258
-8900	107.652	122.921	134.743	99.803	96.381	106.612	106.899	111.041	100.056	93.833	92.550	101.206	1273.698
-9000	107.890	121.685	135.045	100.348	96.530	107.062	107.755	111.505	100.423	94.457	92.711	100.023	1275.434
-9100	107.410	123.465	134.429	99.219	96.241	106.237	105.777	110.482	99.640	93.138	92.398	101.801	1270.237
-9200	107.370	123.424	134.299	98.883	96.167	106.057	105.172	110.183	99.435	92.793	92.324	102.021	1268.129
-9300	107.112	122.863	133.920	97.740	95.950	105.595	103.726	109.445	98.969	91.994	92.139	102.478	1261.929

Precipitation in mm [UNION, SC]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-9400	107.187	123.118	134.184	98.928	96.179	106.062	104.970	110.099	99.380	92.709	92.317	101.946	1267.078
-9500	107.770	118.895	134.911	100.365	96.566	107.090	107.409	111.375	100.297	94.272	92.700	99.659	1271.309
-9600	108.826	120.682	136.259	101.430	95.542	108.812	110.364	113.002	101.751	96.672	93.313	93.809	1280.461
-9700	109.675	118.357	137.255	102.059	90.934	110.098	112.068	114.021	102.884	98.457	93.772	93.027	1282.607
-9800	110.903	117.032	138.244	102.680	84.899	111.351	113.378	114.910	104.025	100.183	94.222	97.328	1289.155
-9900	108.236	124.024	135.565	100.926	96.549	107.952	108.642	112.098	100.864	95.251	92.987	96.325	1279.419
-10000	108.724	124.866	136.189	101.326	95.674	108.750	109.930	112.817	101.503	96.306	93.266	93.636	1282.986
-10100	108.359	124.298	135.732	101.044	96.399	108.202	108.972	112.295	101.024	95.525	93.069	95.315	1280.233
-10200	111.002	121.250	138.092	102.581	85.167	111.272	113.244	114.819	103.787	99.853	94.172	97.123	1292.362
-10300	109.710	118.697	137.233	102.053	90.365	110.205	112.054	114.042	102.821	98.383	93.789	93.260	1282.610
-10400	114.668	120.371	139.163	103.266	85.384	112.624	114.460	115.734	105.038	101.689	94.647	103.045	1310.089
-10500	116.203	121.243	139.449	103.449	87.184	112.988	114.748	115.972	105.366	102.161	94.761	104.284	1317.809
-10600	117.344	118.513	139.737	103.640	89.234	113.327	114.994	116.200	105.732	102.674	94.862	105.235	1321.490
-10700	111.769	119.657	138.279	102.709	84.287	111.577	113.518	115.014	103.997	100.176	94.272	98.598	1293.852
-10800	116.141	126.407	139.247	103.286	86.033	112.765	114.576	115.805	105.018	101.682	94.673	103.603	1319.237
-10900	120.571	126.286	140.994	104.441	97.735	114.825	116.029	117.195	107.160	104.656	94.816	107.652	1352.358
-11000	118.362	126.469	142.006	105.168	100.514	115.721	116.646	117.980	108.425	106.331	93.333	108.505	1359.459
-11100	118.033	126.811	139.634	103.532	88.699	113.240	114.959	116.120	105.464	102.320	94.817	105.022	1328.652
-11200	115.948	125.784	139.090	102.923	84.142	112.182	114.013	115.373	104.289	100.647	94.451	101.509	1310.350
-11300	113.907	124.993	138.551	102.594	84.378	111.536	113.338	114.913	103.691	99.760	94.221	98.667	1300.549
-11400	111.279	125.170	137.690	102.137	88.240	110.599	112.245	114.220	102.875	98.514	93.891	94.599	1291.461
-11500	110.637	124.062	137.035	101.762	92.166	109.830	111.191	113.600	102.201	97.463	93.618	92.613	1286.180
-11600	114.106	126.060	138.429	102.702	84.064	111.712	113.559	115.055	103.907	100.074	94.291	99.418	1303.379
-11700	111.106	124.384	137.084	101.878	91.125	110.047	111.542	113.795	102.418	97.799	93.699	92.980	1287.858
-11800	114.457	125.712	138.360	102.700	84.084	111.696	113.552	115.049	103.909	100.075	94.288	99.334	1303.216
-11900	115.606	127.167	138.811	103.013	84.309	112.277	114.140	115.464	104.495	100.933	94.500	101.819	1312.534
-12000	111.136	126.815	137.760	102.374	86.414	110.969	112.827	114.557	103.354	99.224	94.042	95.939	1295.411
-12100	111.224	126.724	137.909	102.470	85.682	111.137	113.038	114.690	103.542	99.503	94.107	96.635	1296.662
-12200	120.609	128.932	140.540	104.117	95.133	114.300	115.636	116.871	106.596	103.932	94.984	107.076	1348.724
-12300	116.549	141.203	150.247	115.308	103.086	101.887	118.539	121.147	113.278	112.350	88.729	110.886	1393.210
-12400	116.601	141.185	150.405	115.431	103.117	101.947	118.556	121.209	113.380	112.468	89.044	110.934	1394.277
-12500	115.642	139.212	144.655	108.799	102.185	109.898	117.673	119.737	111.256	109.900	85.833	109.912	1374.701
-12600	116.164	141.009	147.427	113.154	102.793	102.588	118.198	120.718	112.736	111.692	86.785	110.622	1383.886

Precipitation in mm [UNION, SC]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-12700	117.426	139.342	154.892	116.188	103.634	107.534	119.044	122.125	114.687	113.987	93.707	111.561	1414.126
-12800	117.002	134.967	143.316	106.366	101.574	114.957	117.186	118.864	109.880	108.191	89.408	109.246	1370.956
-12900	120.776	133.432	157.623	114.519	103.946	111.606	119.452	122.572	115.195	114.572	95.556	111.812	1421.062
-13000	118.093	139.724	151.466	115.821	103.210	102.328	118.647	121.365	113.601	112.729	89.866	111.040	1397.890
-13100	119.189	136.751	158.202	113.566	104.238	116.699	119.712	123.191	116.094	115.481	97.286	112.240	1432.650
-13200	118.199	139.360	154.589	116.304	103.600	107.192	118.993	122.085	114.651	113.942	93.515	111.543	1413.972
-13300	121.775	138.341	152.335	111.566	105.957	124.475	121.937	126.492	120.159	111.461	100.171	114.233	1448.902
-13400	122.662	139.531	152.660	112.387	106.586	125.402	122.878	127.763	121.617	106.942	100.725	114.966	1454.119
-13500	122.978	139.558	152.927	112.596	106.736	125.613	123.112	128.082	121.978	106.544	100.861	115.150	1456.135
-13600	121.233	136.141	155.381	111.156	105.235	123.167	120.921	125.167	118.628	115.579	99.517	113.472	1445.597
-13700	123.256	135.714	152.838	111.664	106.004	124.541	122.006	126.656	120.377	110.698	100.239	114.339	1448.331
-13800	121.168	134.006	158.723	114.264	104.240	117.568	119.645	123.329	116.371	115.716	97.536	112.368	1434.934
-13900	122.489	134.182	156.038	111.253	105.279	123.288	120.969	125.323	118.849	115.232	99.597	113.578	1446.078
-14000	121.491	133.916	159.354	113.536	104.451	119.863	119.874	123.790	116.999	116.148	98.295	112.671	1440.389

Mean Temperature (°C) [UNION, SC]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
0	3.501	5.163	9.621	14.326	18.645	22.647	24.619	24.127	20.719	14.514	9.855	5.142	14.406
-100	3.510	5.173	9.633	14.341	18.665	22.670	24.644	24.151	20.741	14.532	9.869	5.153	14.424
-200	4.280	5.953	10.468	15.261	19.676	23.757	25.767	25.264	21.799	15.506	10.751	5.960	15.370
-300	3.524	5.187	9.651	14.365	18.694	22.705	24.680	24.187	20.774	14.560	9.890	5.170	14.449
-400	3.776	5.443	9.928	14.674	19.038	23.078	25.067	24.570	21.135	14.889	10.185	5.436	14.768
-500	3.976	5.646	10.149	14.922	19.316	23.380	25.381	24.881	21.428	15.155	10.421	5.648	15.025
-600	4.083	5.755	10.267	15.055	19.465	23.541	25.549	25.046	21.585	15.296	10.547	5.761	15.162
-700	4.226	5.900	10.425	15.234	19.666	23.760	25.776	25.272	21.797	15.488	10.716	5.913	15.348
-800	4.212	5.887	10.412	15.220	19.652	23.745	25.762	25.258	21.783	15.474	10.703	5.899	15.334
-900	4.066	5.739	10.255	15.051	19.470	23.552	25.564	25.061	21.594	15.298	10.540	5.747	15.161
-1000	3.851	5.522	10.024	14.797	19.191	23.254	25.255	24.755	21.303	15.029	10.296	5.523	14.900
-1100	4.001	5.674	10.192	14.989	19.409	23.493	25.505	25.002	21.534	15.237	10.477	5.683	15.100
-1200	4.096	5.772	10.300	15.113	19.550	23.648	25.667	25.162	21.684	15.371	10.593	5.785	15.228
-1300	4.152	5.829	10.367	15.195	19.649	23.761	25.786	25.279	21.791	15.463	10.669	5.847	15.316
-1400	4.144	5.822	10.363	15.198	19.657	23.774	25.802	25.294	21.803	15.468	10.668	5.842	15.320
-1500	4.020	5.697	10.234	15.061	19.513	23.623	25.648	25.141	21.654	15.327	10.535	5.715	15.181
-1600	3.886	5.562	10.094	14.913	19.356	23.459	25.480	24.974	21.493	15.174	10.391	5.578	15.030
-1700	3.615	5.288	9.804	14.598	19.013	23.094	25.105	24.602	21.136	14.843	10.087	5.296	14.707
-1800	3.811	5.487	10.021	14.844	19.291	23.397	25.420	24.914	21.430	15.107	10.320	5.504	14.962
-1900	3.983	5.663	10.213	15.061	19.536	23.664	25.698	25.189	21.688	15.340	10.526	5.687	15.187
-2000	3.646	5.323	9.858	14.683	19.132	23.240	25.264	24.758	21.272	14.947	10.158	5.340	14.802
-2100	3.792	5.473	10.027	14.881	19.361	23.495	25.532	25.022	21.517	15.164	10.343	5.499	15.009
-2200	3.910	5.593	10.165	15.046	19.556	23.714	25.762	25.249	21.727	15.346	10.496	5.628	15.183
-2300	4.008	5.693	10.276	15.173	19.701	23.873	25.929	25.413	21.881	15.484	10.616	5.734	15.315
-2400	3.902	5.587	10.171	15.069	19.599	23.772	25.829	25.313	21.780	15.381	10.511	5.628	15.212
-2500	3.740	5.424	9.999	14.886	19.403	23.566	25.617	25.103	21.577	15.190	10.333	5.461	15.025
-2600	3.677	5.363	9.948	14.849	19.381	23.556	25.613	25.097	21.563	15.162	10.290	5.405	14.992
-2700	3.756	5.445	10.046	14.973	19.534	23.732	25.801	25.282	21.730	15.303	10.403	5.494	15.125
-2800	3.765	5.456	10.070	15.016	19.597	23.812	25.889	25.367	21.803	15.358	10.437	5.512	15.173
-2900	3.835	5.530	10.159	15.130	19.737	23.973	26.061	25.537	21.957	15.487	10.539	5.593	15.295
-3000	3.717	5.411	10.041	15.010	19.617	23.852	25.940	25.415	21.836	15.367	10.420	5.475	15.175
-3100	3.621	5.316	9.949	14.925	19.538	23.778	25.868	25.343	21.760	15.285	10.332	5.381	15.091
-3200	3.708	5.406	10.056	15.058	19.700	23.963	26.065	25.537	21.937	15.435	10.453	5.480	15.233

Mean Temperature (°C) [UNION, SC]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-3300	3.640	5.339	9.995	15.006	19.657	23.928	26.034	25.505	21.899	15.388	10.397	5.415	15.183
-3400	3.551	5.251	9.907	14.918	19.569	23.841	25.947	25.417	21.811	15.300	10.309	5.327	15.096
-3500	3.240	4.937	9.583	14.579	19.214	23.472	25.571	25.044	21.448	14.952	9.977	5.009	14.752
-3600	3.273	4.973	9.634	14.653	19.312	23.590	25.699	25.169	21.558	15.040	10.040	5.052	14.833
-3700	3.127	4.827	9.487	14.506	19.165	23.443	25.551	25.021	21.411	14.893	9.894	4.905	14.686
-3800	3.075	4.776	9.442	14.468	19.136	23.422	25.534	25.003	21.387	14.860	9.852	4.857	14.651
-3900	2.808	4.508	9.166	14.180	18.834	23.109	25.216	24.686	21.078	14.564	9.570	4.585	14.359
-4000	2.828	4.530	9.200	14.233	18.909	23.200	25.316	24.784	21.163	14.630	9.615	4.613	14.418
-4100	3.224	4.935	9.656	14.767	19.527	23.886	26.036	25.494	21.824	15.213	10.113	5.043	14.977
-4200	3.102	4.813	9.535	14.647	19.408	23.769	25.919	25.378	21.706	15.094	9.992	4.922	14.857
-4300	2.920	4.632	9.353	14.465	19.226	23.586	25.736	25.195	21.523	14.911	9.810	4.740	14.675
-4400	2.923	4.637	9.372	14.505	19.288	23.667	25.826	25.282	21.597	14.964	9.841	4.752	14.721
-4500	2.971	4.688	9.438	14.594	19.403	23.802	25.971	25.425	21.725	15.068	9.919	4.810	14.818
-4600	2.951	4.670	9.433	14.609	19.440	23.856	26.034	25.485	21.772	15.096	9.926	4.799	14.839
-4700	2.956	4.678	9.454	14.652	19.505	23.941	26.128	25.576	21.849	15.152	9.959	4.813	14.889
-4800	2.889	4.613	9.401	14.615	19.487	23.938	26.133	25.579	21.841	15.127	9.915	4.754	14.858
-4900	2.936	4.662	9.464	14.699	19.595	24.064	26.268	25.711	21.960	15.224	9.989	4.810	14.949
-5000	2.764	4.491	9.295	14.534	19.433	23.906	26.111	25.555	21.801	15.061	9.822	4.639	14.784
-5100	2.644	4.372	9.178	14.421	19.324	23.800	26.007	25.450	21.694	14.951	9.707	4.521	14.673
-5200	2.573	4.302	9.121	14.383	19.307	23.800	26.015	25.456	21.687	14.925	9.661	4.458	14.641
-5300	2.474	4.205	9.028	14.296	19.228	23.726	25.944	25.384	21.611	14.842	9.571	4.363	14.556
-5400	2.417	4.149	8.982	14.267	19.215	23.728	25.953	25.390	21.607	14.823	9.535	4.312	14.532
-5500	2.600	4.338	9.204	14.539	19.541	24.098	26.345	25.776	21.961	15.126	9.784	4.517	14.819
-5600	2.794	4.539	9.441	14.831	19.894	24.499	26.771	26.196	22.344	15.454	10.051	4.736	15.129
-5700	2.832	4.581	9.503	14.926	20.024	24.657	26.943	26.364	22.492	15.569	10.131	4.788	15.234
-5800	2.885	4.638	9.583	15.039	20.174	24.837	27.138	26.554	22.660	15.704	10.229	4.856	15.358
-5900	2.686	4.438	9.379	14.830	19.959	24.617	26.915	26.333	22.442	15.491	10.023	4.654	15.147
-6000	2.681	4.436	9.392	14.867	20.022	24.702	27.011	26.425	22.519	15.544	10.049	4.659	15.192
-6100	2.696	4.454	9.423	14.918	20.095	24.792	27.110	26.522	22.603	15.607	10.091	4.683	15.249
-6200	2.691	4.452	9.434	14.950	20.148	24.864	27.190	26.600	22.667	15.652	10.113	4.688	15.287
-6300	2.410	4.168	9.141	14.642	19.825	24.528	26.848	26.259	22.336	15.335	9.812	4.400	14.975
-6400	2.679	4.446	9.466	15.039	20.301	25.067	27.419	26.822	22.852	15.778	10.177	4.700	15.396
-6500	2.568	4.336	9.361	14.942	20.212	24.985	27.340	26.742	22.767	15.686	10.076	4.593	15.301

Mean Temperature (°C) [UNION, SC]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-6600	2.363	4.130	9.151	14.725	19.987	24.754	27.106	26.508	22.538	15.464	9.862	4.385	15.081
-6700	2.322	4.092	9.123	14.713	19.993	24.774	27.134	26.534	22.553	15.463	9.843	4.352	15.075
-6800	2.291	4.062	9.103	14.708	20.004	24.799	27.164	26.563	22.573	15.467	9.831	4.327	15.074
-6900	2.265	4.038	9.089	14.711	20.024	24.833	27.205	26.602	22.601	15.480	9.826	4.308	15.082
-7000	2.229	4.004	9.066	14.704	20.036	24.860	27.240	26.635	22.623	15.484	9.812	4.279	15.081
-7100	2.186	3.963	9.035	14.690	20.039	24.877	27.264	26.657	22.634	15.480	9.790	4.243	15.071
-7200	2.158	3.936	9.014	14.677	20.036	24.882	27.273	26.664	22.636	15.473	9.774	4.219	15.062
-7300	2.060	3.839	8.921	14.591	19.957	24.808	27.202	26.593	22.561	15.391	9.685	4.124	14.978
-7400	1.948	3.727	8.812	14.485	19.855	24.709	27.105	26.495	22.461	15.287	9.578	4.014	14.873
-7500	1.935	3.717	8.814	14.508	19.900	24.772	27.176	26.564	22.516	15.323	9.591	4.009	14.902
-7600	1.864	3.647	8.753	14.459	19.865	24.747	27.157	26.544	22.488	15.282	9.537	3.944	14.857
-7700	1.923	3.710	8.836	14.573	20.012	24.922	27.346	26.729	22.653	15.416	9.636	4.016	14.981
-7800	1.996	3.787	8.934	14.703	20.178	25.116	27.554	26.933	22.836	15.566	9.752	4.103	15.121
-7900	2.015	3.809	8.972	14.765	20.266	25.226	27.674	27.050	22.937	15.644	9.803	4.133	15.191
-8000	1.832	3.625	8.782	14.567	20.057	25.010	27.454	26.831	22.724	15.439	9.608	3.946	14.990
-8100	1.749	3.543	8.704	14.496	19.994	24.952	27.399	26.775	22.664	15.373	9.534	3.866	14.921
-8200	1.586	3.379	8.536	14.322	19.814	24.767	27.211	26.588	22.481	15.195	9.363	3.700	14.745
-8300	1.651	3.448	8.628	14.447	19.975	24.958	27.417	26.790	22.661	15.342	9.473	3.781	14.881
-8400	1.426	3.221	8.388	14.188	19.696	24.662	27.113	26.488	22.371	15.071	9.223	3.547	14.616
-8500	1.581	3.380	8.573	14.413	19.964	24.965	27.433	26.803	22.661	15.321	9.430	3.719	14.853
-8600	1.494	3.294	8.491	14.336	19.893	24.899	27.370	26.740	22.593	15.248	9.351	3.635	14.779
-8700	1.401	3.201	8.396	14.241	19.797	24.802	27.272	26.642	22.497	15.152	9.256	3.541	14.683
-8800	1.311	3.111	8.308	14.156	19.715	24.722	27.194	26.563	22.416	15.068	9.169	3.452	14.599
-8900	1.278	3.080	8.284	14.142	19.712	24.728	27.204	26.572	22.418	15.061	9.151	3.424	14.588
-9000	1.127	2.927	8.127	13.978	19.540	24.551	27.024	26.393	22.243	14.892	8.990	3.270	14.422
-9100	1.337	3.144	8.375	14.274	19.890	24.943	27.437	26.800	22.619	15.220	9.264	3.501	14.734
-9200	1.364	3.173	8.418	14.339	19.978	25.050	27.553	26.914	22.719	15.298	9.320	3.538	14.805
-9300	1.478	3.291	8.558	14.513	20.188	25.289	27.808	27.165	22.948	15.493	9.478	3.666	14.990
-9400	1.327	3.138	8.395	14.335	19.994	25.082	27.594	26.953	22.746	15.306	9.307	3.509	14.807
-9500	1.021	2.828	8.059	13.959	19.574	24.627	27.122	26.485	22.304	14.904	8.949	3.186	14.418
-9600	0.472	2.274	7.482	13.346	18.922	23.944	26.422	25.790	21.632	14.268	8.352	2.620	13.794
-9700	0.073	1.872	7.061	12.895	18.439	23.435	25.901	25.272	21.133	13.799	7.914	2.209	13.334
-9800	-0.325	1.471	6.644	12.454	17.972	22.946	25.401	24.775	20.652	13.342	7.484	1.800	12.885

Mean Temperature (°C) [UNION, SC]													
DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
-9900	0.644	2.455	7.707	13.640	19.291	24.373	26.882	26.241	22.039	14.606	8.615	2.823	14.110
-10000	0.367	2.177	7.427	13.355	19.001	24.079	26.586	25.946	21.746	14.318	8.332	2.544	13.823
-10100	0.532	2.344	7.604	13.548	19.211	24.303	26.817	26.175	21.965	14.521	8.518	2.716	14.021
-10200	-0.395	1.407	6.613	12.473	18.046	23.065	25.542	24.910	20.755	13.394	7.481	1.752	12.920
-10300	-0.058	1.746	6.966	12.848	18.444	23.481	25.968	25.333	21.164	13.782	7.846	2.098	13.301
-10400	-0.844	0.956	6.150	11.993	17.547	22.551	25.020	24.390	20.246	12.903	7.009	1.296	12.435
-10500	-0.977	0.823	6.018	11.862	17.418	22.422	24.892	24.262	20.117	12.773	6.877	1.163	12.304
-10600	-1.072	0.726	5.912	11.742	17.281	22.273	24.736	24.108	19.972	12.643	6.763	1.062	12.179
-10700	-0.534	1.270	6.486	12.362	17.952	22.985	25.469	24.835	20.669	13.293	7.363	1.620	12.814
-10800	-0.973	0.831	6.053	11.937	17.536	22.576	25.064	24.429	20.258	12.873	6.934	1.184	12.392
-10900	-1.641	0.158	5.349	11.187	16.736	21.735	24.202	23.573	19.432	12.094	6.205	0.496	11.627
-11000	-2.018	-0.222	4.953	10.765	16.285	21.261	23.717	23.091	18.966	11.654	5.794	0.108	11.196
-11100	-1.137	0.667	5.886	11.767	17.363	22.399	24.886	24.251	20.082	12.701	6.766	1.019	12.221
-11200	-0.882	0.931	6.191	12.136	17.801	22.894	25.408	24.766	20.556	13.110	7.106	1.303	12.610
-11300	-0.676	1.138	6.406	12.363	18.040	23.144	25.663	25.020	20.802	13.345	7.327	1.514	12.840
-11400	-0.364	1.451	6.725	12.692	18.379	23.491	26.015	25.370	21.146	13.679	7.652	1.830	13.172
-11500	-0.119	1.697	6.980	12.961	18.664	23.788	26.317	25.671	21.438	13.957	7.914	2.080	13.446
-11600	-0.700	1.111	6.367	12.304	17.961	23.047	25.558	24.916	20.711	13.273	7.277	1.481	12.775
-11700	-0.171	1.643	6.919	12.886	18.576	23.688	26.213	25.568	21.343	13.875	7.846	2.023	13.367
-11800	-0.686	1.124	6.377	12.310	17.962	23.044	25.553	24.913	20.710	13.277	7.285	1.493	12.780
-11900	-0.847	0.961	6.198	12.108	17.734	22.796	25.294	24.657	20.469	13.060	7.093	1.322	12.570
-12000	-0.391	1.417	6.657	12.571	18.202	23.267	25.768	25.129	20.939	13.525	7.555	1.779	13.035
-12100	-0.423	1.383	6.614	12.514	18.130	23.183	25.677	25.040	20.859	13.460	7.504	1.741	12.974
-12200	-1.426	0.373	5.561	11.393	16.936	21.930	24.396	23.767	19.629	12.296	6.414	0.709	11.832
-12300	-3.393	-1.607	3.510	9.234	14.660	19.558	21.976	21.360	17.293	10.069	4.304	-1.305	9.638
-12400	-3.405	-1.621	3.493	9.210	14.629	19.522	21.936	21.322	17.258	10.041	4.283	-1.320	9.612
-12500	-2.769	-0.982	4.145	9.885	15.327	20.239	22.663	22.046	17.969	10.729	4.947	-0.675	10.294
-12600	-3.158	-1.375	3.731	9.438	14.844	19.727	22.137	21.524	17.467	10.261	4.515	-1.078	9.836
-12700	-3.725	-1.944	3.148	8.833	14.216	19.080	21.480	20.870	16.827	9.642	3.920	-1.654	9.224
-12800	-2.400	-0.609	4.539	10.310	15.787	20.727	23.165	22.544	18.446	11.175	5.358	-0.292	10.729
-12900	-3.990	-2.205	2.908	8.625	14.043	18.935	21.350	20.735	16.672	9.455	3.697	-1.905	9.027
-13000	-3.467	-1.683	3.428	9.143	14.558	19.448	21.861	21.247	17.186	9.971	4.216	-1.384	9.544
-13100	-4.125	-2.346	2.736	8.406	13.772	18.623	21.017	20.408	16.375	9.206	3.499	-2.062	8.792

Mean Temperature (°C) [UNION, SC]													
DATE	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual**
-13200	-3.691	-1.911	3.176	8.854	14.229	19.087	21.485	20.875	16.837	9.659	3.944	-1.624	9.244
-13300	-5.206	-3.434	1.610	7.221	12.523	17.322	19.689	19.088	15.094	7.983	2.341	-3.168	7.589
-13400	-5.587	-3.818	1.212	6.802	12.080	16.860	19.219	18.620	14.640	7.551	1.932	-3.558	7.163
-13500	-5.671	-3.903	1.122	6.702	11.971	16.743	19.098	18.500	14.525	7.445	1.836	-3.646	7.060
-13600	-4.715	-2.944	2.096	7.701	12.996	17.790	20.155	19.554	15.564	8.459	2.824	-2.680	8.067
-13700	-5.205	-3.436	1.594	7.182	12.460	17.240	19.598	18.999	15.020	7.931	2.313	-3.177	7.543
-13800	-4.055	-2.282	2.768	8.387	13.699	18.505	20.877	20.274	16.275	9.155	3.503	-2.013	8.758
-13900	-4.711	-2.943	2.082	7.663	12.933	17.706	20.061	19.463	15.488	8.407	2.797	-2.686	8.022
-14000	-4.158	-2.388	2.642	8.230	13.509	18.289	20.647	20.048	16.068	8.979	3.361	-2.129	8.591

Appendix A, Section 9: North American Module of MCM

Radiocarbon Equivalent Dates (rcybp)	NPHX (North Pacific High), 135W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	31	29.5	31	31	33	33.5	39	38	36.5	32.5	32	30.5
-2875	-3000	30.941	29.440	30.942	30.986	33.095	33.729	39.459	38.351	36.707	32.579	32.004	30.473
-2935	-3100	30.925	29.426	30.923	30.965	33.065	33.695	39.415	38.314	36.678	32.559	31.987	30.460
-3000	-3200	30.938	29.436	30.939	30.992	33.123	33.786	39.558	38.430	36.755	32.600	32.012	30.475
-3050	-3300	30.926	29.426	30.926	30.978	33.107	33.771	39.543	38.416	36.741	32.590	32.001	30.465
-3175	-3400	30.912	29.413	30.909	30.957	33.075	33.729	39.485	38.368	36.706	32.568	31.984	30.452
-3275	-3500	30.862	29.369	30.850	30.880	32.947	33.555	39.233	38.161	36.556	32.480	31.920	30.406
-3350	-3600	30.866	29.372	30.856	30.893	32.981	33.613	39.327	38.236	36.605	32.504	31.933	30.413
-3440	-3700	30.843	29.351	30.829	30.859	32.928	33.545	39.231	38.157	36.546	32.468	31.905	30.392
-3525	-3800	30.834	29.343	30.819	30.849	32.918	33.536	39.224	38.151	36.539	32.461	31.898	30.385
-3600	-3900	30.793	29.306	30.769	30.785	32.812	33.393	39.016	37.979	36.414	32.388	31.844	30.346
-3660	-4000	30.795	29.307	30.773	30.794	32.837	33.436	39.089	38.037	36.452	32.406	31.853	30.350
-3734	-4100	30.853	29.357	30.846	30.904	33.054	33.765	39.598	38.450	36.732	32.559	31.952	30.414
-3800	-4200	30.834	29.340	30.823	30.875	33.011	33.709	39.521	38.386	36.684	32.530	31.929	30.396
-3865	-4300	30.805	29.314	30.789	30.833	32.945	33.623	39.400	38.286	36.611	32.485	31.895	30.370
-3923	-4400	30.804	29.313	30.789	30.839	32.966	33.664	39.471	38.342	36.645	32.501	31.902	30.372
-4035	-4500	30.810	29.318	30.797	30.855	33.006	33.731	39.580	38.429	36.701	32.530	31.918	30.381
-4089	-4600	30.806	29.313	30.793	30.855	33.018	33.760	39.632	38.470	36.725	32.539	31.920	30.380
-4125	-4700	30.806	29.312	30.794	30.861	33.041	33.803	39.707	38.529	36.761	32.556	31.928	30.382
-4205	-4800	30.794	29.301	30.781	30.850	33.034	33.805	39.720	38.537	36.761	32.552	31.921	30.374
-4350	-4900	30.800	29.306	30.790	30.865	33.072	33.869	39.824	38.620	36.814	32.579	31.936	30.383
-4425	-5000	30.773	29.282	30.757	30.826	33.013	33.793	39.720	38.534	36.750	32.539	31.904	30.359
-4450	-5100	30.754	29.265	30.735	30.799	32.973	33.743	39.651	38.477	36.707	32.512	31.883	30.342
-4525	-5200	30.742	29.253	30.722	30.787	32.965	33.745	39.667	38.488	36.708	32.509	31.875	30.334
-4575	-5300	30.726	29.239	30.703	30.766	32.936	33.711	39.623	38.451	36.679	32.489	31.859	30.320

Radiocarbon Equivalent Dates (rcybp)	NPHX (North Pacific High), 135W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	31	29.5	31	31	33	33.5	39	38	36.5	32.5	32	30.5
-4700	-5400	30.716	29.230	30.693	30.756	32.931	33.714	39.637	38.461	36.681	32.487	31.853	30.314
-4726	-5500	30.742	29.251	30.725	30.810	33.047	33.900	39.933	38.696	36.835	32.568	31.903	30.344
-4875	-5600	30.769	29.274	30.761	30.868	33.176	34.111	40.267	38.960	37.006	32.656	31.956	30.376
-4975	-5700	30.773	29.277	30.767	30.885	33.224	34.198	40.412	39.072	37.075	32.689	31.974	30.384
-5030	-5800	30.780	29.281	30.777	30.906	33.280	34.298	40.576	39.200	37.153	32.728	31.994	30.394
-5125	-5900	30.749	29.254	30.739	30.857	33.197	34.182	40.409	39.066	37.060	32.674	31.955	30.365
-5260	-6000	30.747	29.251	30.738	30.862	33.221	34.230	40.494	39.131	37.097	32.690	31.961	30.367
-5300	-6100	30.748	29.252	30.741	30.870	33.247	34.281	40.579	39.197	37.137	32.708	31.970	30.371
-5375	-6200	30.746	29.249	30.739	30.874	33.267	34.323	40.653	39.252	37.169	32.722	31.975	30.372
-5500	-6300	30.703	29.211	30.687	30.804	33.144	34.145	40.390	39.044	37.026	32.641	31.918	30.331
-5670	-6400	30.741	29.243	30.736	30.885	33.324	34.443	40.863	39.412	37.261	32.762	31.991	30.375
-5720	-6500	30.724	29.227	30.715	30.860	33.289	34.400	40.808	39.367	37.226	32.740	31.972	30.360
-5775	-6600	30.692	29.199	30.678	30.810	33.202	34.275	40.626	39.222	37.127	32.683	31.931	30.330
-5875	-6700	30.685	29.192	30.670	30.804	33.204	34.289	40.657	39.245	37.137	32.685	31.929	30.326
-5970	-6800	30.680	29.187	30.664	30.800	33.207	34.305	40.690	39.269	37.148	32.688	31.927	30.323
-6040	-6900	30.675	29.182	30.659	30.798	33.214	34.326	40.731	39.299	37.164	32.693	31.927	30.321
-6125	-7000	30.668	29.176	30.652	30.794	33.218	34.344	40.768	39.326	37.176	32.696	31.926	30.317
-6200	-7100	30.661	29.169	30.644	30.787	33.218	34.356	40.797	39.347	37.185	32.697	31.922	30.312
-6260	-7200	30.656	29.164	30.638	30.783	33.217	34.360	40.809	39.355	37.187	32.697	31.920	30.309
-6375	-7300	30.641	29.150	30.620	30.761	33.186	34.322	40.760	39.315	37.157	32.677	31.904	30.296
-6465	-7400	30.624	29.135	30.600	30.736	33.147	34.270	40.688	39.257	37.115	32.652	31.884	30.281
-6600	-7500	30.621	29.132	30.597	30.738	33.163	34.307	40.755	39.307	37.143	32.663	31.887	30.281
-6750	-7600	30.610	29.121	30.584	30.724	33.148	34.296	40.748	39.301	37.133	32.655	31.878	30.272
-6875	-7700	30.617	29.127	30.594	30.745	33.204	34.396	40.913	39.427	37.210	32.692	31.898	30.283
-6960	-7800	30.626	29.134	30.607	30.769	33.266	34.508	41.097	39.567	37.296	32.734	31.922	30.296

Radiocarbon Equivalent Dates (rcybp)	NPHX (North Pacific High), 135W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	31	29.5	31	31	33	33.5	39	38	36.5	32.5	32	30.5
-7050	-7900	30.628	29.135	30.610	30.779	33.300	34.574	41.208	39.651	37.345	32.756	31.933	30.300
-7200	-8000	30.601	29.111	30.577	30.734	33.219	34.453	41.028	39.511	37.251	32.704	31.896	30.275
-7275	-8100	30.588	29.099	30.562	30.717	33.194	34.423	40.990	39.479	37.227	32.688	31.883	30.264
-7390	-8200	30.564	29.078	30.533	30.678	33.125	34.321	40.841	39.362	37.147	32.644	31.851	30.241
-7468	-8300	30.572	29.084	30.544	30.700	33.185	34.431	41.023	39.501	37.231	32.684	31.873	30.253
-7600	-8400	30.539	29.055	30.504	30.644	33.079	34.268	40.775	39.308	37.104	32.615	31.826	30.221
-7725	-8500	30.560	29.073	30.531	30.689	33.180	34.439	41.049	39.518	37.236	32.682	31.866	30.245
-7825	-8600	30.547	29.061	30.515	30.670	33.152	34.404	41.003	39.481	37.208	32.665	31.852	30.234
-7920	-8700	30.533	29.048	30.498	30.648	33.115	34.352	40.927	39.421	37.167	32.641	31.834	30.221
-7940	-8800	30.520	29.036	30.482	30.628	33.084	34.309	40.868	39.374	37.133	32.621	31.819	30.209
-8000	-8900	30.515	29.031	30.476	30.623	33.082	34.314	40.882	39.384	37.136	32.620	31.816	30.205
-8070	-9000	30.493	29.012	30.450	30.587	33.017	34.218	40.740	39.272	37.061	32.578	31.786	30.184
-8175	-9100	30.521	29.036	30.486	30.646	33.148	34.439	41.092	39.542	37.230	32.665	31.839	30.217
-8225	-9200	30.524	29.038	30.490	30.657	33.181	34.502	41.198	39.623	37.278	32.687	31.850	30.222
-8280	-9300	30.539	29.050	30.510	30.691	33.261	34.644	41.427	39.796	37.384	32.740	31.881	30.240
-8356	-9400	30.518	29.031	30.483	30.652	33.186	34.524	41.244	39.656	37.293	32.691	31.849	30.219
-8475	-9500	30.475	28.994	30.430	30.574	33.027	34.268	40.846	39.349	37.097	32.587	31.781	30.174
-8675	-9600	30.397	28.926	30.335	30.444	32.788	33.906	40.300	38.921	36.811	32.430	31.672	30.098
-8735	-9700	30.341	28.877	30.268	30.351	32.617	33.649	39.909	38.613	36.605	32.316	31.593	30.044
-8780	-9800	30.286	28.828	30.202	30.262	32.457	33.413	39.552	38.329	36.412	32.207	31.516	29.990
-8830	-9900	30.419	28.943	30.364	30.496	32.919	34.139	40.684	39.216	36.993	32.520	31.723	30.127
-8840	-10000	30.379	28.908	30.316	30.434	32.812	33.985	40.459	39.039	36.871	32.450	31.672	30.090
-8935	-10100	30.402	28.928	30.344	30.474	32.889	34.104	40.642	39.181	36.965	32.501	31.706	30.113
-9000	-10200	30.274	28.816	30.189	30.256	32.478	33.475	39.677	38.423	36.462	32.226	31.519	29.986
-9175	-10300	30.320	28.857	30.245	30.332	32.615	33.678	39.984	38.667	36.627	32.318	31.584	30.031

Radiocarbon Equivalent Dates (rcybp)	NPHX (North Pacific High), 135W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	31	29.5	31	31	33	33.5	39	38	36.5	32.5	32	30.5
-9227	-10400	30.212	28.762	30.115	30.159	32.311	33.235	39.317	38.135	36.263	32.112	31.437	29.927
-9290	-10500	30.194	28.745	30.093	30.132	32.267	33.177	39.233	38.068	36.214	32.083	31.415	29.910
-9370	-10600	30.181	28.735	30.078	30.110	32.224	33.108	39.125	37.981	36.157	32.053	31.394	29.897
-9460	-10700	30.254	28.798	30.165	30.230	32.445	33.440	39.635	38.388	36.432	32.205	31.500	29.969
-9535	-10800	30.193	28.743	30.093	30.140	32.304	33.251	39.368	38.172	36.276	32.111	31.427	29.914
-9575	-10900	30.103	28.665	29.986	29.997	32.046	32.874	38.791	37.709	35.959	31.933	31.301	29.826
-9625	-11000	30.054	28.622	29.928	29.918	31.907	32.672	38.481	37.459	35.786	31.835	31.232	29.778
-9635	-11100	30.170	28.723	30.066	30.106	32.246	33.170	39.248	38.076	36.209	32.072	31.398	29.893
-9735	-11200	30.203	28.750	30.106	30.170	32.388	33.405	39.632	38.377	36.402	32.173	31.460	29.931
-9935	-11300	30.231	28.774	30.140	30.215	32.469	33.525	39.814	38.522	36.500	32.227	31.499	29.958
-9988	-11400	30.274	28.813	30.192	30.283	32.586	33.695	40.067	38.722	36.637	32.306	31.555	29.999
-10015	-11500	30.308	28.842	30.232	30.338	32.687	33.845	40.294	38.900	36.757	32.372	31.602	30.031
-10065	-11600	30.228	28.773	30.136	30.207	32.443	33.477	39.730	38.457	36.461	32.209	31.489	29.953
-10105	-11700	30.301	28.836	30.224	30.325	32.656	33.793	40.210	38.836	36.716	32.351	31.589	30.023
-10145	-11800	30.230	28.775	30.139	30.209	32.444	33.475	39.725	38.453	36.459	32.209	31.490	29.954
-10200	-11900	30.209	28.757	30.113	30.171	32.368	33.355	39.535	38.304	36.362	32.156	31.456	29.932
-10260	-12000	30.272	28.813	30.188	30.267	32.528	33.579	39.862	38.565	36.545	32.263	31.535	29.991
-10285	-12100	30.268	28.810	30.183	30.258	32.504	33.536	39.791	38.510	36.511	32.246	31.526	29.985
-10320	-12200	30.133	28.693	30.022	30.034	32.109	32.969	38.905	37.812	36.024	31.974	31.340	29.855
-10370	-12300	29.877	28.467	29.719	29.645	31.435	32.005	37.458	36.622	35.196	31.495	30.987	29.605
-10460	-12400	29.875	28.466	29.718	29.641	31.427	31.991	37.434	36.603	35.183	31.489	30.983	29.603
-10525	-12500	29.957	28.538	29.813	29.763	31.625	32.261	37.839	36.937	35.425	31.632	31.090	29.680
-10580	-12600	29.908	28.495	29.755	29.685	31.489	32.067	37.537	36.689	35.250	31.532	31.019	29.631
-10700	-12700	29.836	28.432	29.671	29.579	31.315	31.832	37.183	36.395	35.037	31.405	30.925	29.562
-10850	-12800	30.005	28.579	29.869	29.838	31.759	32.453	38.138	37.181	35.595	31.728	31.158	29.728

Radiocarbon Equivalent Dates (rcybp)	NPHX (North Pacific High), 135W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	31	29.5	31	31	33	33.5	39	38	36.5	32.5	32	30.5
-10990	-12900	29.801	28.400	29.631	29.536	31.264	31.781	37.128	36.348	34.993	31.373	30.893	29.534
-11110	-13000	29.868	28.460	29.708	29.630	31.407	31.964	37.393	36.569	35.159	31.474	30.973	29.595
-11200	-13100	29.785	28.388	29.613	29.505	31.196	31.672	36.942	36.194	34.890	31.317	30.859	29.514
-11300	-13200	29.840	28.437	29.676	29.584	31.319	31.834	37.183	36.395	35.039	31.407	30.928	29.566
-11400	-13300	29.653	28.273	29.460	29.312	30.877	31.243	36.285	35.643	34.486	31.077	30.681	29.386
-11500	-13400	29.607	28.234	29.407	29.245	30.770	31.100	36.065	35.456	34.348	30.995	30.619	29.341
-11625	-13500	29.597	28.225	29.396	29.230	30.744	31.064	36.008	35.408	34.313	30.974	30.604	29.331
-11725	-13600	29.714	28.327	29.530	29.394	30.999	31.393	36.500	35.825	34.626	31.166	30.752	29.441
-11800	-13700	29.654	28.275	29.461	29.309	30.864	31.217	36.236	35.602	34.460	31.065	30.675	29.384
-11900	-13800	29.796	28.399	29.624	29.511	31.182	31.631	36.854	36.124	34.849	31.301	30.856	29.518
-11970	-13900	29.715	28.329	29.531	29.392	30.985	31.366	36.448	35.782	34.599	31.153	30.746	29.439
-12025	-14000	29.784	28.390	29.610	29.489	31.135	31.557	36.731	36.021	34.779	31.263	30.832	29.503

Radiocarbon Equivalent Dates (rcybp)	Jet120W (North American Jetstream), 120W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	27.5	29	29.5	28.5	32	43	47	47	47	51	32.5	32.5
-2875	-3000	27.238	28.652	29.184	28.326	32.040	43.268	47.449	47.535	47.503	51.361	32.647	32.419
-2935	-3100	27.169	28.581	29.114	28.260	31.980	43.214	47.401	47.489	47.456	51.310	32.590	32.356
-3000	-3200	27.222	28.622	29.159	28.324	32.072	43.337	47.547	47.647	47.610	51.445	32.697	32.432
-3050	-3300	27.171	28.567	29.106	28.277	32.035	43.310	47.528	47.632	47.593	51.422	32.664	32.390
-3175	-3400	27.109	28.505	29.044	28.215	31.973	43.248	47.467	47.571	47.532	51.361	32.603	32.328
-3275	-3500	26.895	28.297	28.834	27.994	31.736	42.994	47.199	47.296	47.259	51.099	32.357	32.100
-3350	-3600	26.911	28.304	28.844	28.021	31.786	43.070	47.296	47.403	47.362	51.186	32.420	32.137
-3440	-3700	26.808	28.201	28.741	27.918	31.683	42.966	47.192	47.299	47.258	51.082	32.317	32.033
-3525	-3800	26.769	28.159	28.700	27.882	31.657	42.949	47.182	47.292	47.251	51.069	32.295	32.002
-3600	-3900	26.586	27.980	28.520	27.693	31.455	42.733	46.955	47.060	47.021	50.847	32.086	31.807
-3660	-4000	26.593	27.980	28.523	27.710	31.491	42.792	47.031	47.144	47.102	50.915	32.133	31.832
-3734	-4100	26.847	28.200	28.755	27.998	31.862	43.252	47.561	47.708	47.653	51.411	32.546	32.157
-3800	-4200	26.761	28.113	28.669	27.912	31.778	43.169	47.480	47.627	47.572	51.329	32.462	32.072
-3865	-4300	26.633	27.986	28.541	27.784	31.650	43.041	47.351	47.499	47.443	51.200	32.334	31.944
-3923	-4400	26.629	27.972	28.531	27.789	31.677	43.092	47.421	47.577	47.519	51.261	32.373	31.958
-4035	-4500	26.655	27.989	28.551	27.826	31.739	43.180	47.531	47.697	47.635	51.360	32.447	32.006
-4089	-4600	26.635	27.960	28.526	27.814	31.749	43.212	47.581	47.756	47.690	51.401	32.467	32.004
-4125	-4700	26.632	27.947	28.517	27.820	31.777	43.265	47.653	47.837	47.768	51.465	32.507	32.020
-4205	-4800	26.579	27.888	28.460	27.776	31.751	43.259	47.662	47.854	47.782	51.466	32.490	31.983
-4350	-4900	26.605	27.905	28.480	27.811	31.809	43.341	47.764	47.965	47.889	51.558	32.560	32.028
-4425	-5000	26.483	27.781	28.357	27.691	31.693	43.229	47.655	47.858	47.782	51.448	32.446	31.910
-4450	-5100	26.398	27.694	28.271	27.607	31.613	43.154	47.583	47.787	47.711	51.374	32.368	31.828
-4525	-5200	26.342	27.629	28.209	27.559	31.586	43.148	47.595	47.807	47.728	51.378	32.351	31.789
-4575	-5300	26.271	27.556	28.136	27.491	31.525	43.094	47.547	47.762	47.681	51.327	32.293	31.723
-4700	-5400	26.225	27.503	28.087	27.453	31.503	43.091	47.558	47.780	47.697	51.331	32.280	31.693
-4726	-5500	26.338	27.595	28.186	27.588	31.692	43.336	47.849	48.093	48.001	51.600	32.496	31.851
-4875	-5600	26.457	27.689	28.290	27.731	31.894	43.603	48.166	48.433	48.333	51.892	32.728	32.020
-4975	-5700	26.473	27.692	28.298	27.762	31.960	43.705	48.297	48.579	48.473	52.009	32.811	32.066
-5030	-5800	26.500	27.704	28.315	27.803	32.038	43.821	48.445	48.740	48.629	52.141	32.907	32.123
-5125	-5900	26.362	27.568	28.178	27.663	31.891	43.668	48.287	48.580	48.470	51.986	32.757	31.980
-5260	-6000	26.350	27.546	28.161	27.662	31.916	43.721	48.361	48.665	48.551	52.050	32.796	31.991
-5300	-6100	26.355	27.542	28.160	27.675	31.951	43.779	48.437	48.750	48.632	52.117	32.841	32.013

Radiocarbon Equivalent Dates (rcybp)	Jet120W (North American Jetstream), 120W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	27.5	29	29.5	28.5	32	43	47	47	47	51	32.5	32.5
-5375	-6200	26.345	27.524	28.144	27.674	31.972	43.823	48.500	48.822	48.701	52.171	32.873	32.022
-5500	-6300	26.152	27.337	27.955	27.475	31.757	43.591	48.255	48.570	48.452	51.932	32.650	31.816
-5670	-6400	26.318	27.472	28.102	27.673	32.032	43.950	48.679	49.025	48.895	52.324	32.965	32.047
-5720	-6500	26.238	27.388	28.019	27.596	31.964	43.890	48.627	48.976	48.845	52.268	32.900	31.974
-5775	-6600	26.096	27.250	27.880	27.451	31.811	43.729	48.459	48.806	48.676	52.104	32.744	31.826
-5875	-6700	26.062	27.209	27.841	27.425	31.802	43.739	48.484	48.838	48.705	52.122	32.744	31.807
-5970	-6800	26.035	27.176	27.811	27.405	31.798	43.752	48.510	48.870	48.735	52.141	32.748	31.794
-6040	-6900	26.012	27.145	27.783	27.388	31.799	43.771	48.544	48.911	48.774	52.168	32.757	31.785
-6125	-7000	25.981	27.107	27.747	27.365	31.794	43.786	48.574	48.948	48.808	52.190	32.761	31.770
-6200	-7100	25.946	27.065	27.708	27.337	31.783	43.793	48.596	48.977	48.834	52.205	32.759	31.749
-6260	-7200	25.923	27.039	27.683	27.318	31.774	43.794	48.605	48.990	48.845	52.210	32.755	31.735
-6375	-7300	25.853	26.965	27.610	27.250	31.713	43.740	48.558	48.945	48.800	52.160	32.697	31.670
-6465	-7400	25.773	26.884	27.530	27.172	31.638	43.670	48.490	48.879	48.733	52.091	32.625	31.593
-6600	-7500	25.757	26.859	27.509	27.165	31.653	43.708	48.546	48.944	48.795	52.138	32.650	31.596
-6750	-7600	25.704	26.800	27.452	27.117	31.619	43.687	48.537	48.941	48.789	52.124	32.622	31.554
-6875	-7700	25.735	26.818	27.475	27.162	31.697	43.801	48.680	49.096	48.940	52.252	32.718	31.613
-6960	-7800	25.776	26.845	27.507	27.218	31.787	43.928	48.836	49.267	49.105	52.394	32.825	31.684
-7050	-7900	25.782	26.841	27.507	27.235	31.830	43.998	48.928	49.369	49.203	52.476	32.881	31.712
-7200	-8000	25.656	26.719	27.383	27.105	31.690	43.849	48.771	49.208	49.044	52.322	32.737	31.578
-7275	-8100	25.596	26.656	27.321	27.047	31.640	43.807	48.734	49.174	49.009	52.283	32.690	31.524
-7390	-8200	25.483	26.545	27.209	26.932	31.518	43.678	48.600	49.038	48.874	52.152	32.565	31.405
-7468	-8300	25.518	26.566	27.236	26.982	31.605	43.803	48.756	49.208	49.038	52.292	32.669	31.471
-7600	-8400	25.366	26.422	27.089	26.821	31.424	43.600	48.536	48.980	48.813	52.081	32.478	31.302
-7725	-8500	25.462	26.501	27.174	26.935	31.580	43.802	48.773	49.235	49.062	52.301	32.656	31.434
-7825	-8600	25.400	26.436	27.110	26.875	31.526	43.754	48.731	49.194	49.020	52.256	32.605	31.376
-7920	-8700	25.334	26.371	27.045	26.809	31.459	43.686	48.662	49.125	48.951	52.187	32.537	31.310
-7940	-8800	25.270	26.306	26.980	26.746	31.399	43.629	48.608	49.072	48.898	52.132	32.479	31.248
-8000	-8900	25.244	26.276	26.951	26.725	31.388	43.630	48.618	49.087	48.911	52.137	32.474	31.232
-8070	-9000	25.140	26.174	26.849	26.617	31.274	43.508	48.489	48.955	48.780	52.012	32.355	31.121
-8175	-9100	25.272	26.286	26.968	26.771	31.480	43.769	48.795	49.282	49.099	52.296	32.588	31.298
-8225	-9200	25.284	26.289	26.975	26.793	31.524	43.838	48.884	49.379	49.193	52.375	32.644	31.330
-8280	-9300	25.354	26.343	27.035	26.877	31.645	43.997	49.073	49.584	49.392	52.550	32.782	31.429

Radiocarbon Equivalent Dates (rcybp)	Jet120W (North American Jetstream), 120W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	27.5	29	29.5	28.5	32	43	47	47	47	51	32.5	32.5
-8356	-9400	25.252	26.248	26.937	26.769	31.520	43.856	48.918	49.422	49.233	52.402	32.650	31.314
-8475	-9500	25.050	26.064	26.746	26.549	31.258	43.548	48.574	49.060	48.878	52.074	32.366	31.076
-8675	-9600	24.676	25.704	26.381	26.159	30.829	43.078	48.071	48.542	48.365	51.588	31.918	30.669
-8735	-9700	24.405	25.446	26.119	25.875	30.514	42.729	47.695	48.154	47.982	51.225	31.586	30.371
-8780	-9800	24.133	25.185	25.853	25.592	30.205	42.392	47.336	47.784	47.616	50.877	31.264	30.077
-8830	-9900	24.775	25.774	26.462	26.289	31.032	43.360	48.415	48.916	48.728	51.902	32.158	30.831
-8840	-10000	24.582	25.583	26.270	26.093	30.832	43.155	48.206	48.705	48.518	51.694	31.956	30.633
-8935	-10100	24.693	25.687	26.377	26.211	30.967	43.308	48.373	48.879	48.689	51.855	32.099	30.759
-9000	-10200	24.068	25.098	25.774	25.549	30.216	42.461	47.452	47.922	47.745	50.970	31.303	30.058
-9175	-10300	24.297	25.318	25.998	25.789	30.478	42.748	47.757	48.236	48.057	51.266	31.577	30.307
-9227	-10400	23.758	24.796	25.469	25.232	29.880	42.105	47.079	47.542	47.368	50.605	30.957	29.732
-9290	-10500	23.664	24.701	25.375	25.139	29.788	42.014	46.990	47.452	47.279	50.515	30.866	29.639
-9370	-10600	23.602	24.646	25.317	25.070	29.704	41.914	46.876	47.332	47.161	50.408	30.774	29.564
-9460	-10700	23.965	24.988	25.667	25.454	30.137	42.401	47.405	47.882	47.703	50.917	31.233	29.970
-9535	-10800	23.654	24.673	25.354	25.146	29.839	42.111	47.123	47.604	47.423	50.631	30.939	29.666
-9575	-10900	23.199	24.239	24.912	24.671	29.314	41.533	46.503	46.963	46.791	50.031	30.389	29.169
-9625	-11000	22.943	23.994	24.663	24.404	29.018	41.208	46.154	46.603	46.434	49.693	30.079	28.889
-9635	-11100	23.540	24.561	25.241	25.031	29.719	41.988	46.997	47.476	47.296	50.506	30.817	29.549
-9735	-11200	23.699	24.693	25.383	25.218	29.975	42.317	47.384	47.891	47.701	50.865	31.108	29.766
-9935	-11300	23.840	24.828	25.520	25.364	30.134	42.489	47.567	48.079	47.887	51.043	31.273	29.918
-9988	-11400	24.056	25.041	25.734	25.585	30.365	42.731	47.817	48.332	48.139	51.288	31.509	30.143
-10015	-11500	24.224	25.202	25.898	25.758	30.553	42.935	48.034	48.556	48.360	51.499	31.705	30.323
-10065	-11600	23.829	24.826	25.515	25.345	30.094	42.427	47.487	47.990	47.801	50.971	31.222	29.889
-10105	-11700	24.191	25.175	25.869	25.720	30.501	42.869	47.957	48.473	48.279	51.427	31.646	30.278
-10145	-11800	23.840	24.839	25.527	25.354	30.098	42.426	47.482	47.984	47.795	50.969	31.224	29.896
-10200	-11900	23.735	24.744	25.428	25.238	29.957	42.258	47.293	47.784	47.600	50.790	31.071	29.769
-10260	-12000	24.053	25.061	25.746	25.559	30.282	42.588	47.627	48.120	47.935	51.122	31.398	30.092
-10285	-12100	24.035	25.049	25.731	25.535	30.243	42.533	47.559	48.046	47.863	51.060	31.351	30.061
-10320	-12200	23.352	24.394	25.066	24.822	29.459	41.672	46.637	47.095	46.923	50.168	30.531	29.317
-10370	-12300	22.005	23.094	23.748	23.427	27.947	40.037	44.903	45.314	45.160	48.482	28.961	27.871
-10460	-12400	21.998	23.090	23.743	23.417	27.931	40.013	44.873	45.282	45.128	48.455	28.941	27.859
-10525	-12500	22.438	23.520	24.177	23.866	28.403	40.511	45.391	45.809	45.652	48.963	29.425	28.318

Radiocarbon Equivalent Dates (rcybp)	Jet120W (North American Jetstream), 120W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	27.5	29	29.5	28.5	32	43	47	47	47	51	32.5	32.5
-10580	-12600	22.175	23.272	23.923	23.589	28.091	40.160	45.011	45.414	45.263	48.597	29.095	28.026
-10700	-12700	21.784	22.890	23.538	23.188	27.667	39.712	44.543	44.937	44.789	48.138	28.660	27.615
-10850	-12800	22.687	23.756	24.418	24.130	28.701	40.844	45.754	46.185	46.023	49.311	29.740	28.596
-10990	-12900	21.588	22.679	23.333	23.006	27.519	39.601	44.461	44.869	44.716	48.043	28.529	27.448
-11110	-13000	21.956	23.049	23.701	23.373	27.883	39.962	44.820	45.226	45.074	48.402	28.892	27.813
-11200	-13100	21.507	22.620	23.265	22.905	27.368	39.395	44.212	44.600	44.454	47.814	28.352	27.324
-11300	-13200	21.810	22.919	23.566	23.211	27.682	39.719	44.544	44.935	44.788	48.142	28.671	27.634
-11400	-13300	20.767	21.905	22.541	22.139	26.538	38.498	43.261	43.623	43.487	46.890	27.490	26.530
-11500	-13400	20.506	21.653	22.286	21.868	26.244	38.180	42.924	43.277	43.144	46.562	27.185	26.250
-11625	-13500	20.450	21.601	22.232	21.808	26.175	38.100	42.836	43.185	43.054	46.478	27.111	26.186
-11725	-13600	21.114	22.254	22.889	22.483	26.875	38.829	43.586	43.946	43.811	47.218	27.825	26.872
-11800	-13700	20.774	21.922	22.554	22.136	26.512	38.447	43.190	43.543	43.411	46.828	27.453	26.518
-11900	-13800	21.573	22.707	23.344	22.948	27.357	39.327	44.098	44.464	44.327	47.723	28.314	27.344
-11970	-13900	21.124	22.275	22.906	22.483	26.850	38.776	43.513	43.862	43.731	47.155	27.787	26.861
-12025	-14000	21.510	22.657	23.290	22.872	27.248	39.183	43.927	44.280	44.147	47.565	28.189	27.254

Radiocarbon Equivalent Dates (rcybp)	EUHX (Subtropical High - North Atlantic Sector), 0W												
	DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	Modern	32.38	28.47	29.68	35.44	38.12	40.51	45.01	45.22	44.22	42.24	39.78	37.42
-2875	-3000	32.293	28.319	29.544	35.400	38.221	40.772	45.364	45.605	44.571	42.508	39.921	37.435
-2935	-3100	32.207	28.225	29.448	35.310	38.135	40.691	45.295	45.539	44.505	42.438	39.848	37.357
-3000	-3200	32.315	28.333	29.560	35.431	38.275	40.850	45.454	45.699	44.659	42.582	39.976	37.470
-3050	-3300	32.258	28.269	29.496	35.372	38.223	40.806	45.419	45.667	44.626	42.545	39.933	37.421
-3175	-3400	32.173	28.179	29.403	35.283	38.134	40.718	45.340	45.590	44.550	42.468	39.856	37.342
-3275	-3500	31.858	27.847	29.063	34.947	37.785	40.362	45.009	45.264	44.230	42.155	39.549	37.042
-3350	-3600	31.912	27.898	29.117	35.009	37.864	40.457	45.108	45.366	44.328	42.242	39.624	37.103
-3440	-3700	31.771	27.747	28.962	34.860	37.714	40.309	44.974	45.235	44.198	42.112	39.493	36.971
-3525	-3800	31.728	27.700	28.914	34.817	37.677	40.279	44.951	45.215	44.177	42.088	39.463	36.935
-3600	-3900	31.459	27.416	28.623	34.529	37.379	39.975	44.669	44.937	43.904	41.820	39.201	36.678
-3660	-4000	31.496	27.450	28.659	34.573	37.437	40.047	44.746	45.016	43.979	41.888	39.257	36.722
-3734	-4100	31.952	27.914	29.137	35.072	37.996	40.660	45.346	45.617	44.562	42.436	39.763	37.184
-3800	-4200	31.836	27.789	29.010	34.949	37.874	40.541	45.239	45.513	44.459	42.332	39.657	37.076
-3865	-4300	31.660	27.602	28.818	34.764	37.687	40.356	45.072	45.350	44.298	42.172	39.495	36.912
-3923	-4400	31.683	27.620	28.838	34.792	37.731	40.416	45.138	45.419	44.363	42.228	39.539	36.943
-4035	-4500	31.751	27.686	28.907	34.870	37.826	40.529	45.253	45.536	44.475	42.330	39.628	37.018
-4089	-4600	31.751	27.680	28.901	34.874	37.845	40.563	45.296	45.582	44.517	42.363	39.649	37.027
-4125	-4700	31.775	27.700	28.923	34.905	37.892	40.626	45.365	45.654	44.585	42.422	39.695	37.061
-4205	-4800	31.727	27.644	28.866	34.858	37.857	40.605	45.357	45.649	44.578	42.407	39.670	37.024
-4350	-4900	31.792	27.707	28.932	34.931	37.947	40.711	45.464	45.758	44.682	42.502	39.753	37.095
-4425	-5000	31.630	27.533	28.754	34.760	37.778	40.547	45.319	45.617	44.543	42.361	39.608	36.945
-4450	-5100	31.518	27.413	28.631	34.643	37.662	40.436	45.221	45.523	44.449	42.265	39.510	36.843
-4525	-5200	31.467	27.352	28.570	34.593	37.626	40.416	45.214	45.520	44.444	42.251	39.484	36.805
-4575	-5300	31.379	27.256	28.472	34.500	37.538	40.334	45.144	45.453	44.377	42.182	39.409	36.725
-4700	-5400	31.339	27.208	28.423	34.461	37.510	40.319	45.140	45.452	44.374	42.172	39.390	36.695
-4726	-5500	31.562	27.433	28.656	34.710	37.798	40.642	45.460	45.774	44.684	42.460	39.651	36.928
-4875	-5600	31.802	27.672	28.904	34.976	38.107	40.990	45.806	46.122	45.019	42.771	39.931	37.177
-4975	-5700	31.868	27.735	28.970	35.054	38.209	41.116	45.938	46.257	45.147	42.886	40.027	37.254
-5030	-5800	31.951	27.813	29.052	35.150	38.331	41.262	46.089	46.410	45.294	43.018	40.140	37.347
-5125	-5900	31.755	27.605	28.838	34.940	38.116	41.047	45.892	46.218	45.104	42.831	39.954	37.162
-5260	-6000	31.772	27.617	28.851	34.964	38.158	41.107	45.961	46.289	45.172	42.887	39.997	37.190
-5300	-6100	31.806	27.647	28.883	35.005	38.213	41.178	46.035	46.366	45.244	42.951	40.049	37.230

Radiocarbon Equivalent Dates (rcybp)	EUHX (Subtropical High - North Atlantic Sector), 0W												
	DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	Modern	32.38	28.47	29.68	35.44	38.12	40.51	45.01	45.22	44.22	42.24	39.78	37.42
-5375	-6200	31.821	27.657	28.894	35.025	38.249	41.229	46.093	46.426	45.301	42.999	40.085	37.254
-5500	-6300	31.537	27.357	28.586	34.719	37.931	40.905	45.794	46.133	45.013	42.717	39.809	36.983
-5670	-6400	31.863	27.685	28.927	35.083	38.350	41.374	46.257	46.597	45.460	43.134	40.186	37.320
-5720	-6500	31.764	27.577	28.816	34.979	38.252	41.284	46.181	46.524	45.388	43.057	40.104	37.232
-5775	-6600	31.561	27.362	28.594	34.761	38.028	41.058	45.974	46.322	45.189	42.861	39.911	37.040
-5875	-6700	31.537	27.332	28.564	34.739	38.018	41.062	45.987	46.338	45.202	42.868	39.907	37.026
-5970	-6800	31.521	27.310	28.543	34.726	38.016	41.071	46.004	46.358	45.219	42.878	39.908	37.018
-6040	-6900	31.512	27.295	28.528	34.719	38.021	41.089	46.029	46.386	45.244	42.896	39.917	37.016
-6125	-7000	31.493	27.270	28.503	34.702	38.017	41.099	46.048	46.407	45.263	42.907	39.918	37.007
-6200	-7100	31.466	27.237	28.471	34.678	38.005	41.099	46.058	46.420	45.273	42.911	39.912	36.990
-6260	-7200	31.448	27.215	28.448	34.660	37.993	41.095	46.059	46.423	45.275	42.909	39.904	36.977
-6375	-7300	31.360	27.119	28.350	34.568	37.906	41.014	45.991	46.358	45.210	42.840	39.831	36.899
-6465	-7400	31.256	27.007	28.234	34.457	37.797	40.911	45.899	46.270	45.123	42.752	39.740	36.803
-6600	-7500	31.262	27.008	28.236	34.469	37.823	40.953	45.949	46.323	45.171	42.791	39.768	36.819
-6750	-7600	31.206	26.944	28.171	34.411	37.775	40.915	45.923	46.300	45.147	42.761	39.730	36.772
-6875	-7700	31.292	27.027	28.258	34.510	37.898	41.060	46.071	46.450	45.290	42.891	39.842	36.867
-6960	-7800	31.393	27.125	28.360	34.625	38.037	41.223	46.235	46.615	45.449	43.036	39.969	36.976
-7050	-7900	31.434	27.163	28.400	34.674	38.105	41.308	46.326	46.708	45.536	43.114	40.033	37.026
-7200	-8000	31.250	26.968	28.200	34.475	37.899	41.099	46.134	46.520	45.352	42.933	39.855	36.851
-7275	-8100	31.177	26.888	28.117	34.398	37.827	41.034	46.079	46.469	45.301	42.878	39.796	36.786
-7390	-8200	31.014	26.715	27.940	34.223	37.646	40.852	45.913	46.306	45.141	42.721	39.641	36.632
-7468	-8300	31.109	26.807	28.036	34.332	37.781	41.011	46.075	46.470	45.298	42.863	39.764	36.736
-7600	-8400	30.874	26.561	27.782	34.076	37.510	40.730	45.812	46.212	45.046	42.620	39.529	36.509
-7725	-8500	31.061	26.749	27.977	34.284	37.749	40.997	46.074	46.473	45.298	42.854	39.743	36.701
-7825	-8600	30.983	26.665	27.890	34.202	37.670	40.924	46.013	46.415	45.240	42.793	39.678	36.631
-7920	-8700	30.892	26.567	27.790	34.105	37.571	40.827	45.925	46.330	45.156	42.710	39.593	36.546
-7940	-8800	30.808	26.477	27.697	34.015	37.484	40.743	45.851	46.259	45.086	42.638	39.520	36.469
-8000	-8900	30.787	26.451	27.671	33.994	37.470	40.738	45.853	46.263	45.088	42.636	39.511	36.454
-8070	-9000	30.634	26.290	27.504	33.829	37.299	40.565	45.694	46.108	44.936	42.487	39.364	36.309
-8175	-9100	30.883	26.542	27.766	34.107	37.615	40.913	46.034	46.447	45.263	42.793	39.645	36.564
-8225	-9200	30.930	26.585	27.812	34.161	37.685	40.999	46.124	46.538	45.349	42.870	39.710	36.617
-8280	-9300	31.071	26.727	27.959	34.320	37.870	41.207	46.330	46.744	45.547	43.054	39.876	36.764

Radiocarbon Equivalent Dates (rcybp)	EUHX (Subtropical High - North Atlantic Sector), 0W												
	DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	Modern	32.38	28.47	29.68	35.44	38.12	40.51	45.01	45.22	44.22	42.24	39.78	37.42
-8356	-9400	30.912	26.560	27.787	34.146	37.684	41.013	46.147	46.564	45.372	42.885	39.714	36.609
-8475	-9500	30.579	26.217	27.431	33.780	37.287	40.592	45.747	46.169	44.989	42.519	39.367	36.281
-8675	-9600	30.014	25.623	26.818	33.165	36.641	39.929	45.132	45.567	44.401	41.946	38.810	35.738
-8735	-9700	29.599	25.189	26.370	32.713	36.163	39.436	44.671	45.116	43.961	41.518	38.396	35.337
-8780	-9800	29.188	24.759	25.926	32.266	35.694	38.955	44.224	44.678	43.534	41.102	37.991	34.941
-8830	-9900	30.247	25.852	27.057	33.430	36.959	40.297	45.502	45.940	44.758	42.273	39.099	35.988
-8840	-10000	29.975	25.562	26.758	33.135	36.660	40.000	45.234	45.679	44.502	42.019	38.844	35.732
-8935	-10100	30.150	25.744	26.946	33.327	36.864	40.214	45.434	45.876	44.694	42.204	39.022	35.903
-9000	-10200	29.169	24.724	25.891	32.255	35.722	39.024	44.317	44.779	43.626	41.172	38.030	34.949
-9175	-10300	29.518	25.088	26.268	32.634	36.120	39.433	44.697	45.151	43.989	41.525	38.374	35.284
-9227	-10400	28.715	24.245	25.398	31.762	35.210	38.506	43.841	44.315	43.172	40.726	37.591	34.515
-9290	-10500	28.586	24.108	25.256	31.623	35.071	38.370	43.719	44.198	43.056	40.610	37.473	34.395
-9370	-10600	28.479	23.998	25.143	31.505	34.941	38.230	43.584	44.064	42.926	40.486	37.358	34.288
-9460	-10700	29.050	24.591	25.755	32.129	35.606	38.923	44.236	44.705	43.550	41.089	37.937	34.844
-9535	-10800	28.630	24.142	25.292	31.677	35.156	38.487	43.849	44.332	43.183	40.719	37.558	34.456
-9575	-10900	27.931	23.413	24.539	30.914	34.349	37.654	43.070	43.569	42.439	39.996	36.859	33.778
-9625	-11000	27.535	23.001	24.114	30.483	33.892	37.181	42.628	43.135	42.016	39.586	36.463	33.394
-9635	-11100	28.466	23.969	25.113	31.500	34.975	38.306	43.684	44.172	43.026	40.563	37.404	34.301
-9735	-11200	28.779	24.282	25.438	31.849	35.376	38.753	44.125	44.612	43.450	40.959	37.763	34.625
-9935	-11300	28.991	24.504	25.668	32.080	35.618	39.001	44.355	44.837	43.669	41.172	37.972	34.828
-9988	-11400	29.304	24.835	26.009	32.419	35.967	39.352	44.675	45.148	43.974	41.473	38.270	35.125
-10015	-11500	29.554	25.098	26.281	32.693	36.253	39.644	44.946	45.412	44.232	41.725	38.516	35.366
-10065	-11600	28.948	24.464	25.626	32.030	35.553	38.921	44.271	44.752	43.588	41.100	37.911	34.779
-10105	-11700	29.492	25.035	26.215	32.622	36.173	39.555	44.858	45.325	44.148	41.647	38.444	35.301
-10145	-11800	28.957	24.476	25.638	32.040	35.559	38.923	44.271	44.750	43.587	41.101	37.914	34.785
-10200	-11900	28.778	24.291	25.447	31.841	35.341	38.689	44.046	44.528	43.372	40.897	37.723	34.606
-10260	-12000	29.225	24.767	25.938	32.325	35.832	39.176	44.486	44.954	43.790	41.313	38.140	35.026
-10285	-12100	29.180	24.723	25.892	32.274	35.770	39.104	44.413	44.880	43.719	41.248	38.083	34.978
-10320	-12200	28.136	23.630	24.764	31.133	34.570	37.869	43.260	43.746	42.620	40.173	37.047	33.965
-10370	-12300	26.091	21.500	22.563	28.907	32.226	35.459	41.014	41.553	40.474	38.089	35.014	31.990
-10460	-12400	26.072	21.482	22.544	28.885	32.199	35.427	40.981	41.519	40.442	38.060	34.989	31.969
-10525	-12500	26.722	22.163	23.247	29.592	32.934	36.174	41.671	42.193	41.100	38.706	35.623	32.593

Radiocarbon Equivalent Dates (rcybp)	EUHX (Subtropical High - North Atlantic Sector), 0W												
	DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	Modern	32.38	28.47	29.68	35.44	38.12	40.51	45.01	45.22	44.22	42.24	39.78	37.42
-10580	-12600	26.304	21.731	22.801	29.136	32.445	35.662	41.186	41.716	40.636	38.258	35.194	32.183
-10700	-12700	25.721	21.123	22.173	28.502	31.784	34.988	40.560	41.105	40.039	37.674	34.623	31.621
-10850	-12800	27.118	22.572	23.670	30.025	33.398	36.659	42.131	42.645	41.540	39.129	36.029	32.982
-10990	-12900	25.492	20.871	21.913	28.257	31.560	34.792	40.404	40.961	39.895	37.516	34.445	31.421
-11110	-13000	26.007	21.415	22.475	28.815	32.125	35.351	40.910	41.450	40.374	37.994	34.925	31.906
-11200	-13100	25.309	20.693	21.729	28.052	31.315	34.509	40.115	40.670	39.615	37.259	34.217	31.223
-11300	-13200	25.748	21.153	22.204	28.529	31.807	35.005	40.571	41.113	40.049	37.686	34.639	31.642
-11400	-13300	24.172	19.517	20.514	26.813	30.006	33.157	38.843	39.423	38.399	36.079	33.074	30.114
-11500	-13400	23.769	19.101	20.085	26.374	29.541	32.675	38.387	38.976	37.964	35.658	32.667	29.720
-11625	-13500	23.676	19.007	19.987	26.272	29.429	32.556	38.273	38.863	37.854	35.553	32.568	29.627
-11725	-13600	24.654	20.026	21.039	27.336	30.535	33.679	39.315	39.879	38.847	36.526	33.524	30.569
-11800	-13700	24.149	19.500	20.497	26.786	29.962	33.094	38.771	39.347	38.328	36.018	33.027	30.081
-11900	-13800	25.326	20.727	21.764	28.066	31.290	34.442	40.021	40.566	39.519	37.186	34.175	31.214
-11970	-13900	24.634	20.012	21.025	27.312	30.492	33.616	39.243	39.802	38.775	36.464	33.477	30.538
-12025	-14000	25.192	20.597	21.629	27.917	31.116	34.243	39.820	40.364	39.324	37.006	34.014	31.072

Radiocarbon Equivalent Dates (rcybp)	Inter-Tropical Convergence Zone (ITCZ), 90W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	8	10	11	13.5	13.5	14.5	13.5	14	15	13	11	10.5
-2875	-3000	8.284	10.290	10.537	13.486	13.574	14.663	12.995	13.690	14.937	13.063	11.003	10.483
-2935	-3100	8.100	10.250	10.539	13.421	13.551	14.639	13.044	13.724	14.947	13.048	10.990	10.480
-3000	-3200	8.352	10.304	10.480	13.494	13.596	14.703	12.882	13.616	14.920	13.080	11.009	10.482
-3050	-3300	8.205	10.278	10.485	13.470	13.584	14.692	12.900	13.629	14.924	13.072	11.001	10.479
-3175	-3400	7.990	10.211	10.520	13.391	13.559	14.663	12.965	13.674	14.937	13.054	10.988	10.477
-3275	-3500	8.149	9.916	10.615	12.737	13.459	14.540	13.247	13.862	14.985	12.984	10.937	10.502
-3350	-3600	8.032	9.996	10.579	12.887	13.486	14.581	13.142	13.795	14.970	13.003	10.947	10.490
-3440	-3700	8.400	9.780	10.620	12.515	13.445	14.532	13.248	13.866	14.987	12.974	10.926	10.519
-3525	-3800	8.640	9.659	10.632	12.405	13.437	14.526	13.256	13.871	14.990	12.969	10.920	10.530
-3600	-3900	9.698	8.996	10.708	11.727	13.364	14.421	13.482	14.017	15.021	12.910	10.878	10.684
-3660	-4000	9.652	9.058	10.682	11.819	13.380	14.453	13.404	13.969	15.012	12.925	10.885	10.646
-3734	-4100	8.008	10.055	10.367	13.027	13.543	14.688	12.837	13.597	14.928	13.048	10.963	10.474
-3800	-4200	8.365	9.870	10.417	12.739	13.509	14.650	12.924	13.657	14.945	13.024	10.945	10.487
-3865	-4300	8.982	9.551	10.508	12.268	13.458	14.589	13.061	13.750	14.968	12.988	10.918	10.532
-3923	-4400	8.934	9.587	10.478	12.339	13.475	14.618	12.981	13.699	14.958	13.001	10.923	10.519
-4035	-4500	8.817	9.666	10.427	12.537	13.506	14.665	12.858	13.617	14.939	13.024	10.936	10.495
-4089	-4600	8.853	9.658	10.402	12.546	13.515	14.685	12.797	13.578	14.931	13.031	10.938	10.492
-4125	-4700	8.825	9.680	10.375	12.625	13.533	14.714	12.712	13.521	14.917	13.045	10.943	10.483
-4205	-4800	8.965	9.608	10.383	12.504	13.527	14.715	12.697	13.512	14.917	13.042	10.938	10.490
-4350	-4900	8.981	9.626	10.339	12.690	13.557	14.758	12.577	13.431	14.897	13.063	10.950	10.475
-4425	-5000	9.652	9.214	10.456	12.255	13.511	14.707	12.698	13.516	14.922	13.031	10.925	10.510
-4450	-5100	10.166	8.749	10.566	11.968	13.481	14.673	12.776	13.571	14.937	13.010	10.908	10.553
-4525	-5200	10.283	8.610	10.583	11.854	13.476	14.674	12.758	13.560	14.936	13.007	10.902	10.573
-4575	-5300	10.566	8.176	10.662	11.660	13.455	14.650	12.808	13.596	14.946	12.991	10.890	10.626
-4700	-5400	10.657	7.989	10.688	11.584	13.451	14.653	12.792	13.587	14.946	12.989	10.885	10.650

Radiocarbon Equivalent Dates (rcybp)	Inter-Tropical Convergence Zone (ITCZ), 90W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	8	10	11	13.5	13.5	14.5	13.5	14	15	13	11	10.5
-4726	-5500	10.127	8.797	10.530	12.126	13.538	14.779	12.451	13.354	14.889	13.054	10.924	10.509
-4875	-5600	9.176	9.550	10.252	12.796	13.637	14.913	12.065	13.080	14.814	13.125	10.966	10.453
-4975	-5700	8.906	9.699	10.151	12.978	13.674	14.966	11.898	12.960	14.781	13.152	10.979	10.447
-5030	-5800	8.607	9.846	10.026	13.174	13.716	15.023	11.710	12.821	14.740	13.183	10.995	10.443
-5125	-5900	9.330	9.445	10.292	12.705	13.654	14.956	11.902	12.967	14.788	13.139	10.964	10.450
-5260	-6000	9.174	9.527	10.261	12.765	13.671	14.985	11.804	12.897	14.769	13.152	10.969	10.446
-5300	-6100	9.250	9.488	10.276	12.861	13.692	15.014	11.706	12.824	14.749	13.167	10.976	10.442
-5375	-6200	9.320	9.449	10.289	12.908	13.707	15.037	11.623	12.763	14.732	13.178	10.981	10.440
-5500	-6300	10.275	8.582	10.559	12.144	13.613	14.934	11.923	12.991	14.804	13.113	10.935	10.479
-5670	-6400	8.942	9.655	10.163	13.036	13.750	15.102	11.385	12.585	14.681	13.210	10.993	10.434
-5720	-6500	9.357	9.408	10.291	12.798	13.723	15.080	11.447	12.636	14.700	13.192	10.978	10.436
-5775	-6600	10.122	8.750	10.508	12.246	13.657	15.010	11.653	12.796	14.754	13.147	10.946	10.460
-5875	-6700	10.234	8.613	10.538	12.192	13.659	15.018	11.617	12.771	14.749	13.148	10.944	10.462
-5970	-6800	10.360	8.440	10.576	12.157	13.661	15.027	11.581	12.745	14.743	13.151	10.943	10.463
-6040	-6900	10.465	8.277	10.607	12.140	13.667	15.039	11.534	12.711	14.735	13.155	10.943	10.462
-6125	-7000	10.548	8.124	10.633	12.099	13.669	15.049	11.492	12.681	14.728	13.158	10.942	10.463
-6200	-7100	10.599	8.016	10.648	12.039	13.670	15.055	11.460	12.658	14.723	13.158	10.939	10.466
-6260	-7200	10.679	7.838	10.676	11.997	13.669	15.058	11.446	12.649	14.722	13.158	10.937	10.469
-6375	-7300	10.804	7.487	10.723	11.787	13.645	15.037	11.501	12.694	14.738	13.142	10.924	10.497
-6465	-7400	10.877	7.218	10.755	11.566	13.615	15.007	11.583	12.758	14.760	13.122	10.909	10.545
-6600	-7500	10.866	7.251	10.745	11.586	13.628	15.028	11.507	12.702	14.746	13.131	10.912	10.534
-6750	-7600	10.849	7.282	10.730	11.482	13.617	15.022	11.514	12.709	14.750	13.124	10.904	10.562
-6875	-7700	10.836	7.340	10.727	11.665	13.659	15.077	11.329	12.568	14.709	13.154	10.920	10.506
-6960	-7800	10.678	7.787	10.665	11.910	13.706	15.136	11.126	12.410	14.660	13.188	10.939	10.462
-7050	-7900	10.595	7.959	10.642	12.026	13.732	15.168	11.005	12.314	14.631	13.206	10.947	10.447

Radiocarbon Equivalent Dates (rcybp)	Inter-Tropical Convergence Zone (ITCZ), 90W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	8	10	11	13.5	13.5	14.5	13.5	14	15	13	11	10.5
-7200	-8000	10.778	7.469	10.700	11.596	13.670	15.107	11.201	12.474	14.686	13.164	10.918	10.511
-7275	-8100	10.853	7.215	10.730	11.458	13.652	15.092	11.243	12.509	14.700	13.151	10.908	10.547
-7390	-8200	10.880	7.090	10.736	11.210	13.600	15.036	11.410	12.641	14.743	13.115	10.883	10.674
-7468	-8300	10.792	7.356	10.701	11.353	13.645	15.096	11.207	12.485	14.697	13.148	10.900	10.580
-7600	-8400	10.887	7.063	10.736	11.064	13.568	15.006	11.484	12.701	14.766	13.092	10.864	10.819
-7725	-8500	10.875	7.091	10.738	11.285	13.641	15.100	11.178	12.465	14.695	13.146	10.895	10.606
-7825	-8600	10.866	7.086	10.731	11.184	13.621	15.082	11.229	12.507	14.710	13.132	10.884	10.670
-7920	-8700	10.895	7.109	10.744	11.087	13.594	15.053	11.314	12.575	14.733	13.113	10.870	10.767
-7940	-8800	10.892	7.170	10.741	11.016	13.573	15.030	11.380	12.628	14.751	13.097	10.858	10.872
-8000	-8900	10.893	7.259	10.741	11.002	13.572	15.032	11.364	12.617	14.749	13.096	10.856	10.894
-8070	-9000	10.886	7.556	10.732	10.914	13.533	14.977	11.524	12.741	14.787	13.063	10.833	11.147
-8175	-9100	10.883	7.084	10.736	11.087	13.619	15.100	11.131	12.438	14.698	13.132	10.874	10.742
-8225	-9200	10.863	7.058	10.730	11.138	13.643	15.133	11.015	12.346	14.671	13.150	10.883	10.680
-8280	-9300	10.854	7.089	10.733	11.331	13.703	15.202	10.770	12.147	14.607	13.192	10.907	10.551
-8356	-9400	10.885	7.105	10.737	11.122	13.647	15.144	10.966	12.309	14.662	13.153	10.882	10.687
-8475	-9500	10.878	8.083	10.728	10.893	13.542	15.006	11.404	12.656	14.769	13.070	10.830	11.199
-8675	-9600	10.832	7.951	10.673	10.766	13.654	14.783	12.028	13.122	14.898	12.944	10.746	12.375
-8735	-9700	10.791	8.585	10.639	10.711	14.349	14.607	12.479	13.437	14.970	12.852	10.686	12.588
-8780	-9800	10.678	9.016	10.604	10.661	15.247	14.436	12.889	13.710	15.021	12.765	10.629	11.900
-8830	-9900	10.833	7.156	10.674	10.803	13.533	14.930	11.587	12.803	14.820	13.016	10.785	11.853
-8840	-10000	10.805	7.091	10.643	10.759	13.653	14.834	11.844	12.996	14.874	12.960	10.746	12.381
-8935	-10100	10.821	7.126	10.662	10.786	13.554	14.909	11.635	12.841	14.833	13.001	10.772	12.046
-9000	-10200	10.621	8.136	10.593	10.658	15.220	14.482	12.747	13.622	15.010	12.780	10.631	11.914
-9175	-10300	10.763	8.502	10.625	10.700	14.449	14.628	12.393	13.384	14.963	12.854	10.679	12.537
-9227	-10400	10.058	8.489	10.556	10.605	15.166	14.301	13.154	13.885	15.050	12.690	10.574	10.907

Radiocarbon Equivalent Dates (rcybp)	Inter-Tropical Convergence Zone (ITCZ), 90W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	8	10	11	13.5	13.5	14.5	13.5	14	15	13	11	10.5
-9290	-10500	9.799	8.361	10.544	10.591	14.889	14.257	13.247	13.943	15.057	12.667	10.561	10.695
-9370	-10600	9.623	8.956	10.538	10.579	14.567	14.204	13.366	14.015	15.065	12.642	10.553	10.543
-9460	-10700	10.492	8.481	10.582	10.643	15.352	14.456	12.794	13.655	15.017	12.763	10.616	11.658
-9535	-10800	9.764	7.306	10.534	10.595	15.076	14.314	13.097	13.853	15.048	12.689	10.567	10.794
-9575	-10900	9.152	7.626	10.485	10.521	13.195	14.022	13.720	14.228	15.079	12.548	10.617	10.183
-9625	-11000	9.705	7.761	10.458	10.472	12.714	13.894	14.029	14.401	15.079	12.472	10.980	10.116
-9635	-11100	9.450	7.291	10.519	10.577	14.663	14.252	13.230	13.936	15.058	12.658	10.553	10.557
-9735	-11200	9.709	7.319	10.472	10.611	15.383	14.430	12.798	13.666	15.024	12.738	10.588	11.129
-9935	-11300	10.033	7.384	10.492	10.635	15.359	14.519	12.589	13.528	15.000	12.781	10.616	11.614
-9988	-11400	10.447	7.231	10.541	10.673	14.792	14.640	12.297	13.328	14.960	12.844	10.658	12.293
-10015	-11500	10.496	7.343	10.571	10.703	14.203	14.743	12.035	13.143	14.919	12.897	10.693	12.599
-10065	-11600	10.023	7.212	10.538	10.631	15.399	14.483	12.686	13.590	15.010	12.766	10.609	11.493
-10105	-11700	10.433	7.314	10.589	10.696	14.357	14.708	12.131	13.211	14.934	12.880	10.683	12.550
-10145	-11800	9.958	7.279	10.550	10.632	15.395	14.482	12.692	13.594	15.010	12.766	10.609	11.509
-10200	-11900	9.806	7.087	10.544	10.611	15.348	14.393	12.908	13.734	15.032	12.725	10.585	11.090
-10260	-12000	10.537	6.991	10.591	10.664	15.050	14.557	12.534	13.485	14.988	12.810	10.643	12.092
-10285	-12100	10.543	7.036	10.590	10.658	15.154	14.527	12.615	13.539	14.997	12.796	10.636	11.981
-10320	-12200	9.092	7.058	10.507	10.540	13.622	14.095	13.601	14.151	15.076	12.580	10.565	10.261
-10370	-12300	10.533	5.725	9.665	8.874	12.270	15.709	14.865	14.807	14.985	12.214	12.107	10.032
-10460	-12400	10.535	5.740	9.651	8.858	12.264	15.699	14.880	14.813	14.982	12.209	12.049	10.032
-10525	-12500	10.503	5.815	10.336	9.982	12.412	14.658	14.592	14.687	15.038	12.316	12.600	10.065
-10580	-12600	10.555	5.692	10.054	9.249	12.310	15.601	14.812	14.785	15.000	12.241	12.468	10.044
-10700	-12700	10.516	6.211	9.081	8.824	12.183	14.985	15.028	14.867	14.937	12.150	11.154	10.014
-10850	-12800	10.113	6.380	10.404	10.349	12.521	13.985	14.345	14.567	15.064	12.390	11.844	10.087
-10990	-12900	9.948	7.330	8.704	9.198	12.146	14.483	15.057	14.877	14.922	12.129	10.792	10.003

Radiocarbon Equivalent Dates (rcybp)	Inter-Tropical Convergence Zone (ITCZ), 90W												
	DATE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Modern	8	10	11	13.5	13.5	14.5	13.5	14	15	13	11	10.5
-11110	-13000	10.284	6.014	9.506	8.801	12.249	15.653	14.906	14.823	14.975	12.198	11.893	10.028
-11200	-13100	10.334	6.839	8.712	9.461	12.098	13.783	15.148	14.902	14.885	12.108	10.466	9.995
-11300	-13200	10.373	6.203	9.125	8.798	12.186	15.024	15.028	14.867	14.938	12.151	11.192	10.016
-11400	-13300	10.281	7.064	10.068	10.216	11.881	12.752	15.351	14.911	14.703	13.267	10.054	9.944
-11500	-13400	10.274	7.037	10.174	10.198	11.811	12.650	15.378	14.885	14.630	14.092	10.015	9.927
-11625	-13500	10.256	7.078	10.173	10.193	11.795	12.625	15.382	14.877	14.611	14.188	10.006	9.923
-11725	-13600	10.224	7.264	9.431	10.151	11.962	12.890	15.304	14.922	14.772	12.440	10.113	9.965
-11800	-13700	10.039	7.564	10.014	10.216	11.872	12.733	15.359	14.906	14.690	13.405	10.050	9.943
-11900	-13800	10.008	7.368	8.661	9.346	12.088	13.634	15.185	14.910	14.868	12.106	10.424	9.996
-11970	-13900	10.022	7.649	9.352	10.150	11.953	12.862	15.317	14.921	14.759	12.522	10.106	9.964
-12025	-14000	10.016	7.463	8.632	9.542	12.055	13.306	15.233	14.919	14.840	12.123	10.291	9.990

APPENDIX B: Net Primary Productivity (NPP) Calculations

Appendix B, Section 1: Miami Model (Lieth 1972) Net Primary Productivity Excel Equation

=MIN(3000/(1/(1+EXP(1.315-(0.119*MillenniaT_P![mean millennial temp output OR mean time-averaged temp output]))),(3000*(1-(EXP(-0.000664* MillenniaT_P![annual precipitation millennial output OR time-averaged annual precipitation output])))))

Appendix B, Section 2: Time-Averaged Archaeological Period Net Primary Productivity Outputs

Site	Lat	Long	Period		JAN	FEB	MAR	APR	MAY	JUN
COLUMBUS	32.492	-84.940	Early-Mid Paleo	13,400-12,800	165.244	171.817	222.890	175.654	199.391	294.269
SAPELO	31.478	-81.242		13,400-12,800	153.821	270.290	225.715	157.171	145.286	267.319
SAVANNAH	32.017	-81.117		13,400-12,800	77.947	86.758	89.516	89.879	166.631	384.064
TIFTON	31.463	-83.510		13,400-12,800	143.826	212.567	190.830	150.116	181.465	316.983
EXPERIMENT	33.160	-84.170		13,400-12,800	212.663	215.971	251.311	206.762	240.307	287.841
CHARLESTON	32.770	-79.930		13,400-12,800	113.690	190.883	200.426	113.208	115.367	271.776
UNION	34.600	-81.660		13,400-12,800	229.159	261.666	289.598	216.734	200.472	219.935
COLUMBUS	32.492	-84.940	Late Paleo/ Dalton	12,900-11,500	175.264	159.853	220.380	193.420	182.928	252.367
SAPELO	31.478	-81.242		12,900-11,500	148.017	261.911	206.029	144.716	178.135	278.276
SAVANNAH	32.017	-81.117		12,900-11,500	99.252	95.200	102.862	111.322	200.308	376.617
TIFTON	31.463	-83.510		12,900-11,500	151.996	198.384	180.125	159.465	183.610	286.776
EXPERIMENT	33.160	-84.170		12,900-11,500	218.334	207.513	247.322	214.526	235.007	254.246
CHARLESTON	32.770	-79.930		12,900-11,500	113.990	188.549	183.184	107.063	157.614	287.933
UNION	34.600	-81.660		12,900-11,500	221.049	251.775	272.897	206.463	183.184	210.369
COLUMBUS	32.492	-84.940	Early Archaic	11,500-8900	187.243	167.645	227.451	207.770	177.579	234.152
SAPELO	31.478	-81.242		11,500-8900	142.670	231.797	192.781	131.267	183.452	258.507
SAVANNAH	32.017	-81.117		11,500-8900	118.659	106.209	119.808	125.861	215.455	352.639
TIFTON	31.463	-83.510		11,500-8900	160.919	189.829	180.322	163.896	183.957	261.520
EXPERIMENT	33.160	-84.170		11,500-8900	224.872	208.238	249.810	219.509	226.643	223.390
CHARLESTON	32.770	-79.930		11,500-8900	113.335	162.193	173.506	97.917	167.132	264.351
UNION	34.600	-81.660		11,500-8900	214.235	234.621	261.396	196.063	177.330	211.485

Site	Lat	Long	Period		JAN	FEB	MAR	APR	MAY	JUN
COLUMBUS	32.492	-84.940	Middle Archaic	8900-5800	203.047	181.353	245.461	209.883	187.345	188.081
SAPELO	31.478	-81.242		8900-5800	142.140	222.084	190.173	127.990	157.011	274.380
SAVANNAH	32.017	-81.117		8900-5800	143.885	129.747	149.332	137.297	211.057	315.185
TIFTON	31.463	-83.510		8900-5800	176.937	199.621	196.051	163.043	183.330	223.421
EXPERIMENT	33.160	-84.170		8900-5800	233.220	215.240	259.083	219.872	214.637	188.597
CHARLESTON	32.770	-79.930		8900-5800	118.585	158.896	178.854	98.469	140.324	279.512
UNION	34.600	-81.660		8900-5800	212.632	227.680	258.770	183.547	184.739	202.845
COLUMBUS	32.492	-84.940	Late Archaic	5800-3200	203.114	204.164	258.021	208.301	187.717	194.400
SAPELO	31.478	-81.242		5800-3200	164.643	195.666	195.106	133.215	154.069	250.944
SAVANNAH	32.017	-81.117		5800-3200	159.392	142.139	166.416	143.403	205.355	291.444
TIFTON	31.463	-83.510		5800-3200	195.657	202.847	209.511	163.941	181.844	218.872
EXPERIMENT	33.160	-84.170		5800-3200	235.739	224.124	265.764	220.942	216.166	197.716
CHARLESTON	32.770	-79.930		5800-3200	147.578	134.038	188.121	104.574	137.067	253.267
UNION	34.600	-81.660		5800-3200	229.339	217.879	263.810	179.346	184.434	203.452

Site	Lat	Long	Period		JUL	AUG	SEP	OCT	NOV	DEC	Total	AVG
COLUMBUS	32.492	-84.940	Early-Mid Paleo	13,400-12,800	450.602	338.075	296.842	277.954	233.702	217.456	3043.895	253.658
SAPELO	31.478	-81.242		13,400-12,800	341.478	351.558	289.969	197.388	141.520	177.956	2719.471	226.623
SAVANNAH	32.017	-81.117		13,400-12,800	672.824	690.680	372.809	329.659	149.242	131.347	3241.356	270.113
TIFTON	31.463	-83.510		13,400-12,800	481.121	443.191	280.634	297.541	158.143	189.210	3045.627	253.802
EXPERIMENT	33.160	-84.170		13,400-12,800	333.699	275.804	233.845	278.031	220.404	236.092	2992.730	249.394
CHARLESTON	32.770	-79.930		13,400-12,800	365.989	358.010	296.796	207.837	110.963	134.185	2479.127	206.594
UNION	34.600	-81.660		13,400-12,800	229.451	235.627	222.185	214.830	183.803	215.295	2718.755	226.563
COLUMBUS	32.492	-84.940	Late Paleo/ Dalton	12,900-11,500	384.503	287.932	233.162	205.017	221.595	226.496	2742.916	228.576
SAPELO	31.478	-81.242		12,900-11,500	300.220	353.524	304.939	169.955	138.525	168.375	2652.621	221.052
SAVANNAH	32.017	-81.117		12,900-11,500	509.433	552.555	308.610	228.240	143.789	144.998	2873.186	239.432
TIFTON	31.463	-83.510		12,900-11,500	380.833	361.495	225.444	210.117	149.420	192.030	2679.696	223.308
EXPERIMENT	33.160	-84.170		12,900-11,500	297.668	260.082	193.796	219.820	208.380	239.049	2795.742	232.979
CHARLESTON	32.770	-79.930		12,900-11,500	297.982	333.689	300.713	170.292	111.234	130.374	2382.618	198.551
UNION	34.600	-81.660		12,900-11,500	221.676	225.525	207.706	202.922	178.102	200.274	2581.944	215.162

Site	Lat	Long	Period		JUL	AUG	SEP	OCT	NOV	DEC	Total	AVG
COLUMBUS	32.492	-84.940	Early Archaic	11,500-8900	267.202	220.785	182.321	137.179	203.999	227.954	2441.277	203.440
SAPELO	31.478	-81.242		11,500-8900	246.215	336.090	313.337	158.076	138.152	162.286	2494.630	207.886
SAVANNAH	32.017	-81.117		11,500-8900	304.394	382.699	243.896	147.433	129.674	148.986	2395.712	199.643
TIFTON	31.463	-83.510		11,500-8900	246.197	262.809	176.932	137.063	139.246	190.648	2293.336	191.111
EXPERIMENT	33.160	-84.170		11,500-8900	218.575	225.324	166.274	169.484	192.515	236.780	2561.414	213.451
CHARLESTON	32.770	-79.930		11,500-8900	223.330	292.574	295.537	151.373	112.378	127.989	2181.614	181.801
UNION	34.600	-81.660		11,500-8900	213.440	218.177	197.980	189.408	180.837	192.198	2487.169	207.264
COLUMBUS	32.492	-84.940	Middle Archaic	8900-5800	138.393	146.498	143.219	87.598	176.071	221.809	2128.757	177.396
SAPELO	31.478	-81.242		8900-5800	204.500	311.426	315.857	151.786	135.963	164.332	2397.642	199.804
SAVANNAH	32.017	-81.117		8900-5800	132.787	223.534	184.669	89.935	107.466	144.704	1969.597	164.133
TIFTON	31.463	-83.510		8900-5800	123.314	167.225	137.081	86.018	119.129	190.134	1965.304	163.775
EXPERIMENT	33.160	-84.170		8900-5800	125.393	173.129	147.751	129.637	172.099	227.951	2306.610	192.217
CHARLESTON	32.770	-79.930		8900-5800	171.513	252.178	284.569	139.121	109.895	133.005	2064.922	172.077
UNION	34.600	-81.660		8900-5800	204.329	212.147	192.152	179.823	178.170	198.458	2435.292	202.941
COLUMBUS	32.492	-84.940	Late Archaic	5800-3200	234.319	189.868	159.648	108.111	180.738	223.380	2351.782	195.982
SAPELO	31.478	-81.242		5800-3200	262.483	344.363	314.241	155.925	135.354	166.334	2472.343	206.029
SAVANNAH	32.017	-81.117		5800-3200	262.443	328.228	212.660	113.043	111.148	147.219	2282.891	190.241
TIFTON	31.463	-83.510		5800-3200	216.049	229.071	156.661	107.555	122.011	192.700	2196.719	183.060
EXPERIMENT	33.160	-84.170		5800-3200	211.874	208.567	152.717	146.825	175.109	228.475	2484.017	207.001
CHARLESTON	32.770	-79.930		5800-3200	233.536	297.502	293.233	146.368	109.304	135.452	2180.040	181.670
UNION	34.600	-81.660		5800-3200	208.859	214.138	195.250	184.743	178.751	200.848	2460.849	205.071

Appendix B, Section 3: Millennial Net Primary Productivity Outputs

Site	Lat	Long	Time	JAN	FEB	MAR	APR	MAY	JUN
COLUMBUS	32.492	-84.940	14000	163.623	179.167	214.979	174.853	198.638	324.526
	32.492	-84.940	13000	166.365	159.194	217.181	173.833	204.031	232.724
	32.492	-84.940	12000	185.432	158.929	223.932	207.002	157.862	242.139
	32.492	-84.940	11000	170.653	166.892	219.057	195.733	208.120	289.989
	32.492	-84.940	10000	191.654	161.814	228.907	210.584	193.994	220.255
	32.492	-84.940	9000	197.767	169.980	235.810	213.208	194.132	204.030
	32.492	-84.940	8000	203.134	173.455	242.713	212.866	187.986	188.973
	32.492	-84.940	7000	206.166	183.431	247.517	210.536	186.308	185.629
	32.492	-84.940	6000	201.764	200.322	251.892	203.642	184.247	182.117
	32.492	-84.940	5000	207.347	200.372	255.320	212.270	188.644	195.051
	32.492	-84.940	4000	208.832	201.171	258.173	217.846	192.318	208.775
	32.492	-84.940	3000	202.446	216.771	267.790	193.659	182.653	185.140
SAPELO	31.478	-81.242	14000	157.485	253.232	246.522	157.532	145.253	230.579
	31.478	-81.242	13000	151.360	283.696	222.453	167.670	144.098	354.479
	31.478	-81.242	12000	140.711	249.745	193.635	132.239	214.778	253.030
	31.478	-81.242	11000	155.016	236.863	201.004	138.161	144.911	233.541
	31.478	-81.242	10000	137.066	245.091	190.821	129.986	157.959	265.294
	31.478	-81.242	9000	135.952	232.962	188.791	128.182	154.398	272.029
	31.478	-81.242	8000	136.216	234.157	188.046	125.221	157.362	279.190
	31.478	-81.242	7000	138.799	219.488	189.456	126.578	157.356	274.012
	31.478	-81.242	6000	158.275	190.760	194.884	132.406	157.425	268.625
	31.478	-81.242	5000	152.514	199.442	194.917	129.280	153.933	252.625
	31.478	-81.242	4000	154.298	205.119	194.641	128.879	151.506	240.819
	31.478	-81.242	3000	178.668	182.765	194.710	146.670	155.300	248.259

Site	JUL	AUG	SEP	OCT	NOV	DEC	Total	AVG
COLUMBUS	442.454	338.610	305.795	299.383	235.364	216.840	3094.233	257.853
	463.923	334.442	282.042	271.186	234.153	222.420	2961.494	246.791
	300.738	242.604	190.139	146.004	210.374	228.361	2493.516	207.793
	444.250	310.678	239.572	214.810	230.875	230.183	2920.811	243.401
	212.019	196.920	168.886	118.153	197.968	222.707	2323.860	193.655
	163.023	166.282	154.562	100.697	187.257	227.248	2213.996	184.500
	119.557	136.501	140.678	84.822	176.059	222.019	2088.763	174.064
	137.642	145.426	142.009	86.150	174.522	220.960	2126.296	177.191
	156.197	153.399	143.127	87.347	172.593	219.626	2156.274	179.689
	231.720	190.290	159.370	107.335	181.637	224.004	2353.359	196.113
	280.980	211.970	173.218	126.208	189.251	227.902	2496.644	208.054
	230.614	184.218	155.241	102.654	174.312	219.299	2314.799	192.900
SAPELO	342.874	347.608	286.833	191.285	144.905	178.769	2682.876	223.573
	345.794	358.284	294.309	182.759	136.359	176.304	2817.564	234.797
	255.898	347.034	313.801	159.090	138.741	159.883	2558.584	213.215
	324.542	365.382	304.915	170.651	137.015	172.527	2584.529	215.377
	222.809	327.926	315.576	155.062	137.693	161.216	2446.499	203.875
	208.118	316.034	315.904	152.929	136.849	159.204	2401.353	200.113
	194.714	303.015	315.654	151.081	136.133	164.226	2385.016	198.751
	205.056	312.126	315.922	151.724	135.817	165.196	2391.530	199.294
	217.151	321.049	316.028	152.396	135.458	165.863	2410.322	200.860
	257.528	343.655	314.757	155.613	135.511	166.209	2455.983	204.665
	289.389	354.094	311.945	158.613	135.602	165.744	2490.648	207.554
	269.496	347.144	314.243	155.810	134.704	167.112	2494.882	207.907

Site	Lat	Long	Time	JAN	FEB	MAR	APR	MAY	JUN
SAVANNAH	32.017	-81.117	14000	76.826	85.199	90.122	88.140	163.400	378.601
	32.017	-81.117	13000	82.167	87.650	90.758	96.993	176.469	403.367
	32.017	-81.117	12000	114.211	103.274	114.630	124.438	221.064	357.682
	32.017	-81.117	11000	97.125	90.440	98.874	109.751	196.363	375.314
	32.017	-81.117	10000	122.753	110.330	123.842	129.519	214.800	348.332
	32.017	-81.117	9000	131.694	118.183	134.379	133.498	213.820	335.360
	32.017	-81.117	8000	140.016	127.222	144.922	135.811	212.675	322.864
	32.017	-81.117	7000	145.363	131.782	151.770	137.822	210.492	311.083
	32.017	-81.117	6000	153.825	135.762	160.239	140.513	207.942	298.805
	32.017	-81.117	5000	155.067	139.303	162.694	142.087	206.367	295.092
	32.017	-81.117	4000	156.983	142.104	164.678	143.666	205.387	295.826
	32.017	-81.117	3000	170.807	152.422	179.742	147.389	201.566	275.392
TIFTON	31.463	-83.510	14000	144.631	208.344	197.023	149.399	180.469	327.119
	31.463	-83.510	13000	143.980	209.092	185.334	157.409	185.802	300.067
	31.463	-83.510	12000	157.583	192.064	177.587	163.793	179.492	267.569
	31.463	-83.510	11000	153.080	188.843	175.477	156.469	191.819	301.016
	31.463	-83.510	10000	160.964	193.491	181.014	165.981	188.875	252.323
	31.463	-83.510	9000	166.068	194.979	186.115	167.308	187.822	239.005
	31.463	-83.510	8000	171.851	200.444	192.190	164.219	184.158	226.475
	31.463	-83.510	7000	176.977	200.614	197.279	162.394	182.606	220.700
	31.463	-83.510	6000	190.116	196.585	205.256	159.515	180.738	214.649
	31.463	-83.510	5000	189.533	202.241	207.101	165.115	182.629	220.480
	31.463	-83.510	4000	191.702	206.427	208.266	169.922	184.409	228.203
	31.463	-83.510	3000	207.376	205.474	217.835	158.857	177.965	208.363
EXPERIMENT	33.160	-84.170	14000	211.975	217.785	249.541	206.261	240.411	295.772
	33.160	-84.170	13000	213.144	210.001	247.274	207.449	242.614	275.615
	33.160	-84.170	12000	223.699	205.522	247.975	219.735	226.457	230.174
	33.160	-84.170	11000	216.416	207.971	245.885	215.459	242.574	266.575
	33.160	-84.170	10000	226.968	206.883	250.489	220.483	227.278	212.713
	33.160	-84.170	9000	230.160	210.169	254.071	220.716	221.890	200.107
	33.160	-84.170	8000	232.736	212.594	257.569	220.136	214.987	188.155
	33.160	-84.170	7000	234.315	216.141	260.090	219.998	213.593	187.002
	33.160	-84.170	6000	234.074	221.472	262.590	219.066	211.863	185.732
	33.160	-84.170	5000	236.223	222.493	264.400	221.582	216.964	197.914
	33.160	-84.170	4000	237.264	223.555	265.972	223.414	221.225	209.429
	33.160	-84.170	3000	236.983	229.509	270.451	217.971	211.421	191.823

Site	JUL	AUG	SEP	OCT	NOV	DEC	Total	AVG
SAVANNAH	679.530	698.262	380.112	342.576	150.354	130.447	3263.569	271.964
	680.497	686.692	364.602	307.617	152.062	137.520	3266.393	272.199
	337.329	420.572	257.321	157.297	134.914	150.461	2493.192	207.766
	584.043	606.171	323.080	239.322	149.477	147.702	3017.662	251.472
	220.008	319.705	224.504	124.837	124.931	149.516	2213.077	184.423
	160.806	259.176	202.001	104.783	116.336	147.325	2057.361	171.447
	110.889	203.011	179.951	86.816	107.446	144.681	1916.303	159.692
	131.712	221.643	182.944	88.292	106.236	144.401	1963.541	163.628
	154.216	239.844	185.630	89.613	104.727	143.812	2014.927	167.911
	254.692	324.925	212.235	112.152	111.847	147.561	2264.023	188.669
	335.661	386.197	233.273	133.664	117.870	150.644	2465.953	205.496
	259.608	320.575	206.697	106.735	106.108	144.582	2271.622	189.302
TIFTON	481.709	447.273	287.841	315.646	162.322	188.863	3090.638	257.553
	488.074	438.105	270.124	282.483	154.105	193.351	3007.925	250.660
	273.645	287.783	185.538	145.833	144.020	187.537	2362.443	196.870
	435.719	392.803	233.903	219.462	155.366	199.583	2803.540	233.628
	189.701	227.564	163.239	116.903	135.017	183.725	2158.798	179.900
	145.322	190.062	148.362	99.114	127.247	189.645	2041.048	170.087
	106.587	154.448	133.839	83.079	119.206	190.310	1926.806	160.567
	122.522	166.042	135.980	84.592	117.993	190.204	1957.904	163.159
	139.301	177.073	137.952	85.994	116.492	189.613	1993.284	166.107
	211.693	227.836	156.173	106.641	122.708	193.138	2185.287	182.107
	265.834	262.363	171.121	126.333	127.951	195.582	2338.115	194.843
	213.498	223.869	152.880	102.166	117.292	190.049	2175.626	181.302
EXPERIMENT	323.127	272.951	240.088	287.642	221.524	236.113	3003.189	250.266
	345.740	273.467	222.515	267.521	220.603	238.458	2964.400	247.033
	243.396	245.511	169.319	177.244	197.012	239.076	2625.120	218.760
	349.428	273.966	195.018	227.926	213.095	240.811	2895.124	241.260
	175.396	212.777	159.968	155.333	187.901	235.671	2471.858	205.988
	140.592	188.493	153.487	140.933	180.164	232.835	2373.616	197.801
	109.736	163.127	147.188	127.259	172.157	228.267	2273.911	189.493
	125.201	172.761	147.042	128.386	170.977	227.248	2302.754	191.896
	142.352	181.208	146.726	129.390	169.503	225.960	2329.937	194.161
	208.097	210.138	152.805	146.306	175.793	229.083	2481.799	206.817
	251.359	220.885	158.581	161.552	181.125	231.836	2586.198	215.516
	214.036	205.051	149.848	142.340	170.387	224.953	2464.773	205.398

Site	Lat	Long	Time	JAN	FEB	MAR	APR	MAY	JUN
CHARLESTON	32.770	-79.930	14000	117.140	171.874	226.782	112.781	114.695	228.085
	32.770	-79.930	13000	112.634	207.310	197.664	126.413	116.122	375.763
	32.770	-79.930	12000	110.183	179.594	173.090	98.280	201.221	259.033
	32.770	-79.930	11000	121.194	160.694	175.763	99.826	121.192	236.550
	32.770	-79.930	10000	108.295	177.310	172.748	97.755	140.208	272.052
	32.770	-79.930	9000	108.990	166.841	173.263	97.330	136.997	278.447
	32.770	-79.930	8000	111.088	170.527	175.264	95.427	140.706	285.015
	32.770	-79.930	7000	114.837	156.172	178.510	97.238	140.770	278.861
	32.770	-79.930	6000	139.163	128.843	187.309	103.670	140.919	272.423
	32.770	-79.930	5000	131.722	137.052	187.106	100.319	136.889	255.342
	32.770	-79.930	4000	133.550	142.421	186.497	99.738	133.996	242.627
	32.770	-79.930	3000	167.224	123.589	190.579	119.332	138.630	249.432
UNION	34.600	-81.660	14000	232.506	255.244	301.216	217.848	201.016	229.513
	34.600	-81.660	13000	226.254	265.808	287.044	222.067	198.708	197.066
	34.600	-81.660	12000	213.412	242.272	262.241	197.152	167.292	213.103
	34.600	-81.660	11000	226.750	241.638	269.949	202.348	193.689	221.882
	34.600	-81.660	10000	208.946	238.700	259.383	195.201	184.655	208.993
	34.600	-81.660	9000	207.399	232.862	257.301	193.380	186.255	205.864
	34.600	-81.660	8000	207.815	232.389	256.724	186.531	184.926	202.968
	34.600	-81.660	7000	210.893	226.900	258.251	181.953	184.487	202.405
	34.600	-81.660	6000	225.068	214.791	263.319	175.559	183.977	201.752
	34.600	-81.660	5000	222.937	220.054	263.661	181.972	184.670	203.726
	34.600	-81.660	4000	225.106	223.656	263.323	187.418	185.211	205.504
	34.600	-81.660	3000	237.529	210.775	263.827	169.530	183.335	201.667

Site	JUL	AUG	SEP	OCT	NOV	DEC	Total	AVG
CHARLESTON	372.412	357.739	294.828	200.538	114.256	134.462	2445.594	203.799
	366.767	362.403	300.796	189.520	106.804	134.485	2596.681	216.390
	233.149	305.494	299.664	153.669	113.191	125.007	2251.575	187.631
	323.798	351.452	304.911	172.338	109.925	134.790	2312.433	192.703
	194.882	276.388	293.380	146.347	112.159	127.618	2119.141	176.595
	177.465	259.614	288.326	142.003	111.128	126.634	2067.040	172.253
	161.743	242.474	282.498	137.952	110.097	132.798	2045.590	170.466
	171.721	252.562	284.378	138.880	109.698	134.073	2057.700	171.475
	183.474	262.867	286.119	139.827	109.238	135.038	2088.890	174.074
	227.735	295.376	293.292	145.945	109.513	135.216	2155.508	179.626
	266.209	316.376	296.877	151.435	109.730	134.493	2213.949	184.496
	239.498	300.353	292.850	145.683	108.430	136.765	2212.366	184.364
UNION	229.532	236.727	224.239	222.670	189.551	216.250	2756.315	229.693
	227.275	232.275	217.968	216.358	173.778	213.235	2677.836	223.153
	216.540	219.734	198.976	191.284	181.603	185.151	2488.758	207.396
	223.588	226.047	208.391	204.507	180.275	208.539	2607.602	217.300
	211.179	216.520	195.531	185.836	180.150	180.843	2465.937	205.495
	207.149	214.095	193.519	182.379	179.110	192.774	2452.085	204.340
	202.885	211.594	191.660	179.068	178.130	198.353	2433.044	202.754
	204.231	211.993	192.033	179.570	178.046	199.229	2429.991	202.499
	205.248	212.223	192.397	180.061	177.936	199.852	2432.183	202.682
	209.233	214.334	195.090	184.534	178.797	200.721	2459.729	204.977
	210.722	215.539	197.561	188.469	179.575	200.728	2482.813	206.901
	207.780	213.214	194.800	183.930	178.250	201.479	2446.116	203.843

APPENDIX C: Georgia's Natural, Archaeological, and Historic Resources GIS (GNAHRGIS) Sites Used in This Study

County	Site Number	Northing	Easting	Cultural Affiliation
Bibb	9BI1	3636500	256000	Early-Mid Paleoindian
Bibb	9BI162	3628321	236235	Early-Mid Paleoindian
Bibb	9BI18	3635500	258050	Early-Mid Paleoindian
Burke	9BK515	3630981	386798	Early-Mid Paleoindian
Burke	9BK531	3652666	430674	Early-Mid Paleoindian
Burke	9BK532	3652042	431355	Early-Mid Paleoindian
Burke	9BK537	3651164	390639	Early-Mid Paleoindian
Coffee	9CF132	3515100	318800	Early-Mid Paleoindian
Elbert	9EB276	3789156	339060	Early-Mid Paleoindian
Greene	9GE329	3703780	294530	Early-Mid Paleoindian
Greene	9GE72	3732308	286890	Early-Mid Paleoindian
Gwinnett	9GW153	3757150	754340	Early-Mid Paleoindian
Gwinnett	9GW61	3768120	235192	Early-Mid Paleoindian
Habersham	9HM33	3832860	276100	Early-Mid Paleoindian
Habersham	9HM34	3832760	276260	Early-Mid Paleoindian
Hall	9HL17	3789624	225684	Early-Mid Paleoindian
Hancock	9HK51	3674320	316350	Early-Mid Paleoindian
Hart	9HA117	3790718	309240	Early-Mid Paleoindian
Jefferson	9JF65	3684830	376390	Early-Mid Paleoindian
Macon	9MA20	3571140	779380	Early-Mid Paleoindian
Oconee	9OC30	3746480	285240	Early-Mid Paleoindian
Oglethorpe	9OG5	3746300	319800	Early-Mid Paleoindian
Oglethorpe	9OG74	3744880	295500	Early-Mid Paleoindian
Pulaski	9PU116	3578579	267827	Early-Mid Paleoindian
Putnam	9PM704	3691400	271220	Early-Mid Paleoindian
Telfair	9TF87	3534500	317880	Early-Mid Paleoindian
Towns	9TO2	3872564	238924	Early-Mid Paleoindian
Towns	9TO69	3861410	255180	Early-Mid Paleoindian
Twiggs	9TW99	3613810	261770	Early-Mid Paleoindian
Baldwin	9BL217	3647660	306280	Late Paleoindian
Baldwin	9BL219	3648350	305500	Late Paleoindian
Baldwin	9BL25	3648500	306160	Late Paleoindian
Baldwin	9BL46	3656400	279320	Late Paleoindian
Banks	9BA7	3812500	268100	Late Paleoindian
Barrow	9BW1	3761667	258523	Late Paleoindian
Ben Hill	9BH2	3520050	300400	Late Paleoindian
Bibb	9BI50	3624340	254800	Late Paleoindian
Bibb	9BI51	3624500	254260	Late Paleoindian
Bryan	9BN194	3537200	463650	Late Paleoindian
Bryan	9BN36	3537510	454770	Late Paleoindian
Burke	9BK19	3660680	407510	Late Paleoindian
Burke	9BK22	3667520	427400	Late Paleoindian
Burke	9BK531	3652666	430674	Late Paleoindian
Burke	9BK532	3652042	431355	Late Paleoindian
Chatham	9CH1127	3536006	476318	Late Paleoindian

County	Site Number	Northing	Easting	Cultural Affiliation
Coffee	9CF119	3515100	317200	Late Paleoindian
Coffee	9CF127	3515340	317780	Late Paleoindian
Coffee	9CF165	3490920	336060	Late Paleoindian
Coffee	9CF176	3488700	335420	Late Paleoindian
Coffee	9CF22	3517440	318080	Late Paleoindian
Coffee	9CF24	3517920	324900	Late Paleoindian
Coffee	9CF248	3493950	335480	Late Paleoindian
Coffee	9CF37	3488205	326700	Late Paleoindian
Coffee	9CF55	3496000	310700	Late Paleoindian
Columbia	9CB160	3725420	388465	Late Paleoindian
Dodge	9DG10	3546140	292900	Late Paleoindian
Dodge	9DG129	3573673	298428	Late Paleoindian
Elbert	9EB174	3759000	355000	Late Paleoindian
Elbert	9EB260	3790744	338828	Late Paleoindian
Elbert	9EB327	3778744	340888	Late Paleoindian
Elbert	9EB405	3774852	345000	Late Paleoindian
Elbert	9EB51	3760800	348760	Late Paleoindian
Elbert	9EB635	3761270	352000	Late Paleoindian
Fulton	9FU144	3769000	747216	Late Paleoindian
Fulton	9FU176	3725540	715450	Late Paleoindian
Fulton	9FU428	3719160	709580	Late Paleoindian
Greene	9GE1539	3728200	290440	Late Paleoindian
Greene	9GE1661	3696760	294370	Late Paleoindian
Greene	9GE1801	3732660	287980	Late Paleoindian
Greene	9GE1904	3703980	290585	Late Paleoindian
Greene	9GE1914	3695010	298050	Late Paleoindian
Greene	9GE1915	3695370	299180	Late Paleoindian
Greene	9GE1916	3700050	297590	Late Paleoindian
Greene	9GE1917	3698650	297400	Late Paleoindian
Greene	9GE1918	3697950	298150	Late Paleoindian
Greene	9GE1928	3703718	293723	Late Paleoindian
Greene	9GE398	3698160	292150	Late Paleoindian
Greene	9GE399	3695300	297890	Late Paleoindian
Greene	9GE437	3696778	299930	Late Paleoindian
Greene	9GE486	3695040	298260	Late Paleoindian
Greene	9GE596	3699386	297341	Late Paleoindian
Greene	9GE596	3699386	297341	Late Paleoindian
Greene	9GE629	3698110	298130	Late Paleoindian
Greene	9GE629	3698110	298130	Late Paleoindian
Greene	9GE64	3718456	290216	Late Paleoindian
Greene	9GE64	3718456	290216	Late Paleoindian
Greene	9GE649	3697200	294980	Late Paleoindian
Greene	9GE649	3697200	294980	Late Paleoindian
Greene	9GE676	3700910	296500	Late Paleoindian
Greene	9GE676	3700910	296500	Late Paleoindian
Greene	9GE819	3721360	295312	Late Paleoindian
Greene	9GE819	3721360	295312	Late Paleoindian
Greene	9GE899	3701450	296180	Late Paleoindian

County	Site Number	Northing	Easting	Cultural Affiliation
Greene	9GE899	3701450	296180	Late Paleoindian
Greene	9GE952	3700457	296311	Late Paleoindian
Gwinnett	9GW153	3757150	754340	Late Paleoindian
Gwinnett	9GW476	3773890	767200	Late Paleoindian
Gwinnett	9GW476	3773890	767200	Late Paleoindian
Habersham	9HM36	3838750	279700	Late Paleoindian
Habersham	9HM37	3838650	279460	Late Paleoindian
Habersham	9HM38	3838540	279220	Late Paleoindian
Habersham	9HM39	3841420	260800	Late Paleoindian
Habersham	9HM40	3820490	269840	Late Paleoindian
Hall	9HL377	3793924	251552	Late Paleoindian
Hancock	9HK194	3698920	307878	Late Paleoindian
Hart	9HA105	3798000	308180	Late Paleoindian
Hart	9HA105	3798000	308180	Late Paleoindian
Houston	9HT43	3610060	258530	Late Paleoindian
Jefferson	9JF65	3684830	376390	Late Paleoindian
Laurens	9LS168	3580810	318660	Late Paleoindian
Laurens	9LS44	3597500	324800	Late Paleoindian
Liberty	9LI1072	3531250	438507	Late Paleoindian
Liberty	9LI1776	3530985	450908	Late Paleoindian
Liberty	9LI1776	3530985	450908	Late Paleoindian
Liberty	9LI2051	3522829	455387	Late Paleoindian
Liberty	9LI501	3535690	449630	Late Paleoindian
Liberty	9LI501	3535690	449630	Late Paleoindian
Lincoln	9LC1044	3736950	380403	Late Paleoindian
Lincoln	9LC431	3753380	355470	Late Paleoindian
Lincoln	9LC431	3753380	355470	Late Paleoindian
Lincoln	9LC444	3752150	355510	Late Paleoindian
Lincoln	9LC444	3752150	355510	Late Paleoindian
Lincoln	9LC935	3745090	367300	Late Paleoindian
Macon	9MA23	3594000	779120	Late Paleoindian
Macon	9MA56	3584100	780550	Late Paleoindian
Madison	9MD22	3773930	287380	Late Paleoindian
Madison	9MD22	3773930	287380	Late Paleoindian
Madison	9MD23	3774010	287630	Late Paleoindian
Madison	9MD23	3774010	287630	Late Paleoindian
Madison	9MD28	3773820	287500	Late Paleoindian
Madison	9MD29	3773820	287500	Late Paleoindian
Madison	9MD32	3773600	287720	Late Paleoindian
Madison	9MD32	3773600	287720	Late Paleoindian
Madison	9MD37	3773620	287370	Late Paleoindian
Madison	9MD37	3773620	287370	Late Paleoindian
McDuffie	9MF25	3690280	378320	Late Paleoindian
McDuffie	9MF27	3692270	377190	Late Paleoindian
McDuffie	9MF27	3692270	377190	Late Paleoindian
McDuffie	9MF28	3692260	377520	Late Paleoindian
McDuffie	9MF28	3692260	377520	Late Paleoindian
McDuffie	9MF528	3722597	360896	Late Paleoindian

County	Site Number	Northing	Easting	Cultural Affiliation
McIntosh	9MC160	3498990	455360	Late Paleoindian
McIntosh	9MC160	3498990	455360	Late Paleoindian
McIntosh	9MC229	3486320	458430	Late Paleoindian
McIntosh	9MC229	3486320	458430	Late Paleoindian
Morgan	9MG268	3707040	269775	Late Paleoindian
Morgan	9MG268	3707040	269775	Late Paleoindian
Morgan	9MG276	3705190	264550	Late Paleoindian
Morgan	9MG276	3705190	264550	Late Paleoindian
Morgan	9MG55	3726312	267552	Late Paleoindian
Morgan	9MG55	3726312	267552	Late Paleoindian
Oconee	9OC168	3750220	278700	Late Paleoindian
Oconee	9OC168	3750220	278700	Late Paleoindian
Oconee	9OC25	3745720	286936	Late Paleoindian
Oconee	9OC25	3745720	286936	Late Paleoindian
Oconee	9OC26	3746432	285648	Late Paleoindian
Oconee	9OC26	3746432	285648	Late Paleoindian
Oconee	9OC30	3746480	285240	Late Paleoindian
Oconee	9OC30	3746480	285240	Late Paleoindian
Oconee	9OC74	3733140	280175	Late Paleoindian
Oconee	9OC76	3733650	279920	Late Paleoindian
Oconee	9OC76	3733650	279920	Late Paleoindian
Oconee	9OC95	3734620	280660	Late Paleoindian
Oconee	9OC95	3734620	280660	Late Paleoindian
Oconee	9OC99	3733861	280800	Late Paleoindian
Oconee	9OC99	3733861	280800	Late Paleoindian
Oglethorpe	9OG1	3746250	308060	Late Paleoindian
Oglethorpe	9OG153	3743700	289830	Late Paleoindian
Oglethorpe	9OG175	3742470	289830	Late Paleoindian
Oglethorpe	9OG175	3742470	289830	Late Paleoindian
Oglethorpe	9OG202	3749160	297610	Late Paleoindian
Oglethorpe	9OG202	3749160	297610	Late Paleoindian
Oglethorpe	9OG297	3763410	323760	Late Paleoindian
Oglethorpe	9OG297	3763410	323760	Late Paleoindian
Oglethorpe	9OG344	3761240	322270	Late Paleoindian
Oglethorpe	9OG344	3761240	322270	Late Paleoindian
Oglethorpe	9OG358	3760800	322310	Late Paleoindian
Oglethorpe	9OG358	3760800	322310	Late Paleoindian
Oglethorpe	9OG444	3767600	317640	Late Paleoindian
Oglethorpe	9OG444	3767600	317640	Late Paleoindian
Oglethorpe	9OG529	3741100	288782	Late Paleoindian
Oglethorpe	9OG529	3741100	288782	Late Paleoindian
Oglethorpe	9OG550	3754678	315000	Late Paleoindian
Oglethorpe	9OG61	3747300	295500	Late Paleoindian
Oglethorpe	9OG61	3747300	295500	Late Paleoindian
Pulaski	9PU111	3577128	269378	Late Paleoindian
Pulaski	9PU111	3577128	269378	Late Paleoindian
Pulaski	9PU24	3569000	271720	Late Paleoindian
Pulaski	9PU69	3585546	265614	Late Paleoindian

County	Site Number	Northing	Easting	Cultural Affiliation
Pulaski	9PU69	3585546	265614	Late Paleoindian
Putnam	9PM1243	3704450	287470	Late Paleoindian
Putnam	9PM1244	3698620	289600	Late Paleoindian
Putnam	9PM1480	3701688	267091	Late Paleoindian
Putnam	9PM1480	3701688	267091	Late Paleoindian
Richmond	9RI163	3687910	385410	Late Paleoindian
Richmond	9RI201	3697680	410750	Late Paleoindian
Richmond	9RI22	3697000	410348	Late Paleoindian
Richmond	9RI416	3690460	386020	Late Paleoindian
Richmond	9RI433	3691600	392350	Late Paleoindian
Richmond	9RI433	3691600	392350	Late Paleoindian
Screven	9SN30	3638775	441440	Late Paleoindian
Stephens	9ST224	3820120	278240	Late Paleoindian
Telfair	9TF13	3519070	310560	Late Paleoindian
Telfair	9TF158	3520300	306160	Late Paleoindian
Telfair	9TF3	3519600	311320	Late Paleoindian
Telfair	9TF3	3519600	311320	Late Paleoindian
Telfair	9TF31	3519470	317580	Late Paleoindian
Telfair	9TF4	3523520	298100	Late Paleoindian
Telfair	9TF43	3523600	328940	Late Paleoindian
Telfair	9TF49	3530700	338820	Late Paleoindian
Telfair	9TF5	3519290	308810	Late Paleoindian
Telfair	9TF7	3518600	309800	Late Paleoindian
Telfair	9TF8	3518770	311210	Late Paleoindian
Telfair	9TF8	3518770	311210	Late Paleoindian
Towns	9TO69	3861410	255180	Late Paleoindian
Twiggs	9TW99	3613810	261770	Late Paleoindian
Walton	9WN114	3730250	255950	Late Paleoindian
Walton	9WN114	3730250	255950	Late Paleoindian
Washington	9WG117	3655940	307300	Late Paleoindian
Washington	9WG118	3656360	307760	Late Paleoindian
Washington	9WG119	3656520	307820	Late Paleoindian
Washington	9WG123	3637000	315200	Late Paleoindian
Washington	9WG123	3637000	315200	Late Paleoindian
Washington	9WG123	3637000	315200	Late Paleoindian
Washington	9WG190	3659839	336759	Late Paleoindian
Washington	9WG268	3674215	335689	Late Paleoindian
Wheeler	9WL28	3535860	349380	Late Paleoindian
Wheeler	9WL28	3535860	349380	Late Paleoindian
Wilkes	9WS159	3724660	352800	Late Paleoindian
Wilkes	9WS65	3723460	352880	Late Paleoindian
Wilkes	9WS67	3747800	352400	Late Paleoindian
Wilkinson	9WK76	3633440	310920	Late Paleoindian
Baldwin	9BL100	3672110	291700	Early Archaic
Baldwin	9BL103	3672430	290760	Early Archaic
Baldwin	9BL107	3672700	283000	Early Archaic
Baldwin	9BL115	3672700	279660	Early Archaic
Baldwin	9BL129	3652180	306100	Early Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Baldwin	9BL137	3655180	297200	Early Archaic
Baldwin	9BL151	3655500	296040	Early Archaic
Baldwin	9BL166	3655340	306320	Early Archaic
Baldwin	9BL172	3656550	303990	Early Archaic
Baldwin	9BL174	3655070	305460	Early Archaic
Baldwin	9BL180	3661360	293300	Early Archaic
Baldwin	9BL195	3655260	303680	Early Archaic
Baldwin	9BL210	3653900	283760	Early Archaic
Baldwin	9BL228	3668500	294740	Early Archaic
Baldwin	9BL229	3649840	305980	Early Archaic
Baldwin	9BL28	3661228	293648	Early Archaic
Baldwin	9BL46	3656400	279320	Early Archaic
Baldwin	9BL56	3671800	289200	Early Archaic
Baldwin	9BL69	3668060	294750	Early Archaic
Baldwin	9BL74	3668250	294100	Early Archaic
Banks	9BA106	3802262	274689	Early Archaic
Banks	9BA130	3799530	271160	Early Archaic
Banks	9BA18	3794440	270082	Early Archaic
Banks	9BA19	3795231	269331	Early Archaic
Barrow	9BW1	3761667	258523	Early Archaic
Barrow	9BW13	3767420	248230	Early Archaic
Barrow	9BW5	3776060	241390	Early Archaic
Barrow	9BW67	3768590	251230	Early Archaic
Ben Hill	9BH11	3517000	310400	Early Archaic
Ben Hill	9BH2	3520050	300400	Early Archaic
Bibb	9BI103	3627580	245960	Early Archaic
Bibb	9BI12	3623950	255200	Early Archaic
Bibb	9BI133	3627600	255680	Early Archaic
Bibb	9BI17	3635460	258250	Early Archaic
Bibb	9BI18	3635500	258050	Early Archaic
Bibb	9BI225	3620340	253180	Early Archaic
Bibb	9BI233	3627774	250704	Early Archaic
Bibb	9BI261	3619445	254977	Early Archaic
Bibb	9BI268	3619600	250297	Early Archaic
Bibb	9BI27	3635300	258100	Early Archaic
Bibb	9BI276	3644247	247097	Early Archaic
Bibb	9BI3	3631800	259000	Early Archaic
Bibb	9BI31	3634150	258750	Early Archaic
Bibb	9BI4	3631500	258600	Early Archaic
Bibb	9BI50	3624340	254800	Early Archaic
Bibb	9BI6	3628250	260350	Early Archaic
Bibb	9BI64	3626775	253650	Early Archaic
Bibb	9BI7	3635100	255650	Early Archaic
Bibb	9BI71	3642020	251070	Early Archaic
Bibb	9BI83	3632640	258800	Early Archaic
Bibb	9BI85	3643580	249260	Early Archaic
Bibb	9BI94	3629350	263020	Early Archaic
Bleckley	9BY11	3604390	288290	Early Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Bleckley	9BY13	3589740	277000	Early Archaic
Bleckley	9BY34	3587460	287640	Early Archaic
Bleckley	9BY37	3587155	266475	Early Archaic
Bleckley	9BY51	3590500	267800	Early Archaic
Bleckley	9BY65	3589664	268495	Early Archaic
Bleckley	9BY69	3589930	269025	Early Archaic
Bryan	9BN1111	3543115	450372	Early Archaic
Bryan	9BN183	3536961	459077	Early Archaic
Bryan	9BN194	3537200	463650	Early Archaic
Bryan	9BN195	3536950	463550	Early Archaic
Bryan	9BN265	3563980	451680	Early Archaic
Bryan	9BN33	3537600	454590	Early Archaic
Bryan	9BN36	3537510	454770	Early Archaic
Bryan	9BN475	3536743	456513	Early Archaic
Bryan	9BN507	3537314	459289	Early Archaic
Bulloch	9BU6	3584800	427750	Early Archaic
Bulloch	9BU70	3597441	423379	Early Archaic
Burke	9BK121	3646910	400400	Early Archaic
Burke	9BK137	3646230	400670	Early Archaic
Burke	9BK139	3646070	400320	Early Archaic
Burke	9BK166	3645940	401520	Early Archaic
Burke	9BK169	3646320	402230	Early Archaic
Burke	9BK203	3647190	400840	Early Archaic
Burke	9BK204	3647670	400670	Early Archaic
Burke	9BK206	3649540	400330	Early Archaic
Burke	9BK207	3648090	400370	Early Archaic
Burke	9BK212	3648660	399970	Early Archaic
Burke	9BK215	3648770	400840	Early Archaic
Burke	9BK217	3648960	400990	Early Archaic
Burke	9BK225	3648270	400360	Early Archaic
Burke	9BK242	3649780	401190	Early Archaic
Burke	9BK259	3648800	398940	Early Archaic
Burke	9BK269	3647080	398170	Early Archaic
Burke	9BK270	3651550	398520	Early Archaic
Burke	9BK273	3648260	395590	Early Archaic
Burke	9BK295	3648050	396760	Early Archaic
Burke	9BK297	3648110	396480	Early Archaic
Burke	9BK308	3647000	397950	Early Archaic
Burke	9BK334	3646060	399160	Early Archaic
Burke	9BK346	3648130	399160	Early Archaic
Burke	9BK369	3671370	396750	Early Archaic
Burke	9BK385	3669800	397650	Early Archaic
Burke	9BK413	3634910	378594	Early Archaic
Burke	9BK515	3630981	386798	Early Archaic
Burke	9BK526	3646513	419017	Early Archaic
Burke	9BK532	3652042	431355	Early Archaic
Burke	9BK537	3651164	390639	Early Archaic
Burke	9BK6	3656000	447500	Early Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Burke	9BK83	3657460	436410	Early Archaic
Butts	9BS15	3679200	231620	Early Archaic
Butts	9BS34	3696980	222390	Early Archaic
Butts	9BS35	3697000	221780	Early Archaic
Butts	9BS38	3696980	223390	Early Archaic
Butts	9BS58	3697115	224267	Early Archaic
Chatham	9CH147	3521552	489936	Early Archaic
Chatham	9CH673	3524700	488000	Early Archaic
Chatham	9CH937	3565050	481100	Early Archaic
Clarke	9CA178	3758300	279482	Early Archaic
Clarke	9CA185	3760670	289471	Early Archaic
Clarke	9CA218	3763939	274057	Early Archaic
Clarke	9CA226	3753521	280638	Early Archaic
Clarke	9CA28	3764677	285444	Early Archaic
Clayton	9CN192	3704403	749777	Early Archaic
Clayton	9CN232	3712132	738595	Early Archaic
Clayton	9CN240	3708084	748001	Early Archaic
Clayton	9CN62	3693420	745900	Early Archaic
Clayton	9CN84	3712500	751400	Early Archaic
Cobb	9CO126	3756000	736600	Early Archaic
Cobb	9CO153	3769800	711140	Early Archaic
Cobb	9CO169	3772260	711160	Early Archaic
Cobb	9CO20	3769500	711080	Early Archaic
Cobb	9CO217	3771180	712620	Early Archaic
Cobb	9CO242	3760600	715540	Early Archaic
Cobb	9CO249	3757500	717500	Early Archaic
Cobb	9CO283	3772940	711700	Early Archaic
Cobb	9CO292	3767150	723850	Early Archaic
Cobb	9CO310	3766000	720225	Early Archaic
Cobb	9CO318	3765000	722280	Early Archaic
Cobb	9CO387	3763820	718320	Early Archaic
Cobb	9CO405	3761380	741300	Early Archaic
Cobb	9CO409	3744870	719310	Early Archaic
Cobb	9CO412	3761400	713540	Early Archaic
Cobb	9CO452	3746940	717560	Early Archaic
Cobb	9CO456	3765980	734700	Early Archaic
Cobb	9CO484	3771400	710000	Early Archaic
Cobb	9CO532	3748150	722160	Early Archaic
Cobb	9CO551	3765680	721780	Early Archaic
Cobb	9CO579	3772410	709160	Early Archaic
Cobb	9CO60	3767420	710860	Early Archaic
Cobb	9CO643	3771880	722360	Early Archaic
Cobb	9CO645	3771770	722200	Early Archaic
Cobb	9CO647	3756500	736640	Early Archaic
Cobb	9CO667	3742625	729050	Early Archaic
Cobb	9CO68	3766420	711800	Early Archaic
Cobb	9CO687	3749765	718740	Early Archaic
Cobb	9CO734	3772793	709769	Early Archaic

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Cobb	9CO736	3772965	709920	Early Archaic
Cobb	9CO96	3768324	723648	Early Archaic
Cobb	9CO98	3769750	721970	Early Archaic
Coffee	9CF100	3477000	335800	Early Archaic
Coffee	9CF114	3495032	331562	Early Archaic
Coffee	9CF118	3482920	296450	Early Archaic
Coffee	9CF119	3515100	317200	Early Archaic
Coffee	9CF120	3515380	320280	Early Archaic
Coffee	9CF13	3477110	326780	Early Archaic
Coffee	9CF132	3515100	318800	Early Archaic
Coffee	9CF16	3480930	311500	Early Archaic
Coffee	9CF17	3518975	325250	Early Archaic
Coffee	9CF176	3488700	335420	Early Archaic
Coffee	9CF22	3517440	318080	Early Archaic
Coffee	9CF24	3517920	324900	Early Archaic
Coffee	9CF248	3493950	335480	Early Archaic
Coffee	9CF28	3517700	324625	Early Archaic
Coffee	9CF320	3493354	306884	Early Archaic
Coffee	9CF321	3493059	306205	Early Archaic
Coffee	9CF33	3517880	325120	Early Archaic
Coffee	9CF37	3488205	326700	Early Archaic
Coffee	9CF44	3516440	325960	Early Archaic
Coffee	9CF45	3518200	325900	Early Archaic
Coffee	9CF46	3518640	325700	Early Archaic
Coffee	9CF51	3488800	332200	Early Archaic
Coffee	9CF54	3515050	323000	Early Archaic
Coffee	9CF55	3496000	310700	Early Archaic
Coffee	9CF79	3486960	333560	Early Archaic
Coffee	9CF89	3479740	316370	Early Archaic
Colquitt	9CQ90	3463600	215581	Early Archaic
Columbia	9CB132	3717460	396050	Early Archaic
Columbia	9CB151	3727700	386650	Early Archaic
Columbia	9CB152	3725455	388350	Early Archaic
Columbia	9CB169	3712320	378160	Early Archaic
Columbia	9CB17	3722860	378680	Early Archaic
Columbia	9CB181	3722860	378680	Early Archaic
Columbia	9CB2	3719552	390720	Early Archaic
Columbia	9CB335	3726060	381360	Early Archaic
Columbia	9CB577	3716437	390397	Early Archaic
Columbia	9CB620	3715027	399965	Early Archaic
Columbia	9CB622	3714860	399984	Early Archaic
Columbia	9CB628	3715701	378176	Early Archaic
Columbia	9CB70	3715780	377960	Early Archaic
Columbia	9CB76	3693970	381460	Early Archaic
Columbia	9CB78	3694020	381200	Early Archaic
Columbia	9CB92	3693360	381750	Early Archaic
Crawford	9CD2	3604600	780600	Early Archaic
Crawford	9CD3	3628080	769860	Early Archaic

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Crawford	9CD6	3626730	221560	Early Archaic
DeKalb	9DA245	3746160	765640	Early Archaic
DeKalb	9DA259	3742220	769060	Early Archaic
DeKalb	9DA332	3729540	769640	Early Archaic
DeKalb	9DA44	3728360	756432	Early Archaic
DeKalb	9DA451	3745385	759183	Early Archaic
DeKalb	9DA47	3755760	748060	Early Archaic
DeKalb	9DA56	3726610	751477	Early Archaic
DeKalb	9DA9	3744660	765320	Early Archaic
DeKalb	9DA92	3728144	747672	Early Archaic
Dodge	9DG11	3567450	282530	Early Archaic
Dodge	9DG130	3577402	296747	Early Archaic
Dodge	9DG133	3542077	287808	Early Archaic
Dodge	9DG152	3575020	286276	Early Archaic
Dodge	9DG29	3567080	282700	Early Archaic
Dodge	9DG32	3565220	284440	Early Archaic
Dodge	9DG33	3565740	283690	Early Archaic
Dodge	9DG56	3544250	285980	Early Archaic
Dodge	9DG58	3541380	299600	Early Archaic
Dodge	9DG6	3566440	283200	Early Archaic
Dodge	9DG66	3564620	293150	Early Archaic
Dodge	9DG76	3557800	298920	Early Archaic
Dodge	9DG8	3541700	284720	Early Archaic
Dodge	9DG9	3540400	285300	Early Archaic
Effingham	9EF123	3575240	481340	Early Archaic
Effingham	9EF134	3577460	483920	Early Archaic
Effingham	9EF204	3595480	451060	Early Archaic
Effingham	9EF230	3581380	469740	Early Archaic
Effingham	9EF239	3556100	468700	Early Archaic
Effingham	9EF242	3582041	480566	Early Archaic
Effingham	9EF71	3595095	470729	Early Archaic
Elbert	9EB10	3794984	336912	Early Archaic
Elbert	9EB134	3779920	341160	Early Archaic
Elbert	9EB158	3771100	346380	Early Archaic
Elbert	9EB160	3770920	346340	Early Archaic
Elbert	9EB166	3771240	347000	Early Archaic
Elbert	9EB174	3759000	355000	Early Archaic
Elbert	9EB208	3771660	346660	Early Archaic
Elbert	9EB217	3775775	336670	Early Archaic
Elbert	9EB218	3771552	345600	Early Archaic
Elbert	9EB227	3779860	341130	Early Archaic
Elbert	9EB234	3776540	335828	Early Archaic
Elbert	9EB244	3767960	350576	Early Archaic
Elbert	9EB246	3767840	350528	Early Archaic
Elbert	9EB248	3767720	350072	Early Archaic
Elbert	9EB258	3766660	351648	Early Archaic
Elbert	9EB259	3786696	339288	Early Archaic
Elbert	9EB260	3790744	338828	Early Archaic

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Elbert	9EB267	3788156	338780	Early Archaic
Elbert	9EB285	3783384	337864	Early Archaic
Elbert	9EB301	3782804	339732	Early Archaic
Elbert	9EB325	3778576	340360	Early Archaic
Elbert	9EB327	3778744	340888	Early Archaic
Elbert	9EB341	3778300	342552	Early Archaic
Elbert	9EB349	3777240	344816	Early Archaic
Elbert	9EB35	3775500	319120	Early Archaic
Elbert	9EB350	3777072	344696	Early Archaic
Elbert	9EB351	3776912	344480	Early Archaic
Elbert	9EB367	3781156	339840	Early Archaic
Elbert	9EB368	3781384	340348	Early Archaic
Elbert	9EB384	3782648	337696	Early Archaic
Elbert	9EB397	3783348	337204	Early Archaic
Elbert	9EB405	3774852	345000	Early Archaic
Elbert	9EB422	3776216	343360	Early Archaic
Elbert	9EB437	3772000	348040	Early Archaic
Elbert	9EB46	3774600	337120	Early Archaic
Elbert	9EB468	3785200	309940	Early Archaic
Elbert	9EB469	3785080	309640	Early Archaic
Elbert	9EB495	3763800	352730	Early Archaic
Elbert	9EB526	3779630	341240	Early Archaic
Elbert	9EB56	3773740	339930	Early Archaic
Elbert	9EB569	3761190	353040	Early Archaic
Elbert	9EB57	3773810	339710	Early Archaic
Elbert	9EB579	3760270	352940	Early Archaic
Elbert	9EB580	3760050	353070	Early Archaic
Elbert	9EB613	3761340	351130	Early Archaic
Elbert	9EB647	3762760	347040	Early Archaic
Elbert	9EB650	3762780	347680	Early Archaic
Elbert	9EB665	3762380	347510	Early Archaic
Elbert	9EB694	3776640	325600	Early Archaic
Elbert	9EB713	3784641	315225	Early Archaic
Elbert	9EB755	3768487	327711	Early Archaic
Elbert	9EB76	3774708	346504	Early Archaic
Elbert	9EB86	3775340	337040	Early Archaic
Elbert	9EB92	3772396	346516	Early Archaic
Emanuel	9EM113	3628907	378366	Early Archaic
Emanuel	9EM115	3628860	383416	Early Archaic
Emanuel	9EM116	3628009	389899	Early Archaic
Evans	9EV193	3550069	424340	Early Archaic
Franklin	9FK10	3813500	297775	Early Archaic
Franklin	9FK39	3804750	294200	Early Archaic
Franklin	9FK69	3805777	306475	Early Archaic
Fulton	9FU125	3732900	722000	Early Archaic
Fulton	9FU133	3752340	736550	Early Archaic
Fulton	9FU141	3770260	755130	Early Archaic
Fulton	9FU143	3718120	733804	Early Archaic

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Fulton	9FU163	3769240	747972	Early Archaic
Fulton	9FU166	3771183	750290	Early Archaic
Fulton	9FU176	3725540	715450	Early Archaic
Fulton	9FU193	3730355	720036	Early Archaic
Fulton	9FU201	3770760	750840	Early Archaic
Fulton	9FU290	3770820	750740	Early Archaic
Fulton	9FU362	3725970	719730	Early Archaic
Fulton	9FU430	3719010	710180	Early Archaic
Fulton	9FU481	3768536	759574	Early Archaic
Fulton	9FU659	3764074	751886	Early Archaic
Fulton	9FU660	3764122	751825	Early Archaic
Fulton	9FU668	3723513	725074	Early Archaic
Fulton	9FU705	3727443	720716	Early Archaic
Glascock	9GL21	3677590	345645	Early Archaic
Glascock	9GL4	3678036	338744	Early Archaic
Glascock	9GL5	3678480	338768	Early Archaic
Glascock	9GL6	3677800	353360	Early Archaic
Glynn	9GN213	3458192	455204	Early Archaic
Glynn	9GN279	3463650	454730	Early Archaic
Glynn	9GN389	3465489	454832	Early Archaic
Greene	9GE1004	3706008	292096	Early Archaic
Greene	9GE1011	3706560	289640	Early Archaic
Greene	9GE1016	3706880	289240	Early Archaic
Greene	9GE1020	3721420	286100	Early Archaic
Greene	9GE1049	3721300	296672	Early Archaic
Greene	9GE1052	3720744	296384	Early Archaic
Greene	9GE108	3704280	290100	Early Archaic
Greene	9GE119	3697000	294890	Early Archaic
Greene	9GE1198	3736750	290270	Early Archaic
Greene	9GE1199	3736600	289900	Early Archaic
Greene	9GE1204	3737332	289780	Early Archaic
Greene	9GE1228	3721954	291670	Early Archaic
Greene	9GE1320	3720980	290220	Early Archaic
Greene	9GE1326	3730720	279310	Early Archaic
Greene	9GE1342	3719860	283640	Early Archaic
Greene	9GE135	3694000	298550	Early Archaic
Greene	9GE1381	3726520	295720	Early Archaic
Greene	9GE1391	3699140	301720	Early Archaic
Greene	9GE1417	3700000	301960	Early Archaic
Greene	9GE142	3696648	296960	Early Archaic
Greene	9GE1420	3699840	301760	Early Archaic
Greene	9GE1421	3699720	301940	Early Archaic
Greene	9GE1516	3697320	294770	Early Archaic
Greene	9GE153	3696408	294648	Early Archaic
Greene	9GE1533	3704040	295560	Early Archaic
Greene	9GE1538	3736450	290120	Early Archaic
Greene	9GE1622	3728520	292540	Early Archaic
Greene	9GE1645	3733760	290880	Early Archaic

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Greene	9GE1647	3733720	290600	Early Archaic
Greene	9GE1658	3696660	294050	Early Archaic
Greene	9GE1660	3696720	294240	Early Archaic
Greene	9GE1661	3696760	294370	Early Archaic
Greene	9GE1662	3696500	294380	Early Archaic
Greene	9GE1668	3697290	294660	Early Archaic
Greene	9GE1718	3699940	295520	Early Archaic
Greene	9GE1751	3702080	294840	Early Archaic
Greene	9GE1756	3701240	295120	Early Archaic
Greene	9GE1783	3702600	294970	Early Archaic
Greene	9GE1784	3702800	294980	Early Archaic
Greene	9GE1787	3702880	294290	Early Archaic
Greene	9GE1800	3734959	287990	Early Archaic
Greene	9GE1811	3719280	283480	Early Archaic
Greene	9GE1862	3733040	290320	Early Archaic
Greene	9GE1864	3733000	290100	Early Archaic
Greene	9GE1894	3703630	290836	Early Archaic
Greene	9GE1904	3703980	290585	Early Archaic
Greene	9GE1914	3695010	298050	Early Archaic
Greene	9GE1915	3695370	299180	Early Archaic
Greene	9GE1916	3700050	297590	Early Archaic
Greene	9GE1917	3698650	297400	Early Archaic
Greene	9GE1918	3697950	298150	Early Archaic
Greene	9GE194	3695980	296820	Early Archaic
Greene	9GE2083	3703375	293857	Early Archaic
Greene	9GE2091	3703358	293345	Early Archaic
Greene	9GE2459	3698156	291476	Early Archaic
Greene	9GE2536	3696545	298898	Early Archaic
Greene	9GE2543	3696335	298054	Early Archaic
Greene	9GE26	3717168	287768	Early Archaic
Greene	9GE2784	3705205	295443	Early Archaic
Greene	9GE309	3695330	298290	Early Archaic
Greene	9GE319	3704400	293970	Early Archaic
Greene	9GE329	3703780	294530	Early Archaic
Greene	9GE347	3704660	296010	Early Archaic
Greene	9GE3543	3699372	297005	Early Archaic
Greene	9GE355	3706070	297380	Early Archaic
Greene	9GE3551	3699029	296659	Early Archaic
Greene	9GE3594	3699374	296527	Early Archaic
Greene	9GE3633	3721882	297838	Early Archaic
Greene	9GE3651	3725268	298454	Early Archaic
Greene	9GE3680	3724866	287251	Early Archaic
Greene	9GE3693	3734416	287292	Early Archaic
Greene	9GE3695	3732700	286160	Early Archaic
Greene	9GE3696	3733160	285650	Early Archaic
Greene	9GE3697	3733275	285710	Early Archaic
Greene	9GE3702	3734022	286117	Early Archaic
Greene	9GE3718	3732750	285745	Early Archaic

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Greene	9GE3719	3733671	286476	Early Archaic
Greene	9GE3720	3734308	287452	Early Archaic
Greene	9GE410	3695540	298220	Early Archaic
Greene	9GE418	3695720	298800	Early Archaic
Greene	9GE42	3700800	296530	Early Archaic
Greene	9GE423	3695770	298950	Early Archaic
Greene	9GE44	3700900	296400	Early Archaic
Greene	9GE441	3696630	299710	Early Archaic
Greene	9GE442	3696570	299610	Early Archaic
Greene	9GE46	3698850	297490	Early Archaic
Greene	9GE470	3695440	298450	Early Archaic
Greene	9GE480	3695040	298470	Early Archaic
Greene	9GE486	3695040	298260	Early Archaic
Greene	9GE487	3694610	298200	Early Archaic
Greene	9GE490	3693820	298190	Early Archaic
Greene	9GE494	3694220	298420	Early Archaic
Greene	9GE510	3698100	291680	Early Archaic
Greene	9GE513	3698040	291820	Early Archaic
Greene	9GE52	3726660	279920	Early Archaic
Greene	9GE531	3698240	293180	Early Archaic
Greene	9GE551	3695640	293630	Early Archaic
Greene	9GE559	3698500	294000	Early Archaic
Greene	9GE586	3700017	297774	Early Archaic
Greene	9GE592	3699840	297530	Early Archaic
Greene	9GE595	3699800	297350	Early Archaic
Greene	9GE596	3699386	297341	Early Archaic
Greene	9GE600	3699360	297590	Early Archaic
Greene	9GE615	3698320	297620	Early Archaic
Greene	9GE616	3698170	297620	Early Archaic
Greene	9GE622	3698390	298120	Early Archaic
Greene	9GE648	3696740	294640	Early Archaic
Greene	9GE668	3701440	297000	Early Archaic
Greene	9GE669	3701290	296990	Early Archaic
Greene	9GE67	3732548	286408	Early Archaic
Greene	9GE676	3700910	296500	Early Archaic
Greene	9GE687	3701540	296860	Early Archaic
Greene	9GE705	3696660	298000	Early Archaic
Greene	9GE708	3696510	297960	Early Archaic
Greene	9GE72	3732308	286890	Early Archaic
Greene	9GE723	3696950	296570	Early Archaic
Greene	9GE73	3733924	287160	Early Archaic
Greene	9GE737	3697680	296820	Early Archaic
Greene	9GE75	3734047	287348	Early Archaic
Greene	9GE76	3733885	286902	Early Archaic
Greene	9GE77	3733647	286893	Early Archaic
Greene	9GE778	3716888	288456	Early Archaic
Greene	9GE78	3734063	286800	Early Archaic
Greene	9GE780	3717930	288890	Early Archaic

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Greene	9GE791	3714528	288780	Early Archaic
Greene	9GE796	3714744	288960	Early Archaic
Greene	9GE85	3734416	286902	Early Archaic
Greene	9GE91	3733417	286313	Early Archaic
Greene	9GE924	3699750	295720	Early Archaic
Greene	9GE97	3726300	316680	Early Archaic
Greene	9GE990	3718970	283520	Early Archaic
Gwinnett	9GW152	3746440	767680	Early Archaic
Gwinnett	9GW153	3757150	754340	Early Archaic
Gwinnett	9GW156	3758150	763480	Early Archaic
Gwinnett	9GW173	3746550	766250	Early Archaic
Gwinnett	9GW224	3773740	766240	Early Archaic
Gwinnett	9GW233	3778325	223460	Early Archaic
Gwinnett	9GW237	3752500	760630	Early Archaic
Gwinnett	9GW297	3768220	231720	Early Archaic
Gwinnett	9GW300	3772420	224070	Early Archaic
Gwinnett	9GW353	3769300	774240	Early Archaic
Gwinnett	9GW356	3767810	764310	Early Archaic
Gwinnett	9GW395	3773720	774180	Early Archaic
Gwinnett	9GW401	3775560	767450	Early Archaic
Gwinnett	9GW476	3773890	767200	Early Archaic
Gwinnett	9GW490	3773590	766500	Early Archaic
Gwinnett	9GW563	3771910	235560	Early Archaic
Habersham	9HM150	3828850	268320	Early Archaic
Habersham	9HM276	3843260	278548	Early Archaic
Habersham	9HM278	3845631	277321	Early Archaic
Habersham	9HM39	3841420	260800	Early Archaic
Hall	9HL101	3784684	774720	Early Archaic
Hall	9HL133	3799816	230984	Early Archaic
Hall	9HL220	3806480	239756	Early Archaic
Hall	9HL230	3807936	238000	Early Archaic
Hall	9HL293	3804384	237888	Early Archaic
Hall	9HL298	3799252	233192	Early Archaic
Hall	9HL347	3788756	226396	Early Archaic
Hall	9HL452	3789402	241664	Early Archaic
Hall	9HL81	3784744	773048	Early Archaic
Hall	9HL82	3784852	773168	Early Archaic
Hancock	9HK187	3683925	293750	Early Archaic
Hancock	9HK194	3698920	307878	Early Archaic
Hancock	9HK205	3697076	307654	Early Archaic
Hancock	9HK25	3692288	299120	Early Archaic
Hancock	9HK286	3666940	308330	Early Archaic
Hancock	9HK56	3675330	314840	Early Archaic
Hancock	9HK90	3675300	294440	Early Archaic
Hancock	9HK92	3674580	294180	Early Archaic
Hart	9HA115	3790784	309063	Early Archaic
Hart	9HA31	3801100	323660	Early Archaic
Henry	9HY100	3700700	746975	Early Archaic

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Henry	9HY21	3702080	772640	Early Archaic
Henry	9HY246	3693881	751508	Early Archaic
Henry	9HY25	3701700	769900	Early Archaic
Henry	9HY267	3699000	746330	Early Archaic
Henry	9HY270	3698910	746810	Early Archaic
Henry	9HY328	3713567	767908	Early Archaic
Henry	9HY331	3689762	769953	Early Archaic
Henry	9HY36	3693200	758170	Early Archaic
Henry	9HY38	3692750	758450	Early Archaic
Henry	9HY39	3692310	758630	Early Archaic
Henry	9HY404	3706084	754660	Early Archaic
Henry	9HY41	3689540	765300	Early Archaic
Henry	9HY42	3689520	765440	Early Archaic
Henry	9HY429	3714140	765727	Early Archaic
Henry	9HY443	3708431	223121	Early Archaic
Henry	9HY448	3708071	223222	Early Archaic
Henry	9HY590	3704444	758697	Early Archaic
Henry	9HY95	3700690	747810	Early Archaic
Henry	9HY98	3700640	747340	Early Archaic
Houston	9HT12	3603480	259830	Early Archaic
Houston	9HT166	3610803	257515	Early Archaic
Houston	9HT167	3610647	257972	Early Archaic
Houston	9HT199	3600149	260889	Early Archaic
Houston	9HT33	3608910	257670	Early Archaic
Houston	9HT35	3608580	258810	Early Archaic
Houston	9HT36	3608260	258130	Early Archaic
Houston	9HT39	3608560	259190	Early Archaic
Houston	9HT40	3608830	259170	Early Archaic
Houston	9HT41	3609067	259064	Early Archaic
Houston	9HT42	3609420	258830	Early Archaic
Houston	9HT46	3610918	258344	Early Archaic
Houston	9HT47	3611339	258282	Early Archaic
Houston	9HT54	3608970	258520	Early Archaic
Houston	9HT55	3616240	255630	Early Archaic
Houston	9HT62	3598005	241200	Early Archaic
Houston	9HT63	3598560	239145	Early Archaic
Houston	9HT8	3607830	258750	Early Archaic
Irwin	9IR1	3506020	268320	Early Archaic
Irwin	9IR10	3494400	285750	Early Archaic
Irwin	9IR11	3494150	285600	Early Archaic
Irwin	9IR12	3494250	285250	Early Archaic
Irwin	9IR13	3494200	285275	Early Archaic
Irwin	9IR14	3494100	285750	Early Archaic
Irwin	9IR15	3494025	285825	Early Archaic
Irwin	9IR16	3494050	285725	Early Archaic
Irwin	9IR17	3493975	285775	Early Archaic
Irwin	9IR18	3494500	285975	Early Archaic
Irwin	9IR2	3498000	301000	Early Archaic

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Irwin	9IR21	3511557	275700	Early Archaic
Irwin	9IR26	3506160	268330	Early Archaic
Irwin	9IR4	3492550	297380	Early Archaic
Irwin	9IR8	3484360	296300	Early Archaic
Jackson	9JK123	3793030	257230	Early Archaic
Jackson	9JK323	3774849	245479	Early Archaic
Jackson	9JK44	3769540	277880	Early Archaic
Jackson	9JK48	3775510	272070	Early Archaic
Jackson	9JK54	3776700	272700	Early Archaic
Jackson	9JK59	3778300	271660	Early Archaic
Jackson	9JK65	3781150	270790	Early Archaic
Jackson	9JK86	3783220	279220	Early Archaic
Jasper	9JA151	3680450	237530	Early Archaic
Jasper	9JA264	3677440	238015	Early Archaic
Jasper	9JA269	3677809	236870	Early Archaic
Jasper	9JA332	3675370	250770	Early Archaic
Jasper	9JA343	3676000	246500	Early Archaic
Jasper	9JA361	3672340	249180	Early Archaic
Jasper	9JA376	3676400	247300	Early Archaic
Jasper	9JA47	3674450	237300	Early Archaic
Jasper	9JA474	3677820	237210	Early Archaic
Jasper	9JA577	3699810	236540	Early Archaic
Jasper	9JA62	3673250	260740	Early Archaic
Jasper	9JA642	3676714	245589	Early Archaic
Jasper	9JA729	3676181	245441	Early Archaic
Jasper	9JA731	3676025	245339	Early Archaic
Jeff Davis	9JD10	3521120	327600	Early Archaic
Jeff Davis	9JD28	3534080	349800	Early Archaic
Jeff Davis	9JD31	3536420	360140	Early Archaic
Jeff Davis	9JD41	3531380	344060	Early Archaic
Jeff Davis	9JD43	3518490	327600	Early Archaic
Jefferson	9JF113	3684510	374920	Early Archaic
Jefferson	9JF117	3684900	375170	Early Archaic
Jefferson	9JF136	3685820	373450	Early Archaic
Jefferson	9JF149	3683870	377060	Early Archaic
Jefferson	9JF16	3685700	372580	Early Archaic
Jefferson	9JF19	3686040	374030	Early Archaic
Jefferson	9JF20	3685630	374170	Early Archaic
Jefferson	9JF21	3685890	373200	Early Archaic
Jefferson	9JF238	3656700	361820	Early Archaic
Jefferson	9JF239	3632057	364682	Early Archaic
Jefferson	9JF241	3637596	375700	Early Archaic
Jefferson	9JF27	3683620	377930	Early Archaic
Jefferson	9JF28	3683680	378120	Early Archaic
Jefferson	9JF286	3644181	374328	Early Archaic
Jefferson	9JF361	3635696	368036	Early Archaic
Jefferson	9JF412	3680975	367622	Early Archaic
Jefferson	9JF52	3671700	367600	Early Archaic

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Jefferson	9JF56	3640540	364400	Early Archaic
Jefferson	9JF57	3640850	364170	Early Archaic
Jefferson	9JF75	3685840	374000	Early Archaic
Jenkins	9JS56	3630650	394681	Early Archaic
Johnson	9JH13	3625960	317700	Early Archaic
Johnson	9JH18	3621628	340635	Early Archaic
Johnson	9JH4	3619444	349228	Early Archaic
Johnson	9JH5	3609876	356516	Early Archaic
Jones	9JO126	3670380	264040	Early Archaic
Jones	9JO194	3645400	250820	Early Archaic
Jones	9JO22	3656780	269360	Early Archaic
Jones	9JO260	3664720	245820	Early Archaic
Jones	9JO293	3670855	257476	Early Archaic
Jones	9JO34	3669120	273700	Early Archaic
Jones	9JO391	3658584	246542	Early Archaic
Jones	9JO4	3663933	259150	Early Archaic
Jones	9JO433	3670920	256997	Early Archaic
Jones	9JO487	3668617	242873	Early Archaic
Jones	9JO5	3664994	259262	Early Archaic
Jones	9JO51	3656870	262040	Early Archaic
Jones	9JO77	3669480	263200	Early Archaic
Lamar	9LR12	3667990	769400	Early Archaic
Lamar	9LR46	3673194	767838	Early Archaic
Laurens	9LS119	3602190	315800	Early Archaic
Laurens	9LS149	3564550	320000	Early Archaic
Laurens	9LS207	3615900	307600	Early Archaic
Laurens	9LS318	3595274	330010	Early Archaic
Laurens	9LS5	3597220	324940	Early Archaic
Laurens	9LS91	3606860	294701	Early Archaic
Liberty	9LI1321	3504281	461483	Early Archaic
Liberty	9LI1451	3549145	434110	Early Archaic
Liberty	9LI2051	3522829	455387	Early Archaic
Liberty	9LI265	3536612	454651	Early Archaic
Liberty	9LI297	3540010	424145	Early Archaic
Liberty	9LI305	3519070	441760	Early Archaic
Liberty	9LI356	3549502	433050	Early Archaic
Liberty	9LI399	3537940	441500	Early Archaic
Liberty	9LI444	3540165	425580	Early Archaic
Liberty	9LI447	3540300	425154	Early Archaic
Liberty	9LI504	3534690	449420	Early Archaic
Liberty	9LI901	3533173	436441	Early Archaic
Lincoln	9LC1	3732300	385200	Early Archaic
Lincoln	9LC1004	3761000	348140	Early Archaic
Lincoln	9LC101	3753400	356140	Early Archaic
Lincoln	9LC1029	3753180	355570	Early Archaic
Lincoln	9LC1044	3736950	380403	Early Archaic
Lincoln	9LC21	3744180	374810	Early Archaic
Lincoln	9LC248	3731480	381020	Early Archaic

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Lincoln	9LC43	3743350	368650	Early Archaic
Lincoln	9LC431	3753380	355470	Early Archaic
Lincoln	9LC433	3752990	354740	Early Archaic
Lincoln	9LC44	3748930	359915	Early Archaic
Lincoln	9LC448	3752650	355530	Early Archaic
Lincoln	9LC46	3753850	355580	Early Archaic
Lincoln	9LC650	3736560	380640	Early Archaic
Lincoln	9LC681	3737230	377560	Early Archaic
Lincoln	9LC698	3737820	377380	Early Archaic
Lincoln	9LC75	3731160	376930	Early Archaic
Lincoln	9LC80	3730990	378355	Early Archaic
Lincoln	9LC883	3744060	364230	Early Archaic
Lincoln	9LC91	3744200	363560	Early Archaic
Lincoln	9LC935	3745090	367300	Early Archaic
Long	9LG382	3495857	443259	Early Archaic
Long	9LG5	3500930	436380	Early Archaic
Long	9LG641	3516866	418268	Early Archaic
Macon	9MA11	3571720	776888	Early Archaic
Macon	9MA51	3589180	777280	Early Archaic
Macon	9MA56	3584100	780550	Early Archaic
Macon	9MA60	3585440	780420	Early Archaic
Madison	9MD112	3767000	308520	Early Archaic
Madison	9MD13	3790750	286875	Early Archaic
Madison	9MD133	3772640	291340	Early Archaic
Madison	9MD190	3766589	293002	Early Archaic
Madison	9MD2	3770456	301948	Early Archaic
Madison	9MD201	3783827	295905	Early Archaic
Madison	9MD22	3773930	287380	Early Archaic
Madison	9MD23	3774010	287630	Early Archaic
Madison	9MD28	3773820	287500	Early Archaic
Madison	9MD29	3773820	287500	Early Archaic
Madison	9MD32	3773600	287720	Early Archaic
Madison	9MD37	3773620	287370	Early Archaic
Madison	9MD53	3778980	287520	Early Archaic
Madison	9MD94	3787650	286030	Early Archaic
McDuffie	9MF114	3688900	374350	Early Archaic
McDuffie	9MF164	3717060	358160	Early Archaic
McDuffie	9MF191	3722985	352680	Early Archaic
McDuffie	9MF222	3722400	363640	Early Archaic
McDuffie	9MF25	3690280	378320	Early Archaic
McDuffie	9MF266	3720000	349370	Early Archaic
McDuffie	9MF280	3717620	363630	Early Archaic
McDuffie	9MF294	3713160	354740	Early Archaic
McDuffie	9MF328	3718150	356400	Early Archaic
McDuffie	9MF34	3722360	363780	Early Archaic
McDuffie	9MF373	3719340	358020	Early Archaic
McDuffie	9MF380	3717920	357140	Early Archaic
McDuffie	9MF383	3718910	358100	Early Archaic

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McDuffie	9MF409	3718700	357840	Early Archaic
McDuffie	9MF428	3718280	358120	Early Archaic
McDuffie	9MF450	3714860	351320	Early Archaic
McDuffie	9MF520	3722514	360888	Early Archaic
McDuffie	9MF607	3723032	355925	Early Archaic
McDuffie	9MF75	3686850	373820	Early Archaic
McDuffie	9MF76	3687400	373850	Early Archaic
McDuffie	9MF80	3688050	373300	Early Archaic
McDuffie	9MF81	3686880	372950	Early Archaic
McDuffie	9MF83	3686810	372750	Early Archaic
McDuffie	9MF84	3687630	373350	Early Archaic
McDuffie	9MF886	3709370	364840	Early Archaic
McDuffie	9MF9	3687100	374050	Early Archaic
McDuffie	9MF91	3686750	372500	Early Archaic
McDuffie	9MF93	3687110	372150	Early Archaic
McDuffie	9MF98	3687480	372520	Early Archaic
McIntosh	9MC148	3482880	453490	Early Archaic
McIntosh	9MC89	3500430	462500	Early Archaic
Monroe	9MO387	3651100	234390	Early Archaic
Monroe	9MO388	3651120	234970	Early Archaic
Monroe	9MO394	3651980	235310	Early Archaic
Monroe	9MO401	3651330	234400	Early Archaic
Monroe	9MO439	3649700	234400	Early Archaic
Monroe	9MO464	3649600	233440	Early Archaic
Monroe	9MO507	3667150	233450	Early Archaic
Monroe	9MO548	3669880	777070	Early Archaic
Morgan	9MG111	3707020	284980	Early Archaic
Morgan	9MG113	3706728	285072	Early Archaic
Morgan	9MG116	3707456	284024	Early Archaic
Morgan	9MG13	3715050	278280	Early Archaic
Morgan	9MG191	3715624	286048	Early Archaic
Morgan	9MG192	3715660	286084	Early Archaic
Morgan	9MG197	3714600	286420	Early Archaic
Morgan	9MG198	3715744	285984	Early Archaic
Morgan	9MG2	3720060	272740	Early Archaic
Morgan	9MG235	3742400	267800	Early Archaic
Morgan	9MG25	3731200	273630	Early Archaic
Morgan	9MG254	3712800	252300	Early Archaic
Morgan	9MG258	3707110	269100	Early Archaic
Morgan	9MG259	3708900	268300	Early Archaic
Morgan	9MG262	3709160	269350	Early Archaic
Morgan	9MG263	3708975	269500	Early Archaic
Morgan	9MG267	3708680	269720	Early Archaic
Morgan	9MG268	3707040	269775	Early Archaic
Morgan	9MG269	3708250	269660	Early Archaic
Morgan	9MG270	3708025	269480	Early Archaic
Morgan	9MG271	3725910	277400	Early Archaic
Morgan	9MG273	3704560	264380	Early Archaic

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Morgan	9MG278	3706200	264400	Early Archaic
Morgan	9MG28	3713504	288504	Early Archaic
Morgan	9MG295	3711025	272215	Early Archaic
Morgan	9MG313	3705600	266600	Early Archaic
Morgan	9MG314	3705520	266440	Early Archaic
Morgan	9MG32	3712792	288600	Early Archaic
Morgan	9MG324	3705940	267020	Early Archaic
Morgan	9MG33	3712456	288528	Early Archaic
Morgan	9MG331	3705740	266980	Early Archaic
Morgan	9MG343	3706760	268410	Early Archaic
Morgan	9MG345	3706720	268320	Early Archaic
Morgan	9MG348	3706980	268560	Early Archaic
Morgan	9MG349	3707000	268700	Early Archaic
Morgan	9MG353	3706780	268800	Early Archaic
Morgan	9MG4	3713486	281580	Early Archaic
Morgan	9MG404	3705628	265232	Early Archaic
Morgan	9MG409	3705324	264820	Early Archaic
Morgan	9MG411	3705222	264624	Early Archaic
Morgan	9MG425	3704842	264535	Early Archaic
Morgan	9MG441	3729500	273600	Early Archaic
Morgan	9MG90	3710360	288000	Early Archaic
Newton	9NE125	3715740	234800	Early Archaic
Newton	9NE128	3716325	235220	Early Archaic
Newton	9NE131	3715770	235260	Early Archaic
Newton	9NE154	3705500	241280	Early Archaic
Newton	9NE156	3705280	240020	Early Archaic
Newton	9NE186	3711710	240200	Early Archaic
Newton	9NE217	3719279	238103	Early Archaic
Newton	9NE221	3718707	238267	Early Archaic
Newton	9NE37	3704050	237775	Early Archaic
Newton	9NE63	3727050	239890	Early Archaic
Newton	9NE71	3726400	240460	Early Archaic
Oconee	9OC110	3751912	276720	Early Archaic
Oconee	9OC115	3734710	280193	Early Archaic
Oconee	9OC116	3734750	280362	Early Archaic
Oconee	9OC118	3734700	280338	Early Archaic
Oconee	9OC119	3734493	280565	Early Archaic
Oconee	9OC121	3733825	280650	Early Archaic
Oconee	9OC148	3735520	275470	Early Archaic
Oconee	9OC151	3735560	275430	Early Archaic
Oconee	9OC157	3736000	275320	Early Archaic
Oconee	9OC168	3750220	278700	Early Archaic
Oconee	9OC172	3733200	280500	Early Archaic
Oconee	9OC173	3733956	280030	Early Archaic
Oconee	9OC176	3733260	280200	Early Archaic
Oconee	9OC18	3745912	285564	Early Archaic
Oconee	9OC19	3746144	285768	Early Archaic
Oconee	9OC205	3754470	262620	Early Archaic

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Oconee	9OC207	3742600	286120	Early Archaic
Oconee	9OC209	3738470	277000	Early Archaic
Oconee	9OC24	3745168	286048	Early Archaic
Oconee	9OC25	3745720	286936	Early Archaic
Oconee	9OC251	3752350	266300	Early Archaic
Oconee	9OC26	3746432	285648	Early Archaic
Oconee	9OC27	3746240	285540	Early Archaic
Oconee	9OC276	3746300	275000	Early Archaic
Oconee	9OC29	3746000	286360	Early Archaic
Oconee	9OC30	3746480	285240	Early Archaic
Oconee	9OC32	3746144	285096	Early Archaic
Oconee	9OC325	3740575	275603	Early Archaic
Oconee	9OC33	3745432	286120	Early Archaic
Oconee	9OC334	3741700	276325	Early Archaic
Oconee	9OC342	3743099	276102	Early Archaic
Oconee	9OC349	3743993	276020	Early Archaic
Oconee	9OC35	3745432	286504	Early Archaic
Oconee	9OC36	3745204	286264	Early Archaic
Oconee	9OC37	3745432	286672	Early Archaic
Oconee	9OC39	3745576	286696	Early Archaic
Oconee	9OC4	3743320	270300	Early Archaic
Oconee	9OC40	3745552	286288	Early Archaic
Oconee	9OC41	3745624	286384	Early Archaic
Oconee	9OC44	3745288	286984	Early Archaic
Oconee	9OC45	3746096	285936	Early Archaic
Oconee	9OC46	3747000	286456	Early Archaic
Oconee	9OC51	3744350	285250	Early Archaic
Oconee	9OC74	3733140	280175	Early Archaic
Oconee	9OC76	3733650	279920	Early Archaic
Oconee	9OC78	3733700	280260	Early Archaic
Oconee	9OC79	3733750	280730	Early Archaic
Oconee	9OC81	3733600	280650	Early Archaic
Oconee	9OC83	3734530	280120	Early Archaic
Oconee	9OC87	3734500	280375	Early Archaic
Oconee	9OC89	3734313	280276	Early Archaic
Oconee	9OC94	3734800	280560	Early Archaic
Oconee	9OC97	3734275	280755	Early Archaic
Oglethorpe	9OG1	3746250	308060	Early Archaic
Oglethorpe	9OG152	3743560	289690	Early Archaic
Oglethorpe	9OG155	3743770	290140	Early Archaic
Oglethorpe	9OG159	3742840	290000	Early Archaic
Oglethorpe	9OG171	3742260	289840	Early Archaic
Oglethorpe	9OG175	3742470	289830	Early Archaic
Oglethorpe	9OG194	3748690	298170	Early Archaic
Oglethorpe	9OG202	3749160	297610	Early Archaic
Oglethorpe	9OG209	3749210	298130	Early Archaic
Oglethorpe	9OG214	3767590	318720	Early Archaic
Oglethorpe	9OG215	3767490	318600	Early Archaic

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Oglethorpe	9OG226	3767450	318250	Early Archaic
Oglethorpe	9OG245	3751460	320390	Early Archaic
Oglethorpe	9OG273	3750740	319640	Early Archaic
Oglethorpe	9OG275	3750750	319770	Early Archaic
Oglethorpe	9OG285	3763460	324220	Early Archaic
Oglethorpe	9OG297	3763410	323760	Early Archaic
Oglethorpe	9OG300	3763336	323678	Early Archaic
Oglethorpe	9OG315	3763010	323660	Early Archaic
Oglethorpe	9OG320	3761020	322370	Early Archaic
Oglethorpe	9OG383	3747150	293000	Early Archaic
Oglethorpe	9OG399	3747070	292740	Early Archaic
Oglethorpe	9OG41	3747600	297280	Early Archaic
Oglethorpe	9OG42	3747340	297220	Early Archaic
Oglethorpe	9OG444	3767600	317640	Early Archaic
Oglethorpe	9OG453	3737300	290750	Early Archaic
Oglethorpe	9OG458	3756100	301315	Early Archaic
Oglethorpe	9OG459	3754660	302280	Early Archaic
Oglethorpe	9OG464	3757800	320440	Early Archaic
Oglethorpe	9OG468	3758720	322320	Early Archaic
Oglethorpe	9OG471	3760380	324320	Early Archaic
Oglethorpe	9OG474	3754500	315300	Early Archaic
Oglethorpe	9OG477	3759620	319340	Early Archaic
Oglethorpe	9OG481	3757000	327100	Early Archaic
Oglethorpe	9OG511	3748282	295713	Early Archaic
Oglethorpe	9OG530	3743782	290630	Early Archaic
Oglethorpe	9OG531	3743454	290566	Early Archaic
Oglethorpe	9OG532	3743125	290684	Early Archaic
Oglethorpe	9OG533	3744332	291105	Early Archaic
Oglethorpe	9OG537	3745648	292184	Early Archaic
Oglethorpe	9OG539	3744554	291825	Early Archaic
Oglethorpe	9OG546	3757177	320253	Early Archaic
Oglethorpe	9OG547	3756684	319812	Early Archaic
Oglethorpe	9OG549	3750280	322072	Early Archaic
Oglethorpe	9OG565	3754817	316267	Early Archaic
Oglethorpe	9OG567	3754537	315783	Early Archaic
Oglethorpe	9OG568	3754645	315984	Early Archaic
Oglethorpe	9OG569	3754656	315842	Early Archaic
Oglethorpe	9OG577	3758220	319940	Early Archaic
Oglethorpe	9OG588	3750341	312742	Early Archaic
Oglethorpe	9OG589	3750172	311910	Early Archaic
Oglethorpe	9OG594	3750907	308734	Early Archaic
Oglethorpe	9OG61	3747300	295500	Early Archaic
Oglethorpe	9OG68	3747100	295350	Early Archaic
Oglethorpe	9OG71	3747200	292400	Early Archaic
Oglethorpe	9OG74	3744880	295500	Early Archaic
Oglethorpe	9OG76	3746140	294900	Early Archaic
Oglethorpe	9OG78	3751730	319190	Early Archaic
Peach	9PE12	3603485	239000	Early Archaic

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Peach	9PE16	3600550	237780	Early Archaic
Peach	9PE26	3608650	241280	Early Archaic
Peach	9PE33	3613520	244920	Early Archaic
Pulaski	9PU100	3559270	271503	Early Archaic
Pulaski	9PU105	3558648	271764	Early Archaic
Pulaski	9PU117	3576720	267420	Early Archaic
Pulaski	9PU12	3564860	279700	Early Archaic
Pulaski	9PU20	3572000	258560	Early Archaic
Pulaski	9PU36	3575420	266580	Early Archaic
Pulaski	9PU37	3585826	266153	Early Archaic
Pulaski	9PU44	3579830	264170	Early Archaic
Pulaski	9PU46	3579840	263540	Early Archaic
Pulaski	9PU54	3567600	270440	Early Archaic
Pulaski	9PU57	3585716	265205	Early Archaic
Pulaski	9PU69	3585546	265614	Early Archaic
Pulaski	9PU71	3585436	265521	Early Archaic
Putnam	9PM1041	3681220	269800	Early Archaic
Putnam	9PM1076	3692220	270900	Early Archaic
Putnam	9PM1088	3692360	272020	Early Archaic
Putnam	9PM1099	3690440	272460	Early Archaic
Putnam	9PM1102	3695460	275080	Early Archaic
Putnam	9PM1106	3696000	275000	Early Archaic
Putnam	9PM1122	3673220	269850	Early Archaic
Putnam	9PM113	3705580	285880	Early Archaic
Putnam	9PM121	3693768	297600	Early Archaic
Putnam	9PM122	3693940	297190	Early Archaic
Putnam	9PM1243	3704450	287470	Early Archaic
Putnam	9PM1244	3698620	289600	Early Archaic
Putnam	9PM126	3694216	297528	Early Archaic
Putnam	9PM127	3694696	297264	Early Archaic
Putnam	9PM141	3704504	287552	Early Archaic
Putnam	9PM142	3695192	293960	Early Archaic
Putnam	9PM1451	3702676	269703	Early Archaic
Putnam	9PM200	3697936	290928	Early Archaic
Putnam	9PM207	3696096	294912	Early Archaic
Putnam	9PM2078	3683759	279723	Early Archaic
Putnam	9PM213	3696480	296408	Early Archaic
Putnam	9PM2189	3703008	273321	Early Archaic
Putnam	9PM2196	3700964	273819	Early Archaic
Putnam	9PM2201	3700870	273793	Early Archaic
Putnam	9PM2205	3699584	272683	Early Archaic
Putnam	9PM2225	3702505	273133	Early Archaic
Putnam	9PM227	3703888	289000	Early Archaic
Putnam	9PM2314	3701228	269302	Early Archaic
Putnam	9PM2440	3677813	270259	Early Archaic
Putnam	9PM250	3697504	290192	Early Archaic
Putnam	9PM260	3693336	297744	Early Archaic
Putnam	9PM270	3697744	289792	Early Archaic

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Putnam	9PM436	3697216	291384	Early Archaic
Putnam	9PM443	3697456	290072	Early Archaic
Putnam	9PM444	3697528	290168	Early Archaic
Putnam	9PM445	3697624	290264	Early Archaic
Putnam	9PM449	3699096	287456	Early Archaic
Putnam	9PM466	3698288	288720	Early Archaic
Putnam	9PM470	3698360	289384	Early Archaic
Putnam	9PM471	3698240	289476	Early Archaic
Putnam	9PM477	3697960	290240	Early Archaic
Putnam	9PM480	3698000	290576	Early Archaic
Putnam	9PM483	3698600	291216	Early Archaic
Putnam	9PM489	3698888	291288	Early Archaic
Putnam	9PM490	3699048	291168	Early Archaic
Putnam	9PM491	3699000	291120	Early Archaic
Putnam	9PM501	3700600	290792	Early Archaic
Putnam	9PM502	3700768	290768	Early Archaic
Putnam	9PM512	3701336	290480	Early Archaic
Putnam	9PM513	3701912	289912	Early Archaic
Putnam	9PM554	3704900	287000	Early Archaic
Putnam	9PM568	3704570	289070	Early Archaic
Putnam	9PM584	3703120	289150	Early Archaic
Putnam	9PM594	3698100	290370	Early Archaic
Putnam	9PM602	3705935	286110	Early Archaic
Putnam	9PM612	3673650	284690	Early Archaic
Putnam	9PM614	3674040	284350	Early Archaic
Putnam	9PM668	3683950	263570	Early Archaic
Putnam	9PM679	3689510	295090	Early Archaic
Putnam	9PM689	3679710	276090	Early Archaic
Putnam	9PM785	3694780	277580	Early Archaic
Putnam	9PM883	3684040	264870	Early Archaic
Putnam	9PM983	3680050	289650	Early Archaic
Putnam	9PM996	3699870	287520	Early Archaic
Rabun	9RA107	3854365	266300	Early Archaic
Rabun	9RA125	3866400	301600	Early Archaic
Rabun	9RA321	3865042	286761	Early Archaic
Rabun	9RA422	3859826	290360	Early Archaic
Rabun	9RA460	3868858	291251	Early Archaic
Rabun	9RA99	3856810	275450	Early Archaic
Richmond	9RI1012	3696970	389030	Early Archaic
Richmond	9RI104	3687840	383920	Early Archaic
Richmond	9RI108	3689250	389750	Early Archaic
Richmond	9RI110	3697000	389260	Early Archaic
Richmond	9RI112	3699700	393880	Early Archaic
Richmond	9RI1144	3700048	410470	Early Archaic
Richmond	9RI115	3695110	384640	Early Archaic
Richmond	9RI119	3697320	389090	Early Archaic
Richmond	9RI120	3697950	389580	Early Archaic
Richmond	9RI135	3691100	380100	Early Archaic

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Richmond	9RI138	3691530	383540	Early Archaic
Richmond	9RI141	3687000	384060	Early Archaic
Richmond	9RI158	3708480	406280	Early Archaic
Richmond	9RI163	3687910	385410	Early Archaic
Richmond	9RI187	3685760	408360	Early Archaic
Richmond	9RI198	3680160	413460	Early Archaic
Richmond	9RI201	3697680	410750	Early Archaic
Richmond	9RI206	3690380	391690	Early Archaic
Richmond	9RI22	3697000	410348	Early Archaic
Richmond	9RI238	3687480	385000	Early Archaic
Richmond	9RI25	3696708	410336	Early Archaic
Richmond	9RI286	3687330	387240	Early Archaic
Richmond	9RI31	3697456	410552	Early Archaic
Richmond	9RI327	3707000	407690	Early Archaic
Richmond	9RI346	3699500	393730	Early Archaic
Richmond	9RI363	3691530	384110	Early Archaic
Richmond	9RI381	3697570	409430	Early Archaic
Richmond	9RI412	3690420	384420	Early Archaic
Richmond	9RI433	3691600	392350	Early Archaic
Richmond	9RI45	3696672	409456	Early Archaic
Richmond	9RI462	3696420	391890	Early Archaic
Richmond	9RI468	3696580	396680	Early Archaic
Richmond	9RI47	3697210	398800	Early Archaic
Richmond	9RI488	3697250	392100	Early Archaic
Richmond	9RI50	3688624	397780	Early Archaic
Richmond	9RI51	3690444	400072	Early Archaic
Richmond	9RI531	3695460	394620	Early Archaic
Richmond	9RI544	3691350	392940	Early Archaic
Richmond	9RI57	3694540	403910	Early Archaic
Richmond	9RI592	3691450	391580	Early Archaic
Richmond	9RI598	3697950	388220	Early Archaic
Richmond	9RI666	3685820	383700	Early Archaic
Richmond	9RI684	3688800	384310	Early Archaic
Richmond	9RI702	3692180	383060	Early Archaic
Richmond	9RI735	3690400	382920	Early Archaic
Richmond	9RI736	3690330	382940	Early Archaic
Richmond	9RI78	3692280	411640	Early Archaic
Richmond	9RI806	3690080	380120	Early Archaic
Richmond	9RI81	3694170	410310	Early Archaic
Richmond	9RI842	3685370	377360	Early Archaic
Richmond	9RI843	3685240	377320	Early Archaic
Richmond	9RI907	3692870	387300	Early Archaic
Richmond	9RI910	3692090	388090	Early Archaic
Richmond	9RI912	3691850	389630	Early Archaic
Richmond	9RI920	3696190	387850	Early Archaic
Richmond	9RI930	3695480	388830	Early Archaic
Richmond	9RI96	3691480	392250	Early Archaic
Richmond	9RI98	3689420	389800	Early Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Rockdale	9RO151	3717294	766694	Early Archaic
Rockdale	9RO18	3736720	228020	Early Archaic
Rockdale	9RO2	3728780	222670	Early Archaic
Rockdale	9RO43	3720580	772555	Early Archaic
Rockdale	9RO7	3737200	227660	Early Archaic
Screven	9SN116	3639500	453190	Early Archaic
Screven	9SN165	3608660	450640	Early Archaic
Screven	9SN167	3606760	451920	Early Archaic
Screven	9SN168	3608640	451280	Early Archaic
Screven	9SN39	3630750	454940	Early Archaic
Screven	9SN40	3632120	454410	Early Archaic
Screven	9SN41	3630460	454410	Early Archaic
Screven	9SN51	3612034	459716	Early Archaic
Screven	9SN53	3633040	447500	Early Archaic
Screven	9SN67	3630985	452800	Early Archaic
Screven	9SN68	3631030	452160	Early Archaic
Screven	9SN97	3603340	436380	Early Archaic
Spalding	9SP14	3690940	759480	Early Archaic
Spalding	9SP15	3689410	765120	Early Archaic
Spalding	9SP19	3689620	765460	Early Archaic
Stephens	9ST216	3828700	294775	Early Archaic
Stephens	9ST219	3831040	295700	Early Archaic
Stephens	9ST319	3825761	277493	Early Archaic
Stephens	9ST33	3824040	283120	Early Archaic
Stephens	9ST341	3828757	281416	Early Archaic
Stephens	9ST358	3837740	285460	Early Archaic
Stephens	9ST381	3817780	278339	Early Archaic
Taliaferro	9TL24	3726680	320880	Early Archaic
Tattnall	9TT29	3544210	420205	Early Archaic
Tattnall	9TT33	3542310	421775	Early Archaic
Tattnall	9TT34	3546540	388960	Early Archaic
Tattnall	9TT35	3554540	387640	Early Archaic
Telfair	9TF103	3537940	339000	Early Archaic
Telfair	9TF13	3519070	310560	Early Archaic
Telfair	9TF139	3519320	312300	Early Archaic
Telfair	9TF14	3518510	310000	Early Archaic
Telfair	9TF142	3537800	302370	Early Archaic
Telfair	9TF15	3519520	312060	Early Archaic
Telfair	9TF19	3526580	333140	Early Archaic
Telfair	9TF199	3541938	316506	Early Archaic
Telfair	9TF21	3521400	302290	Early Archaic
Telfair	9TF26	3523720	328600	Early Archaic
Telfair	9TF27	3520580	308360	Early Archaic
Telfair	9TF3	3519600	311320	Early Archaic
Telfair	9TF31	3519470	317580	Early Archaic
Telfair	9TF33	3521260	304000	Early Archaic
Telfair	9TF34	3523590	327500	Early Archaic
Telfair	9TF4	3523520	298100	Early Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Telfair	9TF42	3524830	329120	Early Archaic
Telfair	9TF45	3523280	328160	Early Archaic
Telfair	9TF48	3529520	336780	Early Archaic
Telfair	9TF49	3530700	338820	Early Archaic
Telfair	9TF5	3519290	308810	Early Archaic
Telfair	9TF51	3530340	337920	Early Archaic
Telfair	9TF58	3521510	303160	Early Archaic
Telfair	9TF59	3535680	317660	Early Archaic
Telfair	9TF7	3518600	309800	Early Archaic
Telfair	9TF74	3524200	298400	Early Archaic
Telfair	9TF75	3525200	299300	Early Archaic
Telfair	9TF76	3518550	310380	Early Archaic
Telfair	9TF8	3518770	311210	Early Archaic
Telfair	9TF80	3523500	327400	Early Archaic
Telfair	9TF83	3534160	318400	Early Archaic
Telfair	9TF89	3536600	339360	Early Archaic
Telfair	9TF92	3524950	328900	Early Archaic
Telfair	9TF94	3526200	330640	Early Archaic
Towns	9TO107	3871960	246429	Early Archaic
Towns	9TO11	3867400	250840	Early Archaic
Towns	9TO13	3867400	250840	Early Archaic
Towns	9TO130	3873720	243000	Early Archaic
Towns	9TO134	3874450	242060	Early Archaic
Towns	9TO14	3867400	250840	Early Archaic
Towns	9TO279	3874899	246193	Early Archaic
Towns	9TO68	3858060	245600	Early Archaic
Towns	9TO96	3869470	248780	Early Archaic
Twiggs	9TW102	3599760	272100	Early Archaic
Twiggs	9TW11	3611175	277509	Early Archaic
Twiggs	9TW15	3603088	264455	Early Archaic
Twiggs	9TW28	3618130	283390	Early Archaic
Twiggs	9TW60	3601350	275320	Early Archaic
Twiggs	9TW69	3613590	285950	Early Archaic
Twiggs	9TW72	3606760	271380	Early Archaic
Twiggs	9TW8	3625700	282100	Early Archaic
Twiggs	9TW9	3620680	280200	Early Archaic
Twiggs	9TW98	3613610	261600	Early Archaic
Twiggs	9TW99	3613810	261770	Early Archaic
Upson	9UP41	3652640	748270	Early Archaic
Upson	9UP50	3652510	747520	Early Archaic
Walton	9WN10	3743450	258200	Early Archaic
Walton	9WN11	3742175	263600	Early Archaic
Walton	9WN113	3730200	255820	Early Archaic
Walton	9WN119	3754870	250600	Early Archaic
Walton	9WN12	3736500	245600	Early Archaic
Walton	9WN144	3729801	253811	Early Archaic
Walton	9WN145	3729578	254049	Early Archaic
Walton	9WN18	3746890	243900	Early Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Walton	9WN56	3731910	255260	Early Archaic
Walton	9WN70	3730040	254120	Early Archaic
Walton	9WN81	3730890	252680	Early Archaic
Warren	9WR19	3685430	334420	Early Archaic
Washington	9WG117	3655940	307300	Early Archaic
Washington	9WG118	3656360	307760	Early Archaic
Washington	9WG119	3656520	307820	Early Archaic
Washington	9WG123	3637000	315200	Early Archaic
Washington	9WG128	3656720	309630	Early Archaic
Washington	9WG129	3651290	348280	Early Archaic
Washington	9WG230	3656318	311709	Early Archaic
Washington	9WG35	3646300	347010	Early Archaic
Washington	9WG9	3646080	307300	Early Archaic
Wayne	9WY38	3475000	435000	Early Archaic
Wheeler	9WL118	3555691	321590	Early Archaic
Wheeler	9WL16	3533820	345240	Early Archaic
Wheeler	9WL18	3573800	340600	Early Archaic
Wheeler	9WL23	3548700	325700	Early Archaic
Wheeler	9WL3	3537700	344020	Early Archaic
Wheeler	9WL60	3535330	343840	Early Archaic
Wheeler	9WL84	3560350	329350	Early Archaic
Wilcox	9WI11	3541900	282980	Early Archaic
Wilcox	9WI20	3537760	265990	Early Archaic
Wilcox	9WI29	3542100	281175	Early Archaic
Wilcox	9WI6	3536940	286200	Early Archaic
Wilkes	9WS108	3720920	347250	Early Archaic
Wilkes	9WS159	3724660	352800	Early Archaic
Wilkes	9WS264	3761190	347820	Early Archaic
Wilkes	9WS286	3760910	347460	Early Archaic
Wilkes	9WS297	3761360	347220	Early Archaic
Wilkes	9WS313	3760360	348070	Early Archaic
Wilkes	9WS325	3753500	327600	Early Archaic
Wilkes	9WS347	3739901	344395	Early Archaic
Wilkes	9WS370	3729438	325196	Early Archaic
Wilkes	9WS55	3728100	335100	Early Archaic
Wilkes	9WS58	3745600	344750	Early Archaic
Wilkes	9WS66	3748050	352830	Early Archaic
Wilkinson	9WK148	3626841	298603	Early Archaic
Wilkinson	9WK2	3629500	316500	Early Archaic
Wilkinson	9WK22	3639180	277500	Early Archaic
Wilkinson	9WK32	3627000	297000	Early Archaic
Wilkinson	9WK74	3638980	305590	Early Archaic
Wilkinson	9WK76	3633440	310920	Early Archaic
Wilkinson	9WK77	3635930	309860	Early Archaic
Baldwin	9BL107	3672700	283000	Middle Archaic
Baldwin	9BL129	3652180	306100	Middle Archaic
Baldwin	9BL137	3655180	297200	Middle Archaic
Baldwin	9BL141	3655500	297200	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Baldwin	9BL145	3656000	296380	Middle Archaic
Baldwin	9BL16	3654480	297720	Middle Archaic
Baldwin	9BL172	3656550	303990	Middle Archaic
Baldwin	9BL220	3661530	287750	Middle Archaic
Baldwin	9BL221	3662460	288010	Middle Archaic
Baldwin	9BL228	3668500	294740	Middle Archaic
Baldwin	9BL229	3649840	305980	Middle Archaic
Baldwin	9BL278	3657000	288762	Middle Archaic
Baldwin	9BL28	3661228	293648	Middle Archaic
Baldwin	9BL31	3661760	281820	Middle Archaic
Baldwin	9BL62	3670320	292290	Middle Archaic
Baldwin	9BL69	3668060	294750	Middle Archaic
Baldwin	9BL93	3670920	293740	Middle Archaic
Baldwin	9BL95	3672460	293850	Middle Archaic
Baldwin	9BL99	3673080	290560	Middle Archaic
Banks	9BA130	3799530	271160	Middle Archaic
Banks	9BA18	3794440	270082	Middle Archaic
Banks	9BA34	3804000	275225	Middle Archaic
Banks	9BA35	3808050	279550	Middle Archaic
Banks	9BA59	3802920	276120	Middle Archaic
Banks	9BA60	3802730	276110	Middle Archaic
Banks	9BA62	3802210	275655	Middle Archaic
Banks	9BA67	3802220	276180	Middle Archaic
Banks	9BA68	3802240	275990	Middle Archaic
Banks	9BA7	3812500	268100	Middle Archaic
Banks	9BA70	3801940	276225	Middle Archaic
Banks	9BA74	3803820	276200	Middle Archaic
Banks	9BA75	3803360	276350	Middle Archaic
Banks	9BA77	3802680	275925	Middle Archaic
Banks	9BA92	3802550	273460	Middle Archaic
Banks	9BA99	3802814	274437	Middle Archaic
Barrow	9BW110	3777275	241050	Middle Archaic
Barrow	9BW113	3769046	261237	Middle Archaic
Barrow	9BW127	3757419	248134	Middle Archaic
Barrow	9BW16	3767876	248153	Middle Archaic
Barrow	9BW30	3759770	262130	Middle Archaic
Barrow	9BW34	3760010	249510	Middle Archaic
Barrow	9BW5	3776060	241390	Middle Archaic
Barrow	9BW56	3768160	251750	Middle Archaic
Barrow	9BW67	3768590	251230	Middle Archaic
Bibb	9BI103	3627580	245960	Middle Archaic
Bibb	9BI12	3623950	255200	Middle Archaic
Bibb	9BI129	3627660	255420	Middle Archaic
Bibb	9BI13	3631250	255350	Middle Archaic
Bibb	9BI134	3629610	255500	Middle Archaic
Bibb	9BI136	3628370	254320	Middle Archaic
Bibb	9BI148	3646844	244260	Middle Archaic
Bibb	9BI17	3635460	258250	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Bibb	9BI18	3635500	258050	Middle Archaic
Bibb	9BI190	3637272	251899	Middle Archaic
Bibb	9BI23	3646700	243750	Middle Archaic
Bibb	9BI230	3620501	247628	Middle Archaic
Bibb	9BI233	3627774	250704	Middle Archaic
Bibb	9BI276	3644247	247097	Middle Archaic
Bibb	9BI31	3634150	258750	Middle Archaic
Bibb	9BI34	3627450	247200	Middle Archaic
Bibb	9BI4	3631500	258600	Middle Archaic
Bibb	9BI6	3628250	260350	Middle Archaic
Bibb	9BI7	3635100	255650	Middle Archaic
Bleckley	9BY13	3589740	277000	Middle Archaic
Bleckley	9BY16	3595520	275100	Middle Archaic
Brantley	9BT6	3456620	412720	Middle Archaic
Brantley	9BT7	3456200	413240	Middle Archaic
Brantley	9BT8	3452160	410700	Middle Archaic
Bryan	9BN194	3537200	463650	Middle Archaic
Bryan	9BN265	3563980	451680	Middle Archaic
Bryan	9BN422	3538820	466840	Middle Archaic
Bryan	9BN47	3532300	473445	Middle Archaic
Bryan	9BN668	3539287	470651	Middle Archaic
Bryan	9BN80	3543020	454190	Middle Archaic
Bulloch	9BU117	3594656	447788	Middle Archaic
Bulloch	9BU6	3584800	427750	Middle Archaic
Burke	9BK12	3673300	388800	Middle Archaic
Burke	9BK128	3650720	398860	Middle Archaic
Burke	9BK147	3650900	400440	Middle Archaic
Burke	9BK170	3645990	402490	Middle Archaic
Burke	9BK18	3661460	407120	Middle Archaic
Burke	9BK195	3646810	401890	Middle Archaic
Burke	9BK205	3648900	401200	Middle Archaic
Burke	9BK207	3648090	400370	Middle Archaic
Burke	9BK210	3647880	400510	Middle Archaic
Burke	9BK225	3648270	400360	Middle Archaic
Burke	9BK262	3650300	398360	Middle Archaic
Burke	9BK263	3650800	398420	Middle Archaic
Burke	9BK275	3648180	396090	Middle Archaic
Burke	9BK278	3647960	395720	Middle Archaic
Burke	9BK312	3646240	396770	Middle Archaic
Burke	9BK399	3646157	403216	Middle Archaic
Burke	9BK413	3634910	378594	Middle Archaic
Burke	9BK429	3661441	389754	Middle Archaic
Burke	9BK435	3651992	398842	Middle Archaic
Burke	9BK48	3649350	391480	Middle Archaic
Burke	9BK515	3630981	386798	Middle Archaic
Burke	9BK537	3651164	390639	Middle Archaic
Burke	9BK541	3662034	401395	Middle Archaic
Burke	9BK6	3656000	447500	Middle Archaic

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Butts	9BS121	3686341	775544	Middle Archaic
Butts	9BS13	3678400	231340	Middle Archaic
Butts	9BS15	3679200	231620	Middle Archaic
Butts	9BS30	3695710	221840	Middle Archaic
Butts	9BS33	3697000	222660	Middle Archaic
Butts	9BS41	3697940	222647	Middle Archaic
Butts	9BS45	3696580	222910	Middle Archaic
Butts	9BS55	3680581	768423	Middle Archaic
Butts	9BS57	3690000	222180	Middle Archaic
Candler	9CZ5	3591680	399500	Middle Archaic
Chatham	9CH872	3560270	474800	Middle Archaic
Chatham	9CH894	3545260	478000	Middle Archaic
Clarke	9CA121	3754620	282800	Middle Archaic
Clarke	9CA145	3760231	279557	Middle Archaic
Clarke	9CA156	3757605	281988	Middle Archaic
Clarke	9CA198	3767466	279397	Middle Archaic
Clarke	9CA219	3754667	279257	Middle Archaic
Clarke	9CA225	3753745	280490	Middle Archaic
Clarke	9CA226	3753521	280638	Middle Archaic
Clarke	9CA41	3758030	284210	Middle Archaic
Clarke	9CA52	3762920	274000	Middle Archaic
Clarke	9CA61	3765280	278120	Middle Archaic
Clarke	9CA71	3755400	285200	Middle Archaic
Clarke	9CA83	3757350	276960	Middle Archaic
Clarke	9CA91	3761320	274600	Middle Archaic
Clayton	9CN125	3720880	741090	Middle Archaic
Clayton	9CN226	3716911	738601	Middle Archaic
Clayton	9CN240	3708084	748001	Middle Archaic
Clayton	9CN249	3720208	740069	Middle Archaic
Clayton	9CN27	3693704	743070	Middle Archaic
Clayton	9CN28	3708820	741850	Middle Archaic
Clayton	9CN29	3707219	751195	Middle Archaic
Clayton	9CN38	3698600	743580	Middle Archaic
Clayton	9CN39	3696140	743280	Middle Archaic
Clayton	9CN40	3703820	744920	Middle Archaic
Clayton	9CN41	3704940	746840	Middle Archaic
Clayton	9CN62	3693420	745900	Middle Archaic
Clayton	9CN66	3697627	742584	Middle Archaic
Clayton	9CN67	3698830	743700	Middle Archaic
Clayton	9CN76	3712322	749540	Middle Archaic
Clayton	9CN80	3712920	749420	Middle Archaic
Clayton	9CN81	3712700	749800	Middle Archaic
Coffee	9CF100	3477000	335800	Middle Archaic
Coffee	9CF118	3482920	296450	Middle Archaic
Coffee	9CF120	3515380	320280	Middle Archaic
Coffee	9CF132	3515100	318800	Middle Archaic
Coffee	9CF226	3493410	330110	Middle Archaic
Coffee	9CF248	3493950	335480	Middle Archaic

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Coffee	9CF37	3488205	326700	Middle Archaic
Columbia	9CB140	3718450	386200	Middle Archaic
Columbia	9CB145	3725050	381550	Middle Archaic
Columbia	9CB147	3724620	387760	Middle Archaic
Columbia	9CB151	3727700	386650	Middle Archaic
Columbia	9CB152	3725455	388350	Middle Archaic
Columbia	9CB157	3725570	371760	Middle Archaic
Columbia	9CB158	3727700	385950	Middle Archaic
Columbia	9CB169	3712320	378160	Middle Archaic
Columbia	9CB17	3722860	378680	Middle Archaic
Columbia	9CB181	3722860	378680	Middle Archaic
Columbia	9CB197	3715427	399084	Middle Archaic
Columbia	9CB20	3721750	388600	Middle Archaic
Columbia	9CB22	3726048	388000	Middle Archaic
Columbia	9CB230	3725760	386570	Middle Archaic
Columbia	9CB25	3719650	390800	Middle Archaic
Columbia	9CB295	3722740	380650	Middle Archaic
Columbia	9CB320	3725255	380425	Middle Archaic
Columbia	9CB351	3727560	383340	Middle Archaic
Columbia	9CB38	3724600	369530	Middle Archaic
Columbia	9CB40	3726910	380410	Middle Archaic
Columbia	9CB420	3727040	375325	Middle Archaic
Columbia	9CB524	3710296	387333	Middle Archaic
Columbia	9CB54	3713100	396105	Middle Archaic
Columbia	9CB595	3727560	378410	Middle Archaic
Columbia	9CB628	3715701	378176	Middle Archaic
Columbia	9CB634	3704389	389739	Middle Archaic
Columbia	9CB644	3704033	390406	Middle Archaic
Columbia	9CB81	3694520	383600	Middle Archaic
Crawford	9CD57	3612360	224280	Middle Archaic
DeKalb	9DA11	3743790	765480	Middle Archaic
DeKalb	9DA12	3730880	747340	Middle Archaic
DeKalb	9DA135	3730432	751000	Middle Archaic
DeKalb	9DA268	3727610	750690	Middle Archaic
DeKalb	9DA27	3744570	753420	Middle Archaic
DeKalb	9DA271	3728380	750470	Middle Archaic
DeKalb	9DA289	3731900	770310	Middle Archaic
DeKalb	9DA29	3743360	755072	Middle Archaic
DeKalb	9DA308	3731800	769140	Middle Archaic
DeKalb	9DA310	3731730	769800	Middle Archaic
DeKalb	9DA329	3729850	769690	Middle Archaic
DeKalb	9DA40	3736960	757600	Middle Archaic
DeKalb	9DA408	3728071	754121	Middle Archaic
DeKalb	9DA45	3740480	772240	Middle Archaic
DeKalb	9DA451	3745385	759183	Middle Archaic
DeKalb	9DA47	3755760	748060	Middle Archaic
DeKalb	9DA51	3736288	772672	Middle Archaic
DeKalb	9DA58	3726408	746768	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
DeKalb	9DA6	3745528	763744	Middle Archaic
DeKalb	9DA71	3748312	749048	Middle Archaic
DeKalb	9DA73	3748096	749912	Middle Archaic
DeKalb	9DA75	3748504	749264	Middle Archaic
DeKalb	9DA76	3727960	746120	Middle Archaic
DeKalb	9DA8	3745240	765000	Middle Archaic
DeKalb	9DA81	3732192	754456	Middle Archaic
DeKalb	9DA85	3728216	762216	Middle Archaic
DeKalb	9DA9	3744660	765320	Middle Archaic
Dodge	9DG133	3542077	287808	Middle Archaic
Dodge	9DG152	3575020	286276	Middle Archaic
Dodge	9DG8	3541700	284720	Middle Archaic
Dooly	9DY50	3548661	239235	Middle Archaic
Effingham	9EF289	3568904	473584	Middle Archaic
Effingham	9EF315	3569069	481155	Middle Archaic
Elbert	9EB10	3794984	336912	Middle Archaic
Elbert	9EB120	3770890	346840	Middle Archaic
Elbert	9EB134	3779920	341160	Middle Archaic
Elbert	9EB145	3780120	340250	Middle Archaic
Elbert	9EB149	3781340	339200	Middle Archaic
Elbert	9EB156	3771250	346640	Middle Archaic
Elbert	9EB158	3771100	346380	Middle Archaic
Elbert	9EB160	3770920	346340	Middle Archaic
Elbert	9EB161	3771000	346450	Middle Archaic
Elbert	9EB163	3770500	346610	Middle Archaic
Elbert	9EB17	3794009	337700	Middle Archaic
Elbert	9EB171	3761650	352800	Middle Archaic
Elbert	9EB173	3761450	352900	Middle Archaic
Elbert	9EB176	3785800	310880	Middle Archaic
Elbert	9EB181	3782840	306520	Middle Archaic
Elbert	9EB194	3780060	326080	Middle Archaic
Elbert	9EB198	3765180	352300	Middle Archaic
Elbert	9EB2	3772800	318400	Middle Archaic
Elbert	9EB200	3775000	339000	Middle Archaic
Elbert	9EB203	3772540	345888	Middle Archaic
Elbert	9EB204	3772600	345828	Middle Archaic
Elbert	9EB207	3771816	347048	Middle Archaic
Elbert	9EB208	3771660	346660	Middle Archaic
Elbert	9EB217	3775775	336670	Middle Archaic
Elbert	9EB218	3771552	345600	Middle Archaic
Elbert	9EB219	3771900	345740	Middle Archaic
Elbert	9EB222	3771240	345792	Middle Archaic
Elbert	9EB237	3772612	345288	Middle Archaic
Elbert	9EB243	3766840	350516	Middle Archaic
Elbert	9EB245	3767816	350636	Middle Archaic
Elbert	9EB246	3767840	350528	Middle Archaic
Elbert	9EB254	3767144	351096	Middle Archaic
Elbert	9EB258	3766660	351648	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Elbert	9EB259	3786696	339288	Middle Archaic
Elbert	9EB261	3787660	339372	Middle Archaic
Elbert	9EB264	3786876	339120	Middle Archaic
Elbert	9EB271	3788684	338732	Middle Archaic
Elbert	9EB273	3788744	338900	Middle Archaic
Elbert	9EB276	3789156	339060	Middle Archaic
Elbert	9EB277	3789204	338696	Middle Archaic
Elbert	9EB283	3783384	338168	Middle Archaic
Elbert	9EB284	3783624	338156	Middle Archaic
Elbert	9EB285	3783384	337864	Middle Archaic
Elbert	9EB286	3782864	338492	Middle Archaic
Elbert	9EB291	3782792	339852	Middle Archaic
Elbert	9EB299	3777144	335396	Middle Archaic
Elbert	9EB307	3782672	338288	Middle Archaic
Elbert	9EB309	3782192	338384	Middle Archaic
Elbert	9EB316	3781456	339096	Middle Archaic
Elbert	9EB320	3775144	345960	Middle Archaic
Elbert	9EB325	3778576	340360	Middle Archaic
Elbert	9EB326	3778900	340492	Middle Archaic
Elbert	9EB327	3778744	340888	Middle Archaic
Elbert	9EB330	3778624	341684	Middle Archaic
Elbert	9EB331	3778696	342024	Middle Archaic
Elbert	9EB349	3777240	344816	Middle Archaic
Elbert	9EB35	3775500	319120	Middle Archaic
Elbert	9EB351	3776912	344480	Middle Archaic
Elbert	9EB37	3776060	318910	Middle Archaic
Elbert	9EB379	3779864	340372	Middle Archaic
Elbert	9EB395	3784288	338756	Middle Archaic
Elbert	9EB4	3770700	347600	Middle Archaic
Elbert	9EB405	3774852	345000	Middle Archaic
Elbert	9EB425	3786852	334000	Middle Archaic
Elbert	9EB468	3785200	309940	Middle Archaic
Elbert	9EB485	3764730	352310	Middle Archaic
Elbert	9EB488	3764570	352390	Middle Archaic
Elbert	9EB491	3764110	352430	Middle Archaic
Elbert	9EB492	3764000	352700	Middle Archaic
Elbert	9EB513	3762840	353400	Middle Archaic
Elbert	9EB518	3768820	325440	Middle Archaic
Elbert	9EB520	3782300	319360	Middle Archaic
Elbert	9EB522	3761000	352000	Middle Archaic
Elbert	9EB526	3779630	341240	Middle Archaic
Elbert	9EB527	3762070	350840	Middle Archaic
Elbert	9EB528	3762200	350400	Middle Archaic
Elbert	9EB556	3765290	334960	Middle Archaic
Elbert	9EB56	3773740	339930	Middle Archaic
Elbert	9EB57	3773810	339710	Middle Archaic
Elbert	9EB58	3774480	338804	Middle Archaic
Elbert	9EB59	3773864	341000	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Elbert	9EB60	3783580	339260	Middle Archaic
Elbert	9EB601	3761900	351230	Middle Archaic
Elbert	9EB612	3763050	350260	Middle Archaic
Elbert	9EB613	3761340	351130	Middle Archaic
Elbert	9EB62	3793250	338650	Middle Archaic
Elbert	9EB621	3763600	352840	Middle Archaic
Elbert	9EB627	3763040	350410	Middle Archaic
Elbert	9EB63	3775204	338312	Middle Archaic
Elbert	9EB633	3764230	349090	Middle Archaic
Elbert	9EB64	3773192	347624	Middle Archaic
Elbert	9EB650	3762780	347680	Middle Archaic
Elbert	9EB66	3792900	338670	Middle Archaic
Elbert	9EB661	3761960	348500	Middle Archaic
Elbert	9EB67	3772984	347120	Middle Archaic
Elbert	9EB68	3773384	339240	Middle Archaic
Elbert	9EB689	3786831	311974	Middle Archaic
Elbert	9EB69	3774864	338228	Middle Archaic
Elbert	9EB692	3785563	310618	Middle Archaic
Elbert	9EB70	3779960	329120	Middle Archaic
Elbert	9EB71	3774048	341360	Middle Archaic
Elbert	9EB714	3785139	313712	Middle Archaic
Elbert	9EB72	3777852	339732	Middle Archaic
Elbert	9EB73	3773456	341432	Middle Archaic
Elbert	9EB74	3771144	341336	Middle Archaic
Elbert	9EB743	3768495	335290	Middle Archaic
Elbert	9EB76	3774708	346504	Middle Archaic
Elbert	9EB764	3772742	346525	Middle Archaic
Elbert	9EB81	3779336	328132	Middle Archaic
Elbert	9EB815	3761673	336045	Middle Archaic
Elbert	9EB83	3773228	348216	Middle Archaic
Elbert	9EB88	3783750	339300	Middle Archaic
Elbert	9EB9	3768228	350408	Middle Archaic
Elbert	9EB90	3783580	339050	Middle Archaic
Elbert	9EB92	3772396	346516	Middle Archaic
Emanuel	9EM113	3628907	378366	Middle Archaic
Emanuel	9EM114	3608283	366034	Middle Archaic
Franklin	9FK34	3802980	286820	Middle Archaic
Franklin	9FK39	3804750	294200	Middle Archaic
Franklin	9FK40	3805350	294220	Middle Archaic
Franklin	9FK68	3805797	306516	Middle Archaic
Fulton	9FU104	3726624	724000	Middle Archaic
Fulton	9FU110	3716000	728240	Middle Archaic
Fulton	9FU124	3761530	743880	Middle Archaic
Fulton	9FU126	3726640	743660	Middle Archaic
Fulton	9FU127	3726380	743800	Middle Archaic
Fulton	9FU131	3751672	736648	Middle Archaic
Fulton	9FU139	3770320	754725	Middle Archaic
Fulton	9FU141	3770260	755130	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Fulton	9FU143	3718120	733804	Middle Archaic
Fulton	9FU157	3758750	739960	Middle Archaic
Fulton	9FU163	3769240	747972	Middle Archaic
Fulton	9FU166	3771183	750290	Middle Archaic
Fulton	9FU176	3725540	715450	Middle Archaic
Fulton	9FU177	3726000	717000	Middle Archaic
Fulton	9FU178	3723780	720280	Middle Archaic
Fulton	9FU235	3767750	743780	Middle Archaic
Fulton	9FU357	3726620	719440	Middle Archaic
Fulton	9FU371	3774916	752888	Middle Archaic
Fulton	9FU420	3720800	708710	Middle Archaic
Fulton	9FU429	3719760	709810	Middle Archaic
Fulton	9FU436	3763600	752647	Middle Archaic
Fulton	9FU437	3763750	752589	Middle Archaic
Fulton	9FU481	3768536	759574	Middle Archaic
Fulton	9FU557	3721276	708433	Middle Archaic
Fulton	9FU573	3714650	724006	Middle Archaic
Fulton	9FU628	3744663	738156	Middle Archaic
Fulton	9FU652	3771376	750432	Middle Archaic
Fulton	9FU659	3764074	751886	Middle Archaic
Fulton	9FU660	3764122	751825	Middle Archaic
Fulton	9FU71	3711912	702480	Middle Archaic
Fulton	9FU748	3725711	731110	Middle Archaic
Fulton	9FU772	3721657	732475	Middle Archaic
Fulton	9FU776	3721734	726355	Middle Archaic
Fulton	9FU84	3737216	738000	Middle Archaic
Glascock	9GL6	3677800	353360	Middle Archaic
Glynn	9GN446	3440660	461518	Middle Archaic
Greene	9GE1000	3706370	291980	Middle Archaic
Greene	9GE1002	3705931	291817	Middle Archaic
Greene	9GE1004	3706008	292096	Middle Archaic
Greene	9GE1011	3706560	289640	Middle Archaic
Greene	9GE1012	3706580	289300	Middle Archaic
Greene	9GE1023	3721660	286460	Middle Archaic
Greene	9GE104	3698264	297312	Middle Archaic
Greene	9GE105	3698024	297144	Middle Archaic
Greene	9GE1054	3721035	289350	Middle Archaic
Greene	9GE1055	3720800	289375	Middle Archaic
Greene	9GE1079	3721960	295960	Middle Archaic
Greene	9GE111	3719408	284528	Middle Archaic
Greene	9GE1116	3720385	309950	Middle Archaic
Greene	9GE113	3712216	289384	Middle Archaic
Greene	9GE114	3713650	293600	Middle Archaic
Greene	9GE116	3697030	295340	Middle Archaic
Greene	9GE1198	3736750	290270	Middle Archaic
Greene	9GE1199	3736600	289900	Middle Archaic
Greene	9GE1200	3737050	290350	Middle Archaic
Greene	9GE1227	3720470	291380	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Greene	9GE1304	3720760	291380	Middle Archaic
Greene	9GE131	3693400	298550	Middle Archaic
Greene	9GE132	3692978	298830	Middle Archaic
Greene	9GE1320	3720980	290220	Middle Archaic
Greene	9GE133	3693350	298860	Middle Archaic
Greene	9GE134	3693610	298750	Middle Archaic
Greene	9GE135	3694000	298550	Middle Archaic
Greene	9GE1373	3724945	293580	Middle Archaic
Greene	9GE1390	3699340	301960	Middle Archaic
Greene	9GE1399	3699620	301740	Middle Archaic
Greene	9GE1414	3700100	302300	Middle Archaic
Greene	9GE142	3696648	296960	Middle Archaic
Greene	9GE1421	3699720	301940	Middle Archaic
Greene	9GE146	3695540	293590	Middle Archaic
Greene	9GE1479	3735520	288440	Middle Archaic
Greene	9GE148	3696504	297072	Middle Archaic
Greene	9GE151	3697672	296360	Middle Archaic
Greene	9GE1536	3704420	295480	Middle Archaic
Greene	9GE1539	3728200	290440	Middle Archaic
Greene	9GE1553	3727400	290920	Middle Archaic
Greene	9GE1558	3727220	291300	Middle Archaic
Greene	9GE1565	3727280	291620	Middle Archaic
Greene	9GE1566	3727090	291540	Middle Archaic
Greene	9GE157	3694912	297888	Middle Archaic
Greene	9GE1571	3727600	291780	Middle Archaic
Greene	9GE1577	3727600	292000	Middle Archaic
Greene	9GE1578	3727120	292080	Middle Archaic
Greene	9GE158	3695200	297520	Middle Archaic
Greene	9GE1586	3726620	292240	Middle Archaic
Greene	9GE159	3695216	297504	Middle Archaic
Greene	9GE1632	3724897	300440	Middle Archaic
Greene	9GE1646	3733820	290720	Middle Archaic
Greene	9GE1647	3733720	290600	Middle Archaic
Greene	9GE1661	3696760	294370	Middle Archaic
Greene	9GE168	3698576	295792	Middle Archaic
Greene	9GE170	3698600	296300	Middle Archaic
Greene	9GE171	3698240	296576	Middle Archaic
Greene	9GE1718	3699940	295520	Middle Archaic
Greene	9GE1747	3701920	294060	Middle Archaic
Greene	9GE1787	3702880	294290	Middle Archaic
Greene	9GE1804	3725680	288760	Middle Archaic
Greene	9GE1811	3719280	283480	Middle Archaic
Greene	9GE1846	3702410	293940	Middle Archaic
Greene	9GE185	3716048	289408	Middle Archaic
Greene	9GE1853	3733720	290610	Middle Archaic
Greene	9GE1854	3733600	290600	Middle Archaic
Greene	9GE1855	3733780	290600	Middle Archaic
Greene	9GE1861	3733420	290680	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Greene	9GE1882	3704237	298390	Middle Archaic
Greene	9GE1894	3703630	290836	Middle Archaic
Greene	9GE1896	3703430	290810	Middle Archaic
Greene	9GE1909	3711470	289840	Middle Archaic
Greene	9GE191	3697420	297380	Middle Archaic
Greene	9GE192	3703696	290576	Middle Archaic
Greene	9GE204	3692995	298540	Middle Archaic
Greene	9GE2091	3703358	293345	Middle Archaic
Greene	9GE2140	3707750	291320	Middle Archaic
Greene	9GE2143	3706815	291020	Middle Archaic
Greene	9GE2389	3719882	284094	Middle Archaic
Greene	9GE2415	3696733	299750	Middle Archaic
Greene	9GE2466	3702998	306238	Middle Archaic
Greene	9GE2570	3698302	298212	Middle Archaic
Greene	9GE2703	3706832	289436	Middle Archaic
Greene	9GE2778	3702884	290333	Middle Archaic
Greene	9GE309	3695330	298290	Middle Archaic
Greene	9GE312	3705590	292420	Middle Archaic
Greene	9GE319	3704400	293970	Middle Archaic
Greene	9GE3235	3705606	288577	Middle Archaic
Greene	9GE329	3703780	294530	Middle Archaic
Greene	9GE3428	3720624	301887	Middle Archaic
Greene	9GE3535	3702088	298063	Middle Archaic
Greene	9GE3538	3701060	298379	Middle Archaic
Greene	9GE3570	3701412	297256	Middle Archaic
Greene	9GE3595	3699627	296965	Middle Archaic
Greene	9GE3600	3700401	296428	Middle Archaic
Greene	9GE3633	3721882	297838	Middle Archaic
Greene	9GE3650	3724658	300418	Middle Archaic
Greene	9GE3680	3724866	287251	Middle Archaic
Greene	9GE3700	3733728	286060	Middle Archaic
Greene	9GE376	3698300	292950	Middle Archaic
Greene	9GE381	3698490	292640	Middle Archaic
Greene	9GE393	3698640	292510	Middle Archaic
Greene	9GE41	3701080	296690	Middle Archaic
Greene	9GE410	3695540	298220	Middle Archaic
Greene	9GE413	3695860	298500	Middle Archaic
Greene	9GE416	3695940	298600	Middle Archaic
Greene	9GE417	3695840	298660	Middle Archaic
Greene	9GE418	3695720	298800	Middle Archaic
Greene	9GE419	3696000	298710	Middle Archaic
Greene	9GE42	3700800	296530	Middle Archaic
Greene	9GE423	3695770	298950	Middle Archaic
Greene	9GE426	3695910	299410	Middle Archaic
Greene	9GE430	3695720	299940	Middle Archaic
Greene	9GE441	3696630	299710	Middle Archaic
Greene	9GE442	3696570	299610	Middle Archaic
Greene	9GE448	3696340	299720	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Greene	9GE456	3697080	299890	Middle Archaic
Greene	9GE457	3695270	298330	Middle Archaic
Greene	9GE46	3698850	297490	Middle Archaic
Greene	9GE480	3695040	298470	Middle Archaic
Greene	9GE484	3694840	298170	Middle Archaic
Greene	9GE485	3695200	298250	Middle Archaic
Greene	9GE486	3695040	298260	Middle Archaic
Greene	9GE487	3694610	298200	Middle Archaic
Greene	9GE488	3694380	298300	Middle Archaic
Greene	9GE493	3694250	298540	Middle Archaic
Greene	9GE494	3694220	298420	Middle Archaic
Greene	9GE498	3694010	298370	Middle Archaic
Greene	9GE500	3698590	291530	Middle Archaic
Greene	9GE510	3698100	291680	Middle Archaic
Greene	9GE512	3698110	291880	Middle Archaic
Greene	9GE516	3694310	298870	Middle Archaic
Greene	9GE519	3693780	298290	Middle Archaic
Greene	9GE52	3726660	279920	Middle Archaic
Greene	9GE520	3693650	298360	Middle Archaic
Greene	9GE523	3693720	298700	Middle Archaic
Greene	9GE526	3693790	298840	Middle Archaic
Greene	9GE527	3693980	298680	Middle Archaic
Greene	9GE528	3698430	291880	Middle Archaic
Greene	9GE531	3698240	293180	Middle Archaic
Greene	9GE535	3698430	293270	Middle Archaic
Greene	9GE539	3698610	293320	Middle Archaic
Greene	9GE541	3698920	293190	Middle Archaic
Greene	9GE542	3699030	293170	Middle Archaic
Greene	9GE543	3693610	298830	Middle Archaic
Greene	9GE544	3693700	298880	Middle Archaic
Greene	9GE545	3693600	299060	Middle Archaic
Greene	9GE546	3693670	299140	Middle Archaic
Greene	9GE547	3693490	299050	Middle Archaic
Greene	9GE548	3693250	298690	Middle Archaic
Greene	9GE554	3693310	299240	Middle Archaic
Greene	9GE559	3698500	294000	Middle Archaic
Greene	9GE562	3697860	294370	Middle Archaic
Greene	9GE564	3697520	294310	Middle Archaic
Greene	9GE569	3696840	293650	Middle Archaic
Greene	9GE573	3693000	298750	Middle Archaic
Greene	9GE575	3692950	298940	Middle Archaic
Greene	9GE576	3692950	299000	Middle Archaic
Greene	9GE578	3692850	298800	Middle Archaic
Greene	9GE579	3697710	298760	Middle Archaic
Greene	9GE580	3696400	298220	Middle Archaic
Greene	9GE585	3699999	297617	Middle Archaic
Greene	9GE59	3732873	286738	Middle Archaic
Greene	9GE592	3699840	297530	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Greene	9GE593	3699946	297427	Middle Archaic
Greene	9GE596	3699386	297341	Middle Archaic
Greene	9GE597	3699460	297390	Middle Archaic
Greene	9GE600	3699360	297590	Middle Archaic
Greene	9GE603	3699040	297740	Middle Archaic
Greene	9GE609	3698450	297540	Middle Archaic
Greene	9GE615	3698320	297620	Middle Archaic
Greene	9GE64	3718456	290216	Middle Archaic
Greene	9GE65	3718696	290264	Middle Archaic
Greene	9GE657	3698120	297100	Middle Archaic
Greene	9GE663	3697670	297330	Middle Archaic
Greene	9GE668	3701440	297000	Middle Archaic
Greene	9GE669	3701290	296990	Middle Archaic
Greene	9GE67	3732548	286408	Middle Archaic
Greene	9GE671	3701150	296880	Middle Archaic
Greene	9GE672	3701067	297039	Middle Archaic
Greene	9GE676	3700910	296500	Middle Archaic
Greene	9GE678	3702280	297720	Middle Archaic
Greene	9GE679	3702100	297640	Middle Archaic
Greene	9GE682	3702040	297310	Middle Archaic
Greene	9GE686	3701580	296910	Middle Archaic
Greene	9GE687	3701540	296860	Middle Archaic
Greene	9GE695	3696880	298220	Middle Archaic
Greene	9GE698	3696790	298040	Middle Archaic
Greene	9GE699	3696710	298020	Middle Archaic
Greene	9GE70	3718567	296498	Middle Archaic
Greene	9GE701	3697230	295040	Middle Archaic
Greene	9GE702	3697180	295200	Middle Archaic
Greene	9GE705	3696660	298000	Middle Archaic
Greene	9GE708	3696510	297960	Middle Archaic
Greene	9GE723	3696950	296570	Middle Archaic
Greene	9GE728	3699240	295810	Middle Archaic
Greene	9GE738	3697730	297060	Middle Archaic
Greene	9GE748	3697880	296930	Middle Archaic
Greene	9GE77	3733647	286893	Middle Archaic
Greene	9GE78	3734063	286800	Middle Archaic
Greene	9GE780	3717930	288890	Middle Archaic
Greene	9GE88	3696960	298096	Middle Archaic
Greene	9GE899	3701450	296180	Middle Archaic
Greene	9GE9	3719576	289120	Middle Archaic
Greene	9GE91	3733417	286313	Middle Archaic
Greene	9GE92	3733198	286186	Middle Archaic
Greene	9GE949	3720888	296000	Middle Archaic
Greene	9GE97	3726300	316680	Middle Archaic
Greene	9GE98	3726820	316000	Middle Archaic
Greene	9GE980	3724620	287170	Middle Archaic
Greene	9GE989	3722920	281960	Middle Archaic
Greene	9GE994	3718610	284530	Middle Archaic

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Greene	9GE995	3718470	284620	Middle Archaic
Greene	9GE998	3706344	291550	Middle Archaic
Gwinnett	9GW11	3770576	767240	Middle Archaic
Gwinnett	9GW12	3778408	767480	Middle Archaic
Gwinnett	9GW15	3767888	761096	Middle Archaic
Gwinnett	9GW153	3757150	754340	Middle Archaic
Gwinnett	9GW17	3764600	759888	Middle Archaic
Gwinnett	9GW174	3746240	765980	Middle Archaic
Gwinnett	9GW18	3763792	752960	Middle Archaic
Gwinnett	9GW180	3744495	769319	Middle Archaic
Gwinnett	9GW20	3781312	768648	Middle Archaic
Gwinnett	9GW21	3758240	239696	Middle Archaic
Gwinnett	9GW211	3777150	767400	Middle Archaic
Gwinnett	9GW22	3757888	240120	Middle Archaic
Gwinnett	9GW224	3773740	766240	Middle Archaic
Gwinnett	9GW23	3763336	237720	Middle Archaic
Gwinnett	9GW25	3764096	759000	Middle Archaic
Gwinnett	9GW26	3765336	755360	Middle Archaic
Gwinnett	9GW262	3744810	224430	Middle Archaic
Gwinnett	9GW27	3745600	771360	Middle Archaic
Gwinnett	9GW287	3780580	769500	Middle Archaic
Gwinnett	9GW29	3776048	766864	Middle Archaic
Gwinnett	9GW297	3768220	231720	Middle Archaic
Gwinnett	9GW300	3772420	224070	Middle Archaic
Gwinnett	9GW32	3749696	765408	Middle Archaic
Gwinnett	9GW320	3768180	772400	Middle Archaic
Gwinnett	9GW321	3761960	231840	Middle Archaic
Gwinnett	9GW322	3775620	768180	Middle Archaic
Gwinnett	9GW33	3750840	764660	Middle Archaic
Gwinnett	9GW330	3762580	774300	Middle Archaic
Gwinnett	9GW34	3752696	769768	Middle Archaic
Gwinnett	9GW35	3753768	769744	Middle Archaic
Gwinnett	9GW353	3769300	774240	Middle Archaic
Gwinnett	9GW356	3767810	764310	Middle Archaic
Gwinnett	9GW357	3767800	764020	Middle Archaic
Gwinnett	9GW36	3753912	770360	Middle Archaic
Gwinnett	9GW362	3767970	764330	Middle Archaic
Gwinnett	9GW37	3757840	766072	Middle Archaic
Gwinnett	9GW38	3757384	767168	Middle Archaic
Gwinnett	9GW39	3758672	767720	Middle Archaic
Gwinnett	9GW40	3748120	769816	Middle Archaic
Gwinnett	9GW41	3771576	233264	Middle Archaic
Gwinnett	9GW42	3772480	234600	Middle Archaic
Gwinnett	9GW43	3773552	234216	Middle Archaic
Gwinnett	9GW44	3776360	234000	Middle Archaic
Gwinnett	9GW45	3776528	234456	Middle Archaic
Gwinnett	9GW46	3777264	232912	Middle Archaic
Gwinnett	9GW468	3773310	768000	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Gwinnett	9GW47	3778168	227000	Middle Archaic
Gwinnett	9GW476	3773890	767200	Middle Archaic
Gwinnett	9GW48	3771576	233816	Middle Archaic
Gwinnett	9GW49	3771792	234240	Middle Archaic
Gwinnett	9GW5	3771120	768360	Middle Archaic
Gwinnett	9GW50	3769860	234768	Middle Archaic
Gwinnett	9GW51	3766240	233912	Middle Archaic
Gwinnett	9GW52	3766552	233600	Middle Archaic
Gwinnett	9GW53	3766672	232648	Middle Archaic
Gwinnett	9GW54	3747000	223696	Middle Archaic
Gwinnett	9GW55	3773720	225312	Middle Archaic
Gwinnett	9GW56	3745768	770384	Middle Archaic
Gwinnett	9GW57	3756648	229336	Middle Archaic
Gwinnett	9GW59	3760768	773168	Middle Archaic
Gwinnett	9GW6	3769984	767240	Middle Archaic
Gwinnett	9GW60	3776696	238792	Middle Archaic
Gwinnett	9GW630	3763856	223356	Middle Archaic
Gwinnett	9GW64	3752336	759768	Middle Archaic
Gwinnett	9GW65	3768288	775888	Middle Archaic
Gwinnett	9GW68	3761900	775060	Middle Archaic
Gwinnett	9GW680	3774138	225384	Middle Archaic
Gwinnett	9GW712	3774046	223023	Middle Archaic
Gwinnett	9GW8	3743120	770720	Middle Archaic
Habersham	9HM10	3838384	268924	Middle Archaic
Habersham	9HM155	3829680	268960	Middle Archaic
Habersham	9HM224	3842156	279157	Middle Archaic
Habersham	9HM278	3845631	277321	Middle Archaic
Habersham	9HM296	3834222	268263	Middle Archaic
Habersham	9HM324	3843603	279360	Middle Archaic
Hall	9HL101	3784684	774720	Middle Archaic
Hall	9HL102	3784816	774456	Middle Archaic
Hall	9HL104	3784996	774780	Middle Archaic
Hall	9HL106	3785168	774876	Middle Archaic
Hall	9HL108	3785480	775624	Middle Archaic
Hall	9HL109	3785480	775768	Middle Archaic
Hall	9HL110	3785502	775912	Middle Archaic
Hall	9HL111	3786468	775060	Middle Archaic
Hall	9HL123	3799396	229768	Middle Archaic
Hall	9HL133	3799816	230984	Middle Archaic
Hall	9HL138	3794192	228816	Middle Archaic
Hall	9HL139	3798564	235864	Middle Archaic
Hall	9HL140	3798648	235732	Middle Archaic
Hall	9HL148	3798732	235732	Middle Archaic
Hall	9HL155	3803264	234252	Middle Archaic
Hall	9HL162	3804516	242936	Middle Archaic
Hall	9HL164	3804696	238360	Middle Archaic
Hall	9HL170	3802840	228660	Middle Archaic
Hall	9HL171	3802828	228816	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Hall	9HL175	3803648	228576	Middle Archaic
Hall	9HL178	3803144	228720	Middle Archaic
Hall	9HL183	3794312	228264	Middle Archaic
Hall	9HL187	3784600	775480	Middle Archaic
Hall	9HL193	3786240	226036	Middle Archaic
Hall	9HL196	3786084	226000	Middle Archaic
Hall	9HL198	3786336	226480	Middle Archaic
Hall	9HL211	3783000	224624	Middle Archaic
Hall	9HL212	3786516	224792	Middle Archaic
Hall	9HL214	3786684	225480	Middle Archaic
Hall	9HL219	3806432	239804	Middle Archaic
Hall	9HL221	3806576	239732	Middle Archaic
Hall	9HL222	3806504	239684	Middle Archaic
Hall	9HL230	3807936	238000	Middle Archaic
Hall	9HL233	3810444	235972	Middle Archaic
Hall	9HL24	3786564	229684	Middle Archaic
Hall	9HL247	3803972	242516	Middle Archaic
Hall	9HL258	3800192	237408	Middle Archaic
Hall	9HL26	3787312	226792	Middle Archaic
Hall	9HL27	3785672	229000	Middle Archaic
Hall	9HL28	3786492	226252	Middle Archaic
Hall	9HL282	3802696	236828	Middle Archaic
Hall	9HL29	3787768	224660	Middle Archaic
Hall	9HL293	3804384	237888	Middle Archaic
Hall	9HL298	3799252	233192	Middle Archaic
Hall	9HL300	3799048	231336	Middle Archaic
Hall	9HL31	3806900	238240	Middle Archaic
Hall	9HL33	3796830	234348	Middle Archaic
Hall	9HL34	3797730	230720	Middle Archaic
Hall	9HL347	3788756	226396	Middle Archaic
Hall	9HL348	3789048	226528	Middle Archaic
Hall	9HL364	3813264	227192	Middle Archaic
Hall	9HL366	3812060	228960	Middle Archaic
Hall	9HL369	3787996	227168	Middle Archaic
Hall	9HL370	3811576	235228	Middle Archaic
Hall	9HL40	3799600	234372	Middle Archaic
Hall	9HL41	3798948	231264	Middle Archaic
Hall	9HL42	3798672	231384	Middle Archaic
Hall	9HL437	3781450	224940	Middle Archaic
Hall	9HL444	3794960	245280	Middle Archaic
Hall	9HL450	3787992	241045	Middle Archaic
Hall	9HL452	3789402	241664	Middle Archaic
Hall	9HL456	3802130	237900	Middle Archaic
Hall	9HL49	3803000	235340	Middle Archaic
Hall	9HL50	3802880	235460	Middle Archaic
Hall	9HL51	3803180	235420	Middle Archaic
Hall	9HL517	3789208	236990	Middle Archaic
Hall	9HL52	3802636	235676	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Hall	9HL524	3808012	235385	Middle Archaic
Hall	9HL525	3807857	235557	Middle Archaic
Hall	9HL526	3807762	235339	Middle Archaic
Hall	9HL569	3808166	247253	Middle Archaic
Hall	9HL58	3802510	235380	Middle Archaic
Hall	9HL60	3786500	226220	Middle Archaic
Hall	9HL630	3787469	234251	Middle Archaic
Hall	9HL74	3802984	234336	Middle Archaic
Hall	9HL76	3785480	772000	Middle Archaic
Hall	9HL78	3784828	772600	Middle Archaic
Hall	9HL80	3784528	772864	Middle Archaic
Hall	9HL82	3784852	773168	Middle Archaic
Hall	9HL84	3784672	772096	Middle Archaic
Hall	9HL87	3786120	773792	Middle Archaic
Hall	9HL88	3786228	774000	Middle Archaic
Hall	9HL91	3786696	773240	Middle Archaic
Hancock	9HK101	3684160	293550	Middle Archaic
Hancock	9HK126	3694180	309970	Middle Archaic
Hancock	9HK191	3699793	308963	Middle Archaic
Hancock	9HK205	3697076	307654	Middle Archaic
Hancock	9HK206	3698160	309560	Middle Archaic
Hancock	9HK213	3700603	308612	Middle Archaic
Hancock	9HK219	3697010	309485	Middle Archaic
Hancock	9HK24	3692192	299384	Middle Archaic
Hancock	9HK25	3692288	299120	Middle Archaic
Hancock	9HK274	3687823	301809	Middle Archaic
Hancock	9HK278	3684106	305072	Middle Archaic
Hancock	9HK279	3684719	305065	Middle Archaic
Hancock	9HK280	3684256	304854	Middle Archaic
Hancock	9HK51	3674320	316350	Middle Archaic
Hancock	9HK56	3675330	314840	Middle Archaic
Hancock	9HK64	3679840	309090	Middle Archaic
Hancock	9HK73	3685040	302440	Middle Archaic
Hancock	9HK74	3684760	302800	Middle Archaic
Hancock	9HK79	3685750	301460	Middle Archaic
Hancock	9HK82	3673840	294600	Middle Archaic
Hancock	9HK85	3674210	294210	Middle Archaic
Hancock	9HK92	3674580	294180	Middle Archaic
Hart	9HA15	3801260	332180	Middle Archaic
Hart	9HA150	3815437	311141	Middle Archaic
Hart	9HA5	3807840	330000	Middle Archaic
Henry	9HY10	3693133	766904	Middle Archaic
Henry	9HY16	3711341	761160	Middle Archaic
Henry	9HY208	3709000	774550	Middle Archaic
Henry	9HY21	3702080	772640	Middle Archaic
Henry	9HY211	3697480	775949	Middle Archaic
Henry	9HY212	3693680	747800	Middle Archaic
Henry	9HY214	3694310	748220	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Henry	9HY215	3693700	746850	Middle Archaic
Henry	9HY216	3693640	746960	Middle Archaic
Henry	9HY25	3701700	769900	Middle Archaic
Henry	9HY26	3693800	746900	Middle Archaic
Henry	9HY298	3698320	764100	Middle Archaic
Henry	9HY305	3697570	764510	Middle Archaic
Henry	9HY321	3708679	770212	Middle Archaic
Henry	9HY328	3713567	767908	Middle Archaic
Henry	9HY348	3695540	764470	Middle Archaic
Henry	9HY36	3693200	758170	Middle Archaic
Henry	9HY37	3692950	758270	Middle Archaic
Henry	9HY38	3692750	758450	Middle Archaic
Henry	9HY39	3692310	758630	Middle Archaic
Henry	9HY404	3706084	754660	Middle Archaic
Henry	9HY41	3689540	765300	Middle Archaic
Henry	9HY42	3689520	765440	Middle Archaic
Henry	9HY449	3707866	223194	Middle Archaic
Henry	9HY453	3709066	222110	Middle Archaic
Henry	9HY454	3708927	222201	Middle Archaic
Henry	9HY464	3711728	759876	Middle Archaic
Henry	9HY61	3689400	766780	Middle Archaic
Henry	9HY69	3689920	765680	Middle Archaic
Henry	9HY95	3700690	747810	Middle Archaic
Henry	9HY97	3700740	748130	Middle Archaic
Henry	9HY98	3700640	747340	Middle Archaic
Houston	9HT190	3610496	258084	Middle Archaic
Houston	9HT194	3592436	243635	Middle Archaic
Houston	9HT26	3607354	258427	Middle Archaic
Houston	9HT31	3607223	257229	Middle Archaic
Houston	9HT46	3610918	258344	Middle Archaic
Houston	9HT62	3598005	241200	Middle Archaic
Houston	9HT63	3598560	239145	Middle Archaic
Houston	9HT79	3604900	247270	Middle Archaic
Houston	9HT8	3607830	258750	Middle Archaic
Houston	9HT93	3615660	257460	Middle Archaic
Jackson	9JK101	3767400	270260	Middle Archaic
Jackson	9JK112	3778880	269940	Middle Archaic
Jackson	9JK120	3786140	254850	Middle Archaic
Jackson	9JK121	3786420	255160	Middle Archaic
Jackson	9JK132	3791500	262060	Middle Archaic
Jackson	9JK156	3763290	265700	Middle Archaic
Jackson	9JK178	3763300	268060	Middle Archaic
Jackson	9JK20	3775444	256876	Middle Archaic
Jackson	9JK213	3787520	248650	Middle Archaic
Jackson	9JK214	3787575	248800	Middle Archaic
Jackson	9JK219	3783126	254834	Middle Archaic
Jackson	9JK233	3776247	243977	Middle Archaic
Jackson	9JK281	3783573	269436	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Jackson	9JK315	3781168	253641	Middle Archaic
Jackson	9JK317	3778210	271996	Middle Archaic
Jackson	9JK325	3783278	268843	Middle Archaic
Jackson	9JK33	3783550	256640	Middle Archaic
Jackson	9JK36	3783450	256730	Middle Archaic
Jackson	9JK73	3774600	272080	Middle Archaic
Jackson	9JK96	3767100	270200	Middle Archaic
Jackson	9JK98	3767550	270880	Middle Archaic
Jasper	9JA129	3683120	242220	Middle Archaic
Jasper	9JA139	3681530	238310	Middle Archaic
Jasper	9JA140	3681440	238560	Middle Archaic
Jasper	9JA166	3677250	241210	Middle Archaic
Jasper	9JA178	3672182	255358	Middle Archaic
Jasper	9JA188	3676600	262300	Middle Archaic
Jasper	9JA219	3690160	235890	Middle Archaic
Jasper	9JA234	3672680	249590	Middle Archaic
Jasper	9JA269	3677809	236870	Middle Archaic
Jasper	9JA314	3672420	244300	Middle Archaic
Jasper	9JA318	3678550	237850	Middle Archaic
Jasper	9JA339	3674200	250980	Middle Archaic
Jasper	9JA358	3689430	254830	Middle Archaic
Jasper	9JA560	3684612	257115	Middle Archaic
Jasper	9JA577	3699810	236540	Middle Archaic
Jasper	9JA589	3673311	255391	Middle Archaic
Jasper	9JA608	3671772	241641	Middle Archaic
Jasper	9JA678	3686526	244266	Middle Archaic
Jasper	9JA76	3685500	236830	Middle Archaic
Jeff Davis	9JD51	3531100	343280	Middle Archaic
Jefferson	9JF120	3684790	375700	Middle Archaic
Jefferson	9JF147	3683890	377760	Middle Archaic
Jefferson	9JF159	3663820	353960	Middle Archaic
Jefferson	9JF162	3672400	368220	Middle Archaic
Jefferson	9JF19	3686040	374030	Middle Archaic
Jefferson	9JF20	3685630	374170	Middle Archaic
Jefferson	9JF21	3685890	373200	Middle Archaic
Jefferson	9JF23	3685710	375770	Middle Archaic
Jefferson	9JF27	3683620	377930	Middle Archaic
Jefferson	9JF28	3683680	378120	Middle Archaic
Jefferson	9JF347	3642447	359200	Middle Archaic
Jefferson	9JF367	3648064	360697	Middle Archaic
Jefferson	9JF396	3631686	372399	Middle Archaic
Jefferson	9JF44	3671640	367440	Middle Archaic
Jefferson	9JF52	3671700	367600	Middle Archaic
Jefferson	9JF75	3685840	374000	Middle Archaic
Jenkins	9JS23	3634080	410980	Middle Archaic
Jenkins	9JS56	3630650	394681	Middle Archaic
Johnson	9JH12	3625750	317760	Middle Archaic
Johnson	9JH13	3625960	317700	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Johnson	9JH24	3618020	359476	Middle Archaic
Jones	9JO111	3668950	257200	Middle Archaic
Jones	9JO127	3671680	263080	Middle Archaic
Jones	9JO142	3643290	251540	Middle Archaic
Jones	9JO180	3643770	251440	Middle Archaic
Jones	9JO184	3644060	251015	Middle Archaic
Jones	9JO253	3669950	257350	Middle Archaic
Jones	9JO260	3664720	245820	Middle Archaic
Jones	9JO262	3664400	246120	Middle Archaic
Jones	9JO264	3664820	245650	Middle Archaic
Jones	9JO29	3654300	255800	Middle Archaic
Jones	9JO292	3670985	257189	Middle Archaic
Jones	9JO293	3670855	257476	Middle Archaic
Jones	9JO299	3654711	256225	Middle Archaic
Jones	9JO30	3660200	265460	Middle Archaic
Jones	9JO31	3655050	258220	Middle Archaic
Jones	9JO402	3670489	248043	Middle Archaic
Jones	9JO41	3665300	270670	Middle Archaic
Jones	9JO466	3672131	257951	Middle Archaic
Jones	9JO51	3656870	262040	Middle Archaic
Jones	9JO6	3643240	251050	Middle Archaic
Jones	9JO65	3656890	246210	Middle Archaic
Jones	9JO72	3650780	273800	Middle Archaic
Lamar	9LR11	3668110	768570	Middle Archaic
Lamar	9LR12	3667990	769400	Middle Archaic
Lamar	9LR17	3668750	769930	Middle Archaic
Lamar	9LR18	3667960	769440	Middle Archaic
Lamar	9LR41	3673412	768333	Middle Archaic
Lamar	9LR46	3673194	767838	Middle Archaic
Lamar	9LR49	3673416	767769	Middle Archaic
Lamar	9LR50	3673448	768675	Middle Archaic
Lamar	9LR51	3673908	768538	Middle Archaic
Laurens	9LS239	3599464	325667	Middle Archaic
Laurens	9LS301	3593737	310665	Middle Archaic
Laurens	9LS373	3607999	295675	Middle Archaic
Laurens	9LS5	3597220	324940	Middle Archaic
Liberty	9LI502	3535770	449540	Middle Archaic
Lincoln	9LC1	3732300	385200	Middle Archaic
Lincoln	9LC1004	3761000	348140	Middle Archaic
Lincoln	9LC101	3753400	356140	Middle Archaic
Lincoln	9LC1015	3744520	374450	Middle Archaic
Lincoln	9LC102	3753300	356230	Middle Archaic
Lincoln	9LC1041	3737256	379848	Middle Archaic
Lincoln	9LC1047	3736987	379650	Middle Archaic
Lincoln	9LC1048	3737028	379508	Middle Archaic
Lincoln	9LC1054	3736364	379316	Middle Archaic
Lincoln	9LC1055	3736564	378654	Middle Archaic
Lincoln	9LC1068	3749277	354016	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Lincoln	9LC134	3726250	365950	Middle Archaic
Lincoln	9LC162	3730380	368100	Middle Archaic
Lincoln	9LC208	3757440	353230	Middle Archaic
Lincoln	9LC21	3744180	374810	Middle Archaic
Lincoln	9LC242	3727090	365980	Middle Archaic
Lincoln	9LC248	3731480	381020	Middle Archaic
Lincoln	9LC299	3759300	352710	Middle Archaic
Lincoln	9LC32	3730600	376400	Middle Archaic
Lincoln	9LC329	3758300	351870	Middle Archaic
Lincoln	9LC338	3757740	351320	Middle Archaic
Lincoln	9LC343	3757600	349630	Middle Archaic
Lincoln	9LC354	3755980	352300	Middle Archaic
Lincoln	9LC355	3755820	352340	Middle Archaic
Lincoln	9LC356	3756050	352730	Middle Archaic
Lincoln	9LC366	3754930	350650	Middle Archaic
Lincoln	9LC387	3756520	354220	Middle Archaic
Lincoln	9LC392	3757670	354850	Middle Archaic
Lincoln	9LC40	3737760	376550	Middle Archaic
Lincoln	9LC41	3744350	368120	Middle Archaic
Lincoln	9LC421	3754680	357010	Middle Archaic
Lincoln	9LC43	3743350	368650	Middle Archaic
Lincoln	9LC44	3748930	359915	Middle Archaic
Lincoln	9LC46	3753850	355580	Middle Archaic
Lincoln	9LC468	3753090	357990	Middle Archaic
Lincoln	9LC47	3753730	355610	Middle Archaic
Lincoln	9LC489	3755000	359160	Middle Archaic
Lincoln	9LC499	3754950	360450	Middle Archaic
Lincoln	9LC51	3747250	369275	Middle Archaic
Lincoln	9LC513	3753950	360270	Middle Archaic
Lincoln	9LC516	3753780	361070	Middle Archaic
Lincoln	9LC53	3747630	369265	Middle Archaic
Lincoln	9LC54	3747795	369420	Middle Archaic
Lincoln	9LC558	3750070	363610	Middle Archaic
Lincoln	9LC56	3728840	372980	Middle Archaic
Lincoln	9LC563	3750350	362940	Middle Archaic
Lincoln	9LC578	3749150	361720	Middle Archaic
Lincoln	9LC58	3728750	371300	Middle Archaic
Lincoln	9LC582	3749500	361970	Middle Archaic
Lincoln	9LC583	3749860	362460	Middle Archaic
Lincoln	9LC585	3749460	362200	Middle Archaic
Lincoln	9LC590	3749130	362250	Middle Archaic
Lincoln	9LC598	3749400	363720	Middle Archaic
Lincoln	9LC649	3736460	380880	Middle Archaic
Lincoln	9LC66	3734400	357700	Middle Archaic
Lincoln	9LC67	3739390	362800	Middle Archaic
Lincoln	9LC709	3738540	377980	Middle Archaic
Lincoln	9LC72	3729900	375575	Middle Archaic
Lincoln	9LC73	3729620	377040	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Lincoln	9LC734	3740060	379150	Middle Archaic
Lincoln	9LC738	3740590	378250	Middle Archaic
Lincoln	9LC749	3740220	377570	Middle Archaic
Lincoln	9LC75	3731160	376930	Middle Archaic
Lincoln	9LC790	3743490	374990	Middle Archaic
Lincoln	9LC805	3744240	374100	Middle Archaic
Lincoln	9LC809	3743770	374230	Middle Archaic
Lincoln	9LC821	3742950	371830	Middle Archaic
Lincoln	9LC852	3740350	366890	Middle Archaic
Lincoln	9LC865	3742370	367720	Middle Archaic
Lincoln	9LC874	3744180	365540	Middle Archaic
Lincoln	9LC888	3744060	363920	Middle Archaic
Lincoln	9LC891	3744000	363210	Middle Archaic
Lincoln	9LC896	3742970	361920	Middle Archaic
Lincoln	9LC91	3744200	363560	Middle Archaic
Lincoln	9LC94	3744600	363950	Middle Archaic
Lincoln	9LC958	3744720	370940	Middle Archaic
Lincoln	9LC959	3744550	370870	Middle Archaic
Lincoln	9LC960	3744480	370780	Middle Archaic
Lincoln	9LC973	3743210	369270	Middle Archaic
Lincoln	9LC98	3749100	361150	Middle Archaic
Lincoln	9LC99	3754990	357400	Middle Archaic
Lincoln	9LC998	3759980	348720	Middle Archaic
Macon	9MA80	3580185	780000	Middle Archaic
Macon	9MA81	3582550	780260	Middle Archaic
Madison	9MD105	3788560	284940	Middle Archaic
Madison	9MD133	3772640	291340	Middle Archaic
Madison	9MD163	3776370	295480	Middle Archaic
Madison	9MD190	3766589	293002	Middle Archaic
Madison	9MD193	3767002	309037	Middle Archaic
Madison	9MD208	3782690	299539	Middle Archaic
Madison	9MD33	3774200	287850	Middle Archaic
Madison	9MD38	3773610	287160	Middle Archaic
Madison	9MD56	3768100	294140	Middle Archaic
Madison	9MD60	3769460	301680	Middle Archaic
Madison	9MD73	3787770	288660	Middle Archaic
Madison	9MD76	3787600	288870	Middle Archaic
Madison	9MD82	3777870	305200	Middle Archaic
Madison	9MD87	3772330	299930	Middle Archaic
Madison	9MD93	3787660	285940	Middle Archaic
McDuffie	9MF161	3720510	358060	Middle Archaic
McDuffie	9MF162	3717080	358450	Middle Archaic
McDuffie	9MF183	3719850	360580	Middle Archaic
McDuffie	9MF191	3722985	352680	Middle Archaic
McDuffie	9MF240	3721240	364130	Middle Archaic
McDuffie	9MF27	3692270	377190	Middle Archaic
McDuffie	9MF271	3715930	357430	Middle Archaic
McDuffie	9MF277	3714750	356800	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
McDuffie	9MF295	3712700	354240	Middle Archaic
McDuffie	9MF296	3713500	354200	Middle Archaic
McDuffie	9MF328	3718150	356400	Middle Archaic
McDuffie	9MF37	3717840	358000	Middle Archaic
McDuffie	9MF38	3716680	357880	Middle Archaic
McDuffie	9MF414	3719250	359350	Middle Archaic
McDuffie	9MF442	3720300	359660	Middle Archaic
McDuffie	9MF502	3693165	363404	Middle Archaic
McDuffie	9MF739	3723404	358681	Middle Archaic
McDuffie	9MF764	3722939	359288	Middle Archaic
McDuffie	9MF816	3723256	354717	Middle Archaic
McDuffie	9MF872	3720492	358937	Middle Archaic
McDuffie	9MF876	3721171	359878	Middle Archaic
McDuffie	9MF899	3712335	358450	Middle Archaic
McDuffie	9MF900	3712450	358280	Middle Archaic
McDuffie	9MF901	3712560	358230	Middle Archaic
McIntosh	9MC89	3500430	462500	Middle Archaic
Monroe	9MO333	3661450	234150	Middle Archaic
Monroe	9MO336	3661500	233950	Middle Archaic
Monroe	9MO339	3661750	234950	Middle Archaic
Monroe	9MO341	3661150	233650	Middle Archaic
Monroe	9MO342	3661000	233700	Middle Archaic
Monroe	9MO362	3660200	231825	Middle Archaic
Monroe	9MO409	3649800	233550	Middle Archaic
Monroe	9MO439	3649700	234400	Middle Archaic
Monroe	9MO463	3649580	233070	Middle Archaic
Monroe	9MO489	3663990	238380	Middle Archaic
Monroe	9MO518	3638367	774820	Middle Archaic
Monroe	9MO548	3669880	777070	Middle Archaic
Monroe	9MO559	3662691	238323	Middle Archaic
Monroe	9MO640	3664235	238533	Middle Archaic
Monroe	9MO644	3664595	237960	Middle Archaic
Morgan	9MG115	3707100	284300	Middle Archaic
Morgan	9MG116	3707456	284024	Middle Archaic
Morgan	9MG13	3715050	278280	Middle Archaic
Morgan	9MG187	3714792	286360	Middle Archaic
Morgan	9MG192	3715660	286084	Middle Archaic
Morgan	9MG196	3714588	286324	Middle Archaic
Morgan	9MG2	3720060	272740	Middle Archaic
Morgan	9MG20	3729000	273700	Middle Archaic
Morgan	9MG222	3720700	280750	Middle Archaic
Morgan	9MG225	3711700	259608	Middle Archaic
Morgan	9MG226	3711635	259870	Middle Archaic
Morgan	9MG235	3742400	267800	Middle Archaic
Morgan	9MG244	3725580	260120	Middle Archaic
Morgan	9MG25	3731200	273630	Middle Archaic
Morgan	9MG254	3712800	252300	Middle Archaic
Morgan	9MG256	3707250	262150	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Morgan	9MG257	3706200	269700	Middle Archaic
Morgan	9MG259	3708900	268300	Middle Archaic
Morgan	9MG260	3707960	269120	Middle Archaic
Morgan	9MG261	3708150	269300	Middle Archaic
Morgan	9MG262	3709160	269350	Middle Archaic
Morgan	9MG263	3708975	269500	Middle Archaic
Morgan	9MG264	3708580	269220	Middle Archaic
Morgan	9MG265	3708975	268720	Middle Archaic
Morgan	9MG266	3708840	268800	Middle Archaic
Morgan	9MG267	3708680	269720	Middle Archaic
Morgan	9MG268	3707040	269775	Middle Archaic
Morgan	9MG269	3708250	269660	Middle Archaic
Morgan	9MG270	3708025	269480	Middle Archaic
Morgan	9MG271	3725910	277400	Middle Archaic
Morgan	9MG273	3704560	264380	Middle Archaic
Morgan	9MG274	3705000	264720	Middle Archaic
Morgan	9MG276	3705190	264550	Middle Archaic
Morgan	9MG280	3706330	264380	Middle Archaic
Morgan	9MG286	3703600	264100	Middle Archaic
Morgan	9MG295	3711025	272215	Middle Archaic
Morgan	9MG3	3718700	274720	Middle Archaic
Morgan	9MG300	3711800	271095	Middle Archaic
Morgan	9MG307	3711465	271500	Middle Archaic
Morgan	9MG308	3711725	271595	Middle Archaic
Morgan	9MG309	3711860	271420	Middle Archaic
Morgan	9MG311	3705700	267000	Middle Archaic
Morgan	9MG319	3705580	266390	Middle Archaic
Morgan	9MG33	3712456	288528	Middle Archaic
Morgan	9MG342	3706640	268240	Middle Archaic
Morgan	9MG353	3706780	268800	Middle Archaic
Morgan	9MG354	3706640	268700	Middle Archaic
Morgan	9MG357	3706480	268760	Middle Archaic
Morgan	9MG358	3706580	268660	Middle Archaic
Morgan	9MG361	3706580	268440	Middle Archaic
Morgan	9MG365	3706340	268110	Middle Archaic
Morgan	9MG366	3706310	268240	Middle Archaic
Morgan	9MG367	3706340	268300	Middle Archaic
Morgan	9MG368	3706300	268450	Middle Archaic
Morgan	9MG381	3716480	280980	Middle Archaic
Morgan	9MG387	3713198	267620	Middle Archaic
Morgan	9MG4	3713486	281580	Middle Archaic
Morgan	9MG403	3705765	265351	Middle Archaic
Morgan	9MG412	3705170	264680	Middle Archaic
Morgan	9MG414	3705112	264479	Middle Archaic
Morgan	9MG415	3705085	264527	Middle Archaic
Morgan	9MG417	3705009	264444	Middle Archaic
Morgan	9MG428	3704869	264343	Middle Archaic
Morgan	9MG43	3715624	285528	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Morgan	9MG431	3704667	264381	Middle Archaic
Morgan	9MG484	3703342	269585	Middle Archaic
Morgan	9MG49	3712350	288100	Middle Archaic
Morgan	9MG53	3709336	267672	Middle Archaic
Morgan	9MG54	3712720	280072	Middle Archaic
Morgan	9MG55	3726312	267552	Middle Archaic
Morgan	9MG58	3714912	286192	Middle Archaic
Morgan	9MG64	3742900	268100	Middle Archaic
Morgan	9MG693	3719908	272187	Middle Archaic
Morgan	9MG76	3707576	275528	Middle Archaic
Morgan	9MG77	3707600	275264	Middle Archaic
Morgan	9MG78	3706696	276360	Middle Archaic
Morgan	9MG92	3708000	288192	Middle Archaic
Morgan	9MG94	3714480	286816	Middle Archaic
Newton	9NE101	3722770	238790	Middle Archaic
Newton	9NE105	3716120	232945	Middle Archaic
Newton	9NE131	3715770	235260	Middle Archaic
Newton	9NE142	3713240	234880	Middle Archaic
Newton	9NE154	3705500	241280	Middle Archaic
Newton	9NE158	3705500	240100	Middle Archaic
Newton	9NE162	3708250	240750	Middle Archaic
Newton	9NE186	3711710	240200	Middle Archaic
Newton	9NE190	3706490	239760	Middle Archaic
Newton	9NE193	3714480	225850	Middle Archaic
Newton	9NE22	3704450	237390	Middle Archaic
Newton	9NE221	3718707	238267	Middle Archaic
Newton	9NE23	3704390	237500	Middle Archaic
Newton	9NE24	3704350	237220	Middle Archaic
Newton	9NE26	3717300	231900	Middle Archaic
Newton	9NE35	3704600	237400	Middle Archaic
Newton	9NE40	3703775	237575	Middle Archaic
Newton	9NE46	3703250	237875	Middle Archaic
Newton	9NE59	3728550	239880	Middle Archaic
Newton	9NE63	3727050	239890	Middle Archaic
Newton	9NE68	3726750	240240	Middle Archaic
Newton	9NE71	3726400	240460	Middle Archaic
Newton	9NE91	3705640	239290	Middle Archaic
Newton	9NE96	3722750	239550	Middle Archaic
Oconee	9OC102	3733362	279980	Middle Archaic
Oconee	9OC110	3751912	276720	Middle Archaic
Oconee	9OC113	3734340	280547	Middle Archaic
Oconee	9OC115	3734710	280193	Middle Archaic
Oconee	9OC119	3734493	280565	Middle Archaic
Oconee	9OC121	3733825	280650	Middle Archaic
Oconee	9OC126	3734900	274760	Middle Archaic
Oconee	9OC127	3735130	274730	Middle Archaic
Oconee	9OC136	3734940	275050	Middle Archaic
Oconee	9OC142	3735180	275100	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Oconee	9OC15			Middle Archaic
Oconee	9OC151	3735560	275430	Middle Archaic
Oconee	9OC153	3735830	275250	Middle Archaic
Oconee	9OC154	3735930	275380	Middle Archaic
Oconee	9OC161	3735500	275220	Middle Archaic
Oconee	9OC166	3734780	274780	Middle Archaic
Oconee	9OC168	3750220	278700	Middle Archaic
Oconee	9OC18	3745912	285564	Middle Archaic
Oconee	9OC19	3746144	285768	Middle Archaic
Oconee	9OC191	3752100	274160	Middle Archaic
Oconee	9OC200	3753260	272970	Middle Archaic
Oconee	9OC201	3752000	273800	Middle Archaic
Oconee	9OC204	3735320	286620	Middle Archaic
Oconee	9OC205	3754470	262620	Middle Archaic
Oconee	9OC207	3742600	286120	Middle Archaic
Oconee	9OC209	3738470	277000	Middle Archaic
Oconee	9OC218	3746340	286410	Middle Archaic
Oconee	9OC229	3749880	276200	Middle Archaic
Oconee	9OC230	3743400	285640	Middle Archaic
Oconee	9OC233	3752190	276680	Middle Archaic
Oconee	9OC24	3745168	286048	Middle Archaic
Oconee	9OC25	3745720	286936	Middle Archaic
Oconee	9OC26	3746432	285648	Middle Archaic
Oconee	9OC27	3746240	285540	Middle Archaic
Oconee	9OC293	3741100	278200	Middle Archaic
Oconee	9OC294	3756040	270260	Middle Archaic
Oconee	9OC30	3746480	285240	Middle Archaic
Oconee	9OC302	3750630	273758	Middle Archaic
Oconee	9OC31	3746432	285960	Middle Archaic
Oconee	9OC312	3743437	276120	Middle Archaic
Oconee	9OC32	3746144	285096	Middle Archaic
Oconee	9OC33	3745432	286120	Middle Archaic
Oconee	9OC35	3745432	286504	Middle Archaic
Oconee	9OC36	3745204	286264	Middle Archaic
Oconee	9OC37	3745432	286672	Middle Archaic
Oconee	9OC372	3748572	284464	Middle Archaic
Oconee	9OC382	3749982	282844	Middle Archaic
Oconee	9OC39	3745576	286696	Middle Archaic
Oconee	9OC4	3743320	270300	Middle Archaic
Oconee	9OC40	3745552	286288	Middle Archaic
Oconee	9OC401	3749970	281800	Middle Archaic
Oconee	9OC402	3749990	281915	Middle Archaic
Oconee	9OC416	3738188	273870	Middle Archaic
Oconee	9OC423	3757881	267384	Middle Archaic
Oconee	9OC44	3745288	286984	Middle Archaic
Oconee	9OC45	3746096	285936	Middle Archaic
Oconee	9OC58	3745150	282150	Middle Archaic
Oconee	9OC68	3749530	269800	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Oconee	9OC74	3733140	280175	Middle Archaic
Oconee	9OC77	3733540	280075	Middle Archaic
Oconee	9OC78	3733700	280260	Middle Archaic
Oconee	9OC87	3734500	280375	Middle Archaic
Oconee	9OC88	3734265	280380	Middle Archaic
Oglethorpe	9OG156	3746430	291250	Middle Archaic
Oglethorpe	9OG16	3747060	306420	Middle Archaic
Oglethorpe	9OG168	3742220	290440	Middle Archaic
Oglethorpe	9OG17	3746420	306760	Middle Archaic
Oglethorpe	9OG170	3742160	289850	Middle Archaic
Oglethorpe	9OG18	3746610	307030	Middle Archaic
Oglethorpe	9OG187	3748890	297980	Middle Archaic
Oglethorpe	9OG19	3746420	307080	Middle Archaic
Oglethorpe	9OG209	3749210	298130	Middle Archaic
Oglethorpe	9OG21	3746650	306900	Middle Archaic
Oglethorpe	9OG210	3749070	298110	Middle Archaic
Oglethorpe	9OG214	3767590	318720	Middle Archaic
Oglethorpe	9OG215	3767490	318600	Middle Archaic
Oglethorpe	9OG222	3767380	318330	Middle Archaic
Oglethorpe	9OG234	3767260	318180	Middle Archaic
Oglethorpe	9OG235	3767150	318232	Middle Archaic
Oglethorpe	9OG238	3751620	320250	Middle Archaic
Oglethorpe	9OG243	3746920	296660	Middle Archaic
Oglethorpe	9OG255	3751400	319960	Middle Archaic
Oglethorpe	9OG26	3747300	306370	Middle Archaic
Oglethorpe	9OG260	3751330	320330	Middle Archaic
Oglethorpe	9OG261	3751160	320350	Middle Archaic
Oglethorpe	9OG27	3747170	306710	Middle Archaic
Oglethorpe	9OG270	3751430	319600	Middle Archaic
Oglethorpe	9OG273	3750740	319640	Middle Archaic
Oglethorpe	9OG274	3750750	319520	Middle Archaic
Oglethorpe	9OG275	3750750	319770	Middle Archaic
Oglethorpe	9OG28	3747050	306820	Middle Archaic
Oglethorpe	9OG280	3763580	324280	Middle Archaic
Oglethorpe	9OG281	3763780	324350	Middle Archaic
Oglethorpe	9OG285	3763460	324220	Middle Archaic
Oglethorpe	9OG297	3763410	323760	Middle Archaic
Oglethorpe	9OG30	3746890	306900	Middle Archaic
Oglethorpe	9OG300	3763336	323678	Middle Archaic
Oglethorpe	9OG309	3762960	323560	Middle Archaic
Oglethorpe	9OG31	3746860	306730	Middle Archaic
Oglethorpe	9OG310	3762950	323360	Middle Archaic
Oglethorpe	9OG32	3746740	306750	Middle Archaic
Oglethorpe	9OG33	3746660	306800	Middle Archaic
Oglethorpe	9OG337	3761220	321540	Middle Archaic
Oglethorpe	9OG340	3761200	322010	Middle Archaic
Oglethorpe	9OG345	3761190	322400	Middle Archaic
Oglethorpe	9OG346	3761200	322490	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Oglethorpe	9OG354	3761320	322000	Middle Archaic
Oglethorpe	9OG355	3761740	321550	Middle Archaic
Oglethorpe	9OG358	3760800	322310	Middle Archaic
Oglethorpe	9OG36	3747600	292850	Middle Archaic
Oglethorpe	9OG374	3747440	292910	Middle Archaic
Oglethorpe	9OG379	3747490	293410	Middle Archaic
Oglethorpe	9OG398	3747140	292710	Middle Archaic
Oglethorpe	9OG42	3747340	297220	Middle Archaic
Oglethorpe	9OG420	3747210	292350	Middle Archaic
Oglethorpe	9OG437	3753420	322700	Middle Archaic
Oglethorpe	9OG438	3753900	323580	Middle Archaic
Oglethorpe	9OG439	3753820	323630	Middle Archaic
Oglethorpe	9OG440	3753850	323760	Middle Archaic
Oglethorpe	9OG441	3753870	323830	Middle Archaic
Oglethorpe	9OG442	3754005	323910	Middle Archaic
Oglethorpe	9OG443	3753660	323660	Middle Archaic
Oglethorpe	9OG453	3737300	290750	Middle Archaic
Oglethorpe	9OG460	3752430	312450	Middle Archaic
Oglethorpe	9OG462	3751350	311160	Middle Archaic
Oglethorpe	9OG463	3746400	299490	Middle Archaic
Oglethorpe	9OG464	3757800	320440	Middle Archaic
Oglethorpe	9OG465	3757680	319980	Middle Archaic
Oglethorpe	9OG467	3756840	319840	Middle Archaic
Oglethorpe	9OG47	3747850	297900	Middle Archaic
Oglethorpe	9OG473	3760380	327900	Middle Archaic
Oglethorpe	9OG481	3757000	327100	Middle Archaic
Oglethorpe	9OG487	3757500	324840	Middle Archaic
Oglethorpe	9OG491	3747020	297450	Middle Archaic
Oglethorpe	9OG493	3747400	297820	Middle Archaic
Oglethorpe	9OG5	3746300	319800	Middle Archaic
Oglethorpe	9OG530	3743782	290630	Middle Archaic
Oglethorpe	9OG535	3745562	291500	Middle Archaic
Oglethorpe	9OG539	3744554	291825	Middle Archaic
Oglethorpe	9OG549	3750280	322072	Middle Archaic
Oglethorpe	9OG550	3754678	315000	Middle Archaic
Oglethorpe	9OG570	3756555	318286	Middle Archaic
Oglethorpe	9OG571	3756293	318384	Middle Archaic
Oglethorpe	9OG578	3758192	319911	Middle Archaic
Oglethorpe	9OG580	3758173	319831	Middle Archaic
Oglethorpe	9OG6	3757000	331200	Middle Archaic
Oglethorpe	9OG643	3741327	292539	Middle Archaic
Oglethorpe	9OG65	3747240	296300	Middle Archaic
Oglethorpe	9OG76	3746140	294900	Middle Archaic
Oglethorpe	9OG81	3737590	289950	Middle Archaic
Oglethorpe	9OG91	3739100	291360	Middle Archaic
Oglethorpe	9OG97	3739100	291120	Middle Archaic
Peach	9PE39	3602537	227929	Middle Archaic
Pulaski	9PU117	3576720	267420	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Pulaski	9PU23	3568740	270500	Middle Archaic
Pulaski	9PU28	3564400	254980	Middle Archaic
Pulaski	9PU36	3575420	266580	Middle Archaic
Pulaski	9PU37	3585826	266153	Middle Archaic
Pulaski	9PU44	3579830	264170	Middle Archaic
Pulaski	9PU45	3580240	264410	Middle Archaic
Pulaski	9PU46	3579840	263540	Middle Archaic
Pulaski	9PU52	3568570	271460	Middle Archaic
Pulaski	9PU57	3585716	265205	Middle Archaic
Pulaski	9PU69	3585546	265614	Middle Archaic
Pulaski	9PU71	3585436	265521	Middle Archaic
Pulaski	9PU92	3584165	265770	Middle Archaic
Putnam	9PM1011	3676360	266300	Middle Archaic
Putnam	9PM1028	3678000	268070	Middle Archaic
Putnam	9PM1041	3681220	269800	Middle Archaic
Putnam	9PM1042	3692120	277280	Middle Archaic
Putnam	9PM1094	3691600	272380	Middle Archaic
Putnam	9PM112	3706192	285264	Middle Archaic
Putnam	9PM113	3705580	285880	Middle Archaic
Putnam	9PM1133	3684260	266990	Middle Archaic
Putnam	9PM1144	3678340	268600	Middle Archaic
Putnam	9PM116	3699624	291456	Middle Archaic
Putnam	9PM1172	3699681	279420	Middle Archaic
Putnam	9PM121	3693768	297600	Middle Archaic
Putnam	9PM122	3693940	297190	Middle Archaic
Putnam	9PM123	3694070	297290	Middle Archaic
Putnam	9PM124	3694220	297290	Middle Archaic
Putnam	9PM126	3694216	297528	Middle Archaic
Putnam	9PM127	3694696	297264	Middle Archaic
Putnam	9PM128	3693600	297264	Middle Archaic
Putnam	9PM129	3693288	297720	Middle Archaic
Putnam	9PM131	3695240	297072	Middle Archaic
Putnam	9PM138	3691528	295408	Middle Archaic
Putnam	9PM1402	3691130	299270	Middle Archaic
Putnam	9PM141	3704504	287552	Middle Archaic
Putnam	9PM142	3695192	293960	Middle Archaic
Putnam	9PM143	3695864	294528	Middle Archaic
Putnam	9PM144	3701300	276870	Middle Archaic
Putnam	9PM1445	3701797	270254	Middle Archaic
Putnam	9PM145	3705888	285600	Middle Archaic
Putnam	9PM1450	3702428	269782	Middle Archaic
Putnam	9PM1460	3700401	268347	Middle Archaic
Putnam	9PM1463	3700284	268445	Middle Archaic
Putnam	9PM1464	3700243	268435	Middle Archaic
Putnam	9PM1465	3700235	268482	Middle Archaic
Putnam	9PM1468	3700126	268501	Middle Archaic
Putnam	9PM1474	3700998	267456	Middle Archaic
Putnam	9PM1477	3701152	267935	Middle Archaic

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Putnam	9PM1495	3702687	272183	Middle Archaic
Putnam	9PM1586	3702679	269958	Middle Archaic
Putnam	9PM16	3697800	273300	Middle Archaic
Putnam	9PM170	3699160	269020	Middle Archaic
Putnam	9PM177	3699970	269340	Middle Archaic
Putnam	9PM178	3701155	269615	Middle Archaic
Putnam	9PM1872	3701761	272355	Middle Archaic
Putnam	9PM1882	3694775	289956	Middle Archaic
Putnam	9PM19	3697800	276800	Middle Archaic
Putnam	9PM193	3693000	271200	Middle Archaic
Putnam	9PM1941	3697340	285904	Middle Archaic
Putnam	9PM1985	3693047	270052	Middle Archaic
Putnam	9PM20	3693000	276000	Middle Archaic
Putnam	9PM200	3697936	290928	Middle Archaic
Putnam	9PM201	3705144	288336	Middle Archaic
Putnam	9PM202	3695192	293264	Middle Archaic
Putnam	9PM205	3695072	294456	Middle Archaic
Putnam	9PM2064	3693348	267801	Middle Archaic
Putnam	9PM207	3696096	294912	Middle Archaic
Putnam	9PM2070	3692252	270242	Middle Archaic
Putnam	9PM2074	3691792	270451	Middle Archaic
Putnam	9PM2075	3692222	270486	Middle Archaic
Putnam	9PM208	3696384	295192	Middle Archaic
Putnam	9PM2087	3702290	271242	Middle Archaic
Putnam	9PM2119	3702672	274260	Middle Archaic
Putnam	9PM213	3696480	296408	Middle Archaic
Putnam	9PM215	3691650	299480	Middle Archaic
Putnam	9PM2185	3699902	273315	Middle Archaic
Putnam	9PM2192	3702791	273312	Middle Archaic
Putnam	9PM228	3703936	289168	Middle Archaic
Putnam	9PM230	3693888	297768	Middle Archaic
Putnam	9PM26	3680300	283700	Middle Archaic
Putnam	9PM27	3680300	283800	Middle Archaic
Putnam	9PM273	3698000	289720	Middle Archaic
Putnam	9PM32	3690600	278950	Middle Archaic
Putnam	9PM347	3697816	288912	Middle Archaic
Putnam	9PM348	3698120	288600	Middle Archaic
Putnam	9PM35	3684900	279900	Middle Archaic
Putnam	9PM37	3699600	288100	Middle Archaic
Putnam	9PM40	3696900	282100	Middle Archaic
Putnam	9PM41	3702100	288800	Middle Archaic
Putnam	9PM411	3697840	288216	Middle Archaic
Putnam	9PM436	3697216	291384	Middle Archaic
Putnam	9PM441	3697048	289912	Middle Archaic
Putnam	9PM443	3697456	290072	Middle Archaic
Putnam	9PM447	3698650	287600	Middle Archaic
Putnam	9PM448	3699020	287170	Middle Archaic
Putnam	9PM450	3699168	287624	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Putnam	9PM454	3698768	288072	Middle Archaic
Putnam	9PM457	3698960	288216	Middle Archaic
Putnam	9PM459	3698768	288384	Middle Archaic
Putnam	9PM461	3698504	288456	Middle Archaic
Putnam	9PM463	3698504	288504	Middle Archaic
Putnam	9PM466	3698288	288720	Middle Archaic
Putnam	9PM467	3698120	288984	Middle Archaic
Putnam	9PM468	3698192	288888	Middle Archaic
Putnam	9PM470	3698360	289384	Middle Archaic
Putnam	9PM471	3698240	289476	Middle Archaic
Putnam	9PM472	3698336	289480	Middle Archaic
Putnam	9PM474	3698504	289792	Middle Archaic
Putnam	9PM475	3698288	289864	Middle Archaic
Putnam	9PM476	3698000	290048	Middle Archaic
Putnam	9PM477	3697960	290240	Middle Archaic
Putnam	9PM478	3697936	290360	Middle Archaic
Putnam	9PM482	3697912	290744	Middle Archaic
Putnam	9PM483	3698600	291216	Middle Archaic
Putnam	9PM486	3698960	290832	Middle Archaic
Putnam	9PM487	3698912	291120	Middle Archaic
Putnam	9PM490	3699048	291168	Middle Archaic
Putnam	9PM491	3699000	291120	Middle Archaic
Putnam	9PM495	3699912	291360	Middle Archaic
Putnam	9PM502	3700768	290768	Middle Archaic
Putnam	9PM503	3700864	290744	Middle Archaic
Putnam	9PM504	3701288	289960	Middle Archaic
Putnam	9PM505	3701288	289528	Middle Archaic
Putnam	9PM506	3701432	289816	Middle Archaic
Putnam	9PM511	3701408	290384	Middle Archaic
Putnam	9PM53	3702500	280800	Middle Archaic
Putnam	9PM533	3705765	286250	Middle Archaic
Putnam	9PM534	3705510	287805	Middle Archaic
Putnam	9PM535	3705600	286300	Middle Archaic
Putnam	9PM54	3675700	285900	Middle Archaic
Putnam	9PM541	3704710	285290	Middle Archaic
Putnam	9PM544	3705270	286720	Middle Archaic
Putnam	9PM546	3705290	286530	Middle Archaic
Putnam	9PM550	3705180	286780	Middle Archaic
Putnam	9PM551	3705060	286850	Middle Archaic
Putnam	9PM552	3704900	286850	Middle Archaic
Putnam	9PM554	3704900	287000	Middle Archaic
Putnam	9PM556	3704990	287370	Middle Archaic
Putnam	9PM563	3705190	288130	Middle Archaic
Putnam	9PM564	3704790	288530	Middle Archaic
Putnam	9PM57	3685600	273900	Middle Archaic
Putnam	9PM572	3704720	288390	Middle Archaic
Putnam	9PM575	3704230	288880	Middle Archaic
Putnam	9PM577	3704420	289060	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Putnam	9PM592	3698070	290470	Middle Archaic
Putnam	9PM593	3698240	290680	Middle Archaic
Putnam	9PM594	3698100	290370	Middle Archaic
Putnam	9PM595	3698030	290075	Middle Archaic
Putnam	9PM596	3698150	290200	Middle Archaic
Putnam	9PM598	3698625	289750	Middle Archaic
Putnam	9PM601	3706180	286060	Middle Archaic
Putnam	9PM61	3698800	285800	Middle Archaic
Putnam	9PM612	3673650	284690	Middle Archaic
Putnam	9PM635	3686760	281940	Middle Archaic
Putnam	9PM677	3682700	284200	Middle Archaic
Putnam	9PM698	3681010	268490	Middle Archaic
Putnam	9PM70	3678400	272700	Middle Archaic
Putnam	9PM709	3691220	272960	Middle Archaic
Putnam	9PM71	3679900	272500	Middle Archaic
Putnam	9PM721	3675900	266420	Middle Archaic
Putnam	9PM722	3675890	266630	Middle Archaic
Putnam	9PM729	3696920	274860	Middle Archaic
Putnam	9PM748	3698157	277134	Middle Archaic
Putnam	9PM774	3698520	277920	Middle Archaic
Putnam	9PM775	3698480	278220	Middle Archaic
Putnam	9PM825	3680000	265220	Middle Archaic
Putnam	9PM863	3687920	265410	Middle Archaic
Putnam	9PM899	3677350	275865	Middle Archaic
Putnam	9PM994	3674720	271200	Middle Archaic
Putnam	9PM996	3699870	287520	Middle Archaic
Rabun	9RA17	3854320	279930	Middle Archaic
Rabun	9RA203	3864910	272200	Middle Archaic
Rabun	9RA32	3870650	289100	Middle Archaic
Rabun	9RA321	3865042	286761	Middle Archaic
Rabun	9RA322	3865522	286397	Middle Archaic
Rabun	9RA323	3865573	286528	Middle Archaic
Rabun	9RA34	3870540	285700	Middle Archaic
Rabun	9RA39	3869570	287300	Middle Archaic
Rabun	9RA421	3859743	290498	Middle Archaic
Rabun	9RA424	3860038	290154	Middle Archaic
Rabun	9RA67	3854240	285160	Middle Archaic
Richmond	9RI1007	3697300	388580	Middle Archaic
Richmond	9RI1061	3710150	404920	Middle Archaic
Richmond	9RI110	3697000	389260	Middle Archaic
Richmond	9RI112	3699700	393880	Middle Archaic
Richmond	9RI116	3697300	387720	Middle Archaic
Richmond	9RI118	3697340	388130	Middle Archaic
Richmond	9RI124	3686350	382000	Middle Archaic
Richmond	9RI130	3693290	382420	Middle Archaic
Richmond	9RI132	3683550	379160	Middle Archaic
Richmond	9RI135	3691100	380100	Middle Archaic
Richmond	9RI141	3687000	384060	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Richmond	9RI158	3708480	406280	Middle Archaic
Richmond	9RI16	3697264	410684	Middle Archaic
Richmond	9RI164	3693092	383276	Middle Archaic
Richmond	9RI187	3685760	408360	Middle Archaic
Richmond	9RI199	3699750	411750	Middle Archaic
Richmond	9RI202	3696610	396200	Middle Archaic
Richmond	9RI22	3697000	410348	Middle Archaic
Richmond	9RI25	3696708	410336	Middle Archaic
Richmond	9RI251	3695220	384800	Middle Archaic
Richmond	9RI31	3697456	410552	Middle Archaic
Richmond	9RI327	3707000	407690	Middle Archaic
Richmond	9RI34	3701828	413420	Middle Archaic
Richmond	9RI369	3698240	391580	Middle Archaic
Richmond	9RI37	3697696	408144	Middle Archaic
Richmond	9RI371	3698120	391720	Middle Archaic
Richmond	9RI38	3697768	407960	Middle Archaic
Richmond	9RI385	3690580	379160	Middle Archaic
Richmond	9RI41	3696768	408216	Middle Archaic
Richmond	9RI43	3696816	407696	Middle Archaic
Richmond	9RI433	3691600	392350	Middle Archaic
Richmond	9RI44	3696960	407828	Middle Archaic
Richmond	9RI45	3696672	409456	Middle Archaic
Richmond	9RI468	3696580	396680	Middle Archaic
Richmond	9RI47	3697210	398800	Middle Archaic
Richmond	9RI48	3696576	399660	Middle Archaic
Richmond	9RI489	3696910	392170	Middle Archaic
Richmond	9RI50	3688624	397780	Middle Archaic
Richmond	9RI51	3690444	400072	Middle Archaic
Richmond	9RI52	3694600	404200	Middle Archaic
Richmond	9RI531	3695460	394620	Middle Archaic
Richmond	9RI55	3689940	398800	Middle Archaic
Richmond	9RI638	3688200	384300	Middle Archaic
Richmond	9RI653	3686660	383860	Middle Archaic
Richmond	9RI666	3685820	383700	Middle Archaic
Richmond	9RI675	3685120	383130	Middle Archaic
Richmond	9RI697	3687900	384120	Middle Archaic
Richmond	9RI7	3688480	397680	Middle Archaic
Richmond	9RI713	3691260	381380	Middle Archaic
Richmond	9RI72	3692910	411220	Middle Archaic
Richmond	9RI720	3692080	383160	Middle Archaic
Richmond	9RI770	3686790	382840	Middle Archaic
Richmond	9RI8	3695240	400468	Middle Archaic
Richmond	9RI81	3694170	410310	Middle Archaic
Richmond	9RI821	3691290	380270	Middle Archaic
Richmond	9RI842	3685370	377360	Middle Archaic
Richmond	9RI890	3692890	388630	Middle Archaic
Richmond	9RI911	3692380	389380	Middle Archaic
Richmond	9RI923	3695910	387720	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Richmond	9RI95	3692680	389380	Middle Archaic
Richmond	9RI99	3688850	384600	Middle Archaic
Rockdale	9RO151	3717294	766694	Middle Archaic
Rockdale	9RO18	3736720	228020	Middle Archaic
Rockdale	9RO2	3728780	222670	Middle Archaic
Rockdale	9RO30	3737710	227850	Middle Archaic
Rockdale	9RO43	3720580	772555	Middle Archaic
Rockdale	9RO53	3727710	227825	Middle Archaic
Rockdale	9RO57	3721620	769520	Middle Archaic
Rockdale	9RO6	3735170	227890	Middle Archaic
Rockdale	9RO70	3724800	773500	Middle Archaic
Rockdale	9RO75	3738192	227219	Middle Archaic
Rockdale	9RO78	3729280	227460	Middle Archaic
Screven	9SN165	3608660	450640	Middle Archaic
Screven	9SN204	3616000	446420	Middle Archaic
Screven	9SN223	3600775	450135	Middle Archaic
Screven	9SN260	3638040	448922	Middle Archaic
Screven	9SN30	3638775	441440	Middle Archaic
Screven	9SN41	3630460	454410	Middle Archaic
Spalding	9SP10	3688747	763783	Middle Archaic
Spalding	9SP106	3689512	756738	Middle Archaic
Spalding	9SP108	3689500	757115	Middle Archaic
Spalding	9SP11	3688024	762205	Middle Archaic
Spalding	9SP15	3689410	765120	Middle Archaic
Spalding	9SP19	3689620	765460	Middle Archaic
Spalding	9SP20	3689665	765555	Middle Archaic
Spalding	9SP23	3690840	760340	Middle Archaic
Spalding	9SP24	3691130	760120	Middle Archaic
Spalding	9SP25	3691300	760050	Middle Archaic
Spalding	9SP79	3688806	758442	Middle Archaic
Spalding	9SP94	3689341	756374	Middle Archaic
Stephens	9ST216	3828700	294775	Middle Archaic
Stephens	9ST219	3831040	295700	Middle Archaic
Stephens	9ST221	3831640	295600	Middle Archaic
Stephens	9ST227	3823530	277110	Middle Archaic
Stephens	9ST27	3832680	290680	Middle Archaic
Stephens	9ST30	3826300	285680	Middle Archaic
Stephens	9ST33	3824040	283120	Middle Archaic
Stephens	9ST34	3823530	277110	Middle Archaic
Stephens	9ST349	3823359	287994	Middle Archaic
Stephens	9ST39	3818040	300315	Middle Archaic
Stephens	9ST396	3819693	280394	Middle Archaic
Stephens	9ST5	3835800	291100	Middle Archaic
Taliaferro	9TL24	3726680	320880	Middle Archaic
Taliaferro	9TL27	3720588	334513	Middle Archaic
Tattnall	9TT34	3546540	388960	Middle Archaic
Telfair	9TF139	3519320	312300	Middle Archaic
Telfair	9TF15	3519520	312060	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Telfair	9TF17	3520120	311500	Middle Archaic
Telfair	9TF187	3534960	308980	Middle Archaic
Telfair	9TF199	3541938	316506	Middle Archaic
Telfair	9TF29	3527100	296960	Middle Archaic
Telfair	9TF31	3519470	317580	Middle Archaic
Telfair	9TF64	3534900	318100	Middle Archaic
Toombs	9TS55	3543414	372918	Middle Archaic
Towns	9TO108	3872630	245870	Middle Archaic
Towns	9TO109	3872620	245950	Middle Archaic
Towns	9TO136	3874640	242400	Middle Archaic
Towns	9TO208	3867200	252740	Middle Archaic
Towns	9TO21	3869408	241720	Middle Archaic
Towns	9TO22	3860072	251672	Middle Archaic
Towns	9TO23	3868240	236400	Middle Archaic
Towns	9TO278	3874671	248171	Middle Archaic
Towns	9TO280	3873941	243466	Middle Archaic
Towns	9TO45	3871330	239300	Middle Archaic
Towns	9TO52	3871120	241290	Middle Archaic
Towns	9TO68	3858060	245600	Middle Archaic
Towns	9TO82	3874920	248130	Middle Archaic
Towns	9TO88	3870810	247640	Middle Archaic
Towns	9TO9	3868804	244000	Middle Archaic
Towns	9TO96	3869470	248780	Middle Archaic
Twiggs	9TW102	3599760	272100	Middle Archaic
Twiggs	9TW137	3612420	287420	Middle Archaic
Twiggs	9TW82	3622700	276580	Middle Archaic
Twiggs	9TW91	3617992	270252	Middle Archaic
Twiggs	9TW99	3613810	261770	Middle Archaic
Upson	9UP13	3647700	732000	Middle Archaic
Upson	9UP37	3649650	754980	Middle Archaic
Walton	9WN10	3743450	258200	Middle Archaic
Walton	9WN110	3729760	253510	Middle Archaic
Walton	9WN111	3731000	256100	Middle Archaic
Walton	9WN114	3730250	255950	Middle Archaic
Walton	9WN119	3754870	250600	Middle Archaic
Walton	9WN126	3725415	247540	Middle Archaic
Walton	9WN18	3746890	243900	Middle Archaic
Walton	9WN29	3751790	253290	Middle Archaic
Walton	9WN36	3738100	233900	Middle Archaic
Walton	9WN48	3743820	251860	Middle Archaic
Walton	9WN50	3744240	251860	Middle Archaic
Walton	9WN73	3729090	252840	Middle Archaic
Walton	9WN79	3730120	255180	Middle Archaic
Walton	9WN97	3733930	252850	Middle Archaic
Washington	9WG115	3656280	308140	Middle Archaic
Washington	9WG127	3656890	309300	Middle Archaic
Washington	9WG129	3651290	348280	Middle Archaic
Washington	9WG169	3673830	335419	Middle Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Washington	9WG218	3649497	333507	Middle Archaic
Washington	9WG32	3646051	347919	Middle Archaic
Washington	9WG35	3646300	347010	Middle Archaic
Washington	9WG44	3662520	332840	Middle Archaic
Wayne	9WY41	3479610	440020	Middle Archaic
Wheeler	9WL118	3555691	321590	Middle Archaic
Wheeler	9WL23	3548700	325700	Middle Archaic
Wheeler	9WL77	3552010	320910	Middle Archaic
Wheeler	9WL95	3553180	321310	Middle Archaic
Wilcox	9WI15	3542622	283011	Middle Archaic
Wilkes	9WS103	3719660	347420	Middle Archaic
Wilkes	9WS280	3760940	346900	Middle Archaic
Wilkes	9WS293	3760840	347660	Middle Archaic
Wilkes	9WS310	3760430	347610	Middle Archaic
Wilkes	9WS319	3753180	327000	Middle Archaic
Wilkes	9WS322	3754050	326620	Middle Archaic
Wilkes	9WS323	3754040	326940	Middle Archaic
Wilkes	9WS324	3754060	327070	Middle Archaic
Wilkes	9WS325	3753500	327600	Middle Archaic
Wilkes	9WS331	3753600	327200	Middle Archaic
Wilkes	9WS347	3739901	344395	Middle Archaic
Wilkes	9WS431	3748049	338793	Middle Archaic
Wilkes	9WS435	3745214	338130	Middle Archaic
Wilkes	9WS44	3757748	346445	Middle Archaic
Wilkes	9WS51	3761920	346670	Middle Archaic
Wilkes	9WS55	3728100	335100	Middle Archaic
Wilkes	9WS56	3728090	335400	Middle Archaic
Wilkes	9WS59	3744400	343300	Middle Archaic
Wilkes	9WS62	3747840	354000	Middle Archaic
Wilkes	9WS65	3723460	352880	Middle Archaic
Wilkes	9WS66	3748050	352830	Middle Archaic
Wilkes	9WS67	3747800	352400	Middle Archaic
Wilkinson	9WK22	3639180	277500	Middle Archaic
Appling	9AP11	3534370	371360	Late Archaic
Appling	9AP12	3534370	370140	Late Archaic
Appling	9AP14	3534490	369510	Late Archaic
Appling	9AP17	3529800	387100	Late Archaic
Appling	9AP30	3532470	378580	Late Archaic
Appling	9AP53	3524447	396468	Late Archaic
Appling	9AP6	3534480	370100	Late Archaic
Baldwin	9BL100	3672110	291700	Late Archaic
Baldwin	9BL102	3672040	291380	Late Archaic
Baldwin	9BL103	3672430	290760	Late Archaic
Baldwin	9BL106	3672400	291140	Late Archaic
Baldwin	9BL107	3672700	283000	Late Archaic
Baldwin	9BL109	3670880	278100	Late Archaic
Baldwin	9BL129	3652180	306100	Late Archaic
Baldwin	9BL137	3655180	297200	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Baldwin	9BL139	3654920	297520	Late Archaic
Baldwin	9BL14	3668940	294920	Late Archaic
Baldwin	9BL141	3655500	297200	Late Archaic
Baldwin	9BL145	3656000	296380	Late Archaic
Baldwin	9BL146	3656300	296420	Late Archaic
Baldwin	9BL147	3656200	296250	Late Archaic
Baldwin	9BL149	3654700	296880	Late Archaic
Baldwin	9BL152	3655220	296460	Late Archaic
Baldwin	9BL154	3656100	295320	Late Archaic
Baldwin	9BL158	3656300	296920	Late Archaic
Baldwin	9BL215	3655580	283910	Late Archaic
Baldwin	9BL220	3661530	287750	Late Archaic
Baldwin	9BL221	3662460	288010	Late Archaic
Baldwin	9BL227	3668660	294760	Late Archaic
Baldwin	9BL228	3668500	294740	Late Archaic
Baldwin	9BL230	3651730	293695	Late Archaic
Baldwin	9BL27	3652016	306229	Late Archaic
Baldwin	9BL283	3658827	288454	Late Archaic
Baldwin	9BL30	3661800	282100	Late Archaic
Baldwin	9BL38	3666710	294500	Late Archaic
Baldwin	9BL46	3656400	279320	Late Archaic
Baldwin	9BL56	3671800	289200	Late Archaic
Baldwin	9BL57	3670780	292090	Late Archaic
Baldwin	9BL67	3668640	294400	Late Archaic
Baldwin	9BL69	3668060	294750	Late Archaic
Baldwin	9BL76	3668380	294170	Late Archaic
Baldwin	9BL77	3667870	294150	Late Archaic
Baldwin	9BL82	3667940	293800	Late Archaic
Baldwin	9BL87	3666370	294410	Late Archaic
Baldwin	9BL88	3666370	294370	Late Archaic
Baldwin	9BL89	3666910	294280	Late Archaic
Baldwin	9BL90	3669030	295400	Late Archaic
Baldwin	9BL95	3672460	293850	Late Archaic
Baldwin	9BL96	3670800	293300	Late Archaic
Baldwin	9BL99	3673080	290560	Late Archaic
Banks	9BA10	3809350	262200	Late Archaic
Banks	9BA105	3802722	274475	Late Archaic
Banks	9BA109	3801425	275806	Late Archaic
Banks	9BA11	3809550	263300	Late Archaic
Banks	9BA21	3793292	267563	Late Archaic
Banks	9BA39	3806640	263990	Late Archaic
Banks	9BA59	3802920	276120	Late Archaic
Banks	9BA60	3802730	276110	Late Archaic
Banks	9BA62	3802210	275655	Late Archaic
Banks	9BA65	3802500	275625	Late Archaic
Banks	9BA67	3802220	276180	Late Archaic
Banks	9BA70	3801940	276225	Late Archaic
Banks	9BA74	3803820	276200	Late Archaic

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Banks	9BA89	3799380	272280	Late Archaic
Banks	9BA99	3802814	274437	Late Archaic
Barrow	9BW1	3761667	258523	Late Archaic
Barrow	9BW10	3767600	249620	Late Archaic
Barrow	9BW15	3767700	248610	Late Archaic
Barrow	9BW16	3767876	248153	Late Archaic
Barrow	9BW43	3758680	260060	Late Archaic
Barrow	9BW57	3768080	251700	Late Archaic
Barrow	9BW99	3771861	239386	Late Archaic
Ben Hill	9BH2	3520050	300400	Late Archaic
Ben Hill	9BH4	3524180	294600	Late Archaic
Ben Hill	9BH8	3519820	300580	Late Archaic
Ben Hill	9BH9	3520300	300300	Late Archaic
Bibb	9BI1	3636500	256000	Late Archaic
Bibb	9BI103	3627580	245960	Late Archaic
Bibb	9BI12	3623950	255200	Late Archaic
Bibb	9BI13	3631250	255350	Late Archaic
Bibb	9BI132	3628010	255560	Late Archaic
Bibb	9BI133	3627600	255680	Late Archaic
Bibb	9BI135	3628050	255280	Late Archaic
Bibb	9BI136	3628370	254320	Late Archaic
Bibb	9BI14	3618600	255350	Late Archaic
Bibb	9BI148	3646844	244260	Late Archaic
Bibb	9BI151	3638459	253341	Late Archaic
Bibb	9BI16	3636900	258200	Late Archaic
Bibb	9BI165	3631858	242250	Late Archaic
Bibb	9BI17	3635460	258250	Late Archaic
Bibb	9BI18	3635500	258050	Late Archaic
Bibb	9BI19	3632150	254650	Late Archaic
Bibb	9BI225	3620340	253180	Late Archaic
Bibb	9BI230	3620501	247628	Late Archaic
Bibb	9BI258	3619315	253673	Late Archaic
Bibb	9BI3	3631800	259000	Late Archaic
Bibb	9BI31	3634150	258750	Late Archaic
Bibb	9BI32	3635050	256350	Late Archaic
Bibb	9BI4	3631500	258600	Late Archaic
Bibb	9BI48	3638600	252350	Late Archaic
Bibb	9BI49	3629346	258980	Late Archaic
Bibb	9BI5	3628750	259350	Late Archaic
Bibb	9BI51	3624500	254260	Late Archaic
Bibb	9BI6	3628250	260350	Late Archaic
Bibb	9BI7	3635100	255650	Late Archaic
Bibb	9BI79	3633280	257830	Late Archaic
Bibb	9BI8	3635900	254950	Late Archaic
Bibb	9BI85	3643580	249260	Late Archaic
Bleckley	9BY13	3589740	277000	Late Archaic
Bleckley	9BY14	3594500	275480	Late Archaic
Bleckley	9BY23	3592100	267700	Late Archaic

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Bleckley	9BY34	3587460	287640	Late Archaic
Bleckley	9BY37	3587155	266475	Late Archaic
Bleckley	9BY41	3587835	266675	Late Archaic
Bleckley	9BY46	3588625	267065	Late Archaic
Bleckley	9BY51	3590500	267800	Late Archaic
Bleckley	9BY56	3590020	268710	Late Archaic
Bleckley	9BY57	3588835	266700	Late Archaic
Brantley	9BT4	3458650	412960	Late Archaic
Brantley	9BT8	3452160	410700	Late Archaic
Bryan	9BN1008	3538415	464110	Late Archaic
Bryan	9BN101	3539180	470541	Late Archaic
Bryan	9BN102	3538112	457228	Late Archaic
Bryan	9BN103	3538085	457409	Late Archaic
Bryan	9BN1036	3538002	468509	Late Archaic
Bryan	9BN104	3526286	483302	Late Archaic
Bryan	9BN1043	3537898	468996	Late Archaic
Bryan	9BN1046	3537988	468880	Late Archaic
Bryan	9BN1075	3536876	467891	Late Archaic
Bryan	9BN1086	3528319	475204	Late Archaic
Bryan	9BN11	3525883	481541	Late Archaic
Bryan	9BN110	3544620	452080	Late Archaic
Bryan	9BN1115	3538481	460368	Late Archaic
Bryan	9BN1166	3550081	457319	Late Archaic
Bryan	9BN119	3537519	462848	Late Archaic
Bryan	9BN1198	3536659	451970	Late Archaic
Bryan	9BN1215	3536784	452347	Late Archaic
Bryan	9BN1226	3537726	463602	Late Archaic
Bryan	9BN1245	3547245	463937	Late Archaic
Bryan	9BN1246	3546098	465059	Late Archaic
Bryan	9BN1247	3547526	463939	Late Archaic
Bryan	9BN1256	3546552	464623	Late Archaic
Bryan	9BN1260	3548559	464116	Late Archaic
Bryan	9BN1304	3537530	456473	Late Archaic
Bryan	9BN1305	3537620	456473	Late Archaic
Bryan	9BN1306	3537710	455033	Late Archaic
Bryan	9BN133	3537260	468170	Late Archaic
Bryan	9BN1347	3547989	463576	Late Archaic
Bryan	9BN135	3537380	468620	Late Archaic
Bryan	9BN1351	3548672	463683	Late Archaic
Bryan	9BN1408	3543934	466549	Late Archaic
Bryan	9BN1412	3544224	466015	Late Archaic
Bryan	9BN1417	3544065	466085	Late Archaic
Bryan	9BN147	3549965	435300	Late Archaic
Bryan	9BN1470	3525542	465793	Late Archaic
Bryan	9BN1496	3534676	467200	Late Archaic
Bryan	9BN1503	3525496	467841	Late Archaic
Bryan	9BN1504	3538523	460166	Late Archaic
Bryan	9BN1508	3537707	460941	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Bryan	9BN152	3542488	465409	Late Archaic
Bryan	9BN1564	3539033	459998	Late Archaic
Bryan	9BN1568	3538702	460963	Late Archaic
Bryan	9BN1580	3538697	463384	Late Archaic
Bryan	9BN160	3536366	456478	Late Archaic
Bryan	9BN1632	3522924	468248	Late Archaic
Bryan	9BN166	3522580	466970	Late Archaic
Bryan	9BN169	3531221	473344	Late Archaic
Bryan	9BN170	3531049	473497	Late Archaic
Bryan	9BN171	3531310	473829	Late Archaic
Bryan	9BN174	3531620	474357	Late Archaic
Bryan	9BN187	3527908	482898	Late Archaic
Bryan	9BN205	3551041	458763	Late Archaic
Bryan	9BN265	3563980	451680	Late Archaic
Bryan	9BN266	3555530	461520	Late Archaic
Bryan	9BN286	3550713	432978	Late Archaic
Bryan	9BN290	3549144	439477	Late Archaic
Bryan	9BN31	3538844	460520	Late Archaic
Bryan	9BN319	3547610	437280	Late Archaic
Bryan	9BN32	3538800	464100	Late Archaic
Bryan	9BN321	3550417	439065	Late Archaic
Bryan	9BN33	3537600	454590	Late Archaic
Bryan	9BN330	3550728	439155	Late Archaic
Bryan	9BN346	3552329	436706	Late Archaic
Bryan	9BN347	3551539	438365	Late Archaic
Bryan	9BN35	3545903	464972	Late Archaic
Bryan	9BN36	3537510	454770	Late Archaic
Bryan	9BN37	3553231	428611	Late Archaic
Bryan	9BN39	3537560	468390	Late Archaic
Bryan	9BN41	3541840	469060	Late Archaic
Bryan	9BN412	3541950	468857	Late Archaic
Bryan	9BN448	3535600	460814	Late Archaic
Bryan	9BN475	3536743	456513	Late Archaic
Bryan	9BN511	3537613	459735	Late Archaic
Bryan	9BN527	3537532	459998	Late Archaic
Bryan	9BN551	3538809	452874	Late Archaic
Bryan	9BN557	3538792	452518	Late Archaic
Bryan	9BN579	3538816	452785	Late Archaic
Bryan	9BN581	3541068	452145	Late Archaic
Bryan	9BN586	3541292	452203	Late Archaic
Bryan	9BN6	3532120	473830	Late Archaic
Bryan	9BN629	3544117	453325	Late Archaic
Bryan	9BN634	3524540	473350	Late Archaic
Bryan	9BN645	3540631	469907	Late Archaic
Bryan	9BN646	3540570	469773	Late Archaic
Bryan	9BN648	3540332	470119	Late Archaic
Bryan	9BN655	3539028	468044	Late Archaic
Bryan	9BN657	3538862	469668	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Bryan	9BN660	3538761	470122	Late Archaic
Bryan	9BN664	3539187	468472	Late Archaic
Bryan	9BN667	3538981	470469	Late Archaic
Bryan	9BN668	3539287	470651	Late Archaic
Bryan	9BN727	3548771	437641	Late Archaic
Bryan	9BN75	3537490	462821	Late Archaic
Bryan	9BN76	3537107	457761	Late Archaic
Bryan	9BN77	3536660	456264	Late Archaic
Bryan	9BN80	3543020	454190	Late Archaic
Bryan	9BN82	3547300	451400	Late Archaic
Bryan	9BN837	3524076	480947	Late Archaic
Bryan	9BN838	3523975	480887	Late Archaic
Bryan	9BN85	3538728	463691	Late Archaic
Bryan	9BN870	3526424	482343	Late Archaic
Bryan	9BN871	3526517	483133	Late Archaic
Bryan	9BN872	3526054	482801	Late Archaic
Bryan	9BN875	3525790	483215	Late Archaic
Bryan	9BN876	3525720	483495	Late Archaic
Bryan	9BN879	3525584	483566	Late Archaic
Bryan	9BN880	3525409	483398	Late Archaic
Bryan	9BN882	3525262	483448	Late Archaic
Bryan	9BN883	3525303	483316	Late Archaic
Bryan	9BN884	3525110	483316	Late Archaic
Bryan	9BN887	3524881	483886	Late Archaic
Bryan	9BN889	3525044	483851	Late Archaic
Bryan	9BN890	3525029	483932	Late Archaic
Bryan	9BN893	3524388	483266	Late Archaic
Bryan	9BN9	3524026	483272	Late Archaic
Bryan	9BN90	3537728	468016	Late Archaic
Bryan	9BN909	3525510	480897	Late Archaic
Bryan	9BN96	3549382	436671	Late Archaic
Bryan	9BN97	3550368	434746	Late Archaic
Bryan	9BN98	3550878	434146	Late Archaic
Bulloch	9BU117	3594656	447788	Late Archaic
Bulloch	9BU127	3594446	447788	Late Archaic
Bulloch	9BU24	3589100	434050	Late Archaic
Bulloch	9BU25	3596900	443500	Late Archaic
Bulloch	9BU30	3583600	449500	Late Archaic
Bulloch	9BU47	3567960	436920	Late Archaic
Bulloch	9BU5	3581450	419420	Late Archaic
Bulloch	9BU6	3584800	427750	Late Archaic
Burke	9BK110	3647560	408540	Late Archaic
Burke	9BK113	3655240	427300	Late Archaic
Burke	9BK128	3650720	398860	Late Archaic
Burke	9BK135	3646130	401040	Late Archaic
Burke	9BK14	3633310	378295	Late Archaic
Burke	9BK147	3650900	400440	Late Archaic
Burke	9BK153	3650900	400230	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Burke	9BK157	3647580	399440	Late Archaic
Burke	9BK164	3645710	401050	Late Archaic
Burke	9BK167	3646140	402210	Late Archaic
Burke	9BK169	3646320	402230	Late Archaic
Burke	9BK170	3645990	402490	Late Archaic
Burke	9BK171	3646130	402760	Late Archaic
Burke	9BK18	3661460	407120	Late Archaic
Burke	9BK187	3647530	401230	Late Archaic
Burke	9BK200	3647550	400900	Late Archaic
Burke	9BK207	3648090	400370	Late Archaic
Burke	9BK215	3648770	400840	Late Archaic
Burke	9BK223	3648500	400600	Late Archaic
Burke	9BK225	3648270	400360	Late Archaic
Burke	9BK243	3645650	399400	Late Archaic
Burke	9BK267	3651270	397580	Late Archaic
Burke	9BK270	3651550	398520	Late Archaic
Burke	9BK273	3648260	395590	Late Archaic
Burke	9BK284	3647270	395680	Late Archaic
Burke	9BK291	3648160	397160	Late Archaic
Burke	9BK307	3645740	402300	Late Archaic
Burke	9BK312	3646240	396770	Late Archaic
Burke	9BK320	3646330	399250	Late Archaic
Burke	9BK326	3645910	397840	Late Archaic
Burke	9BK367	3656356	407180	Late Archaic
Burke	9BK369	3671370	396750	Late Archaic
Burke	9BK384	3653020	408425	Late Archaic
Burke	9BK385	3669800	397650	Late Archaic
Burke	9BK386	3678040	414100	Late Archaic
Burke	9BK390	3654700	428420	Late Archaic
Burke	9BK399	3646157	403216	Late Archaic
Burke	9BK412	3644751	424315	Late Archaic
Burke	9BK413	3634910	378594	Late Archaic
Burke	9BK429	3661441	389754	Late Archaic
Burke	9BK435	3651992	398842	Late Archaic
Burke	9BK444	3660282	390718	Late Archaic
Burke	9BK478	3655741	395601	Late Archaic
Burke	9BK479	3655194	395858	Late Archaic
Burke	9BK492	3660900	428250	Late Archaic
Burke	9BK529	3652971	418087	Late Archaic
Burke	9BK537	3651164	390639	Late Archaic
Burke	9BK6	3656000	447500	Late Archaic
Burke	9BK63	3631216	384560	Late Archaic
Burke	9BK83	3657460	436410	Late Archaic
Burke	9BK84	3661220	434000	Late Archaic
Burke	9BK88	3677500	416500	Late Archaic
Butts	9BS1	3674900	236600	Late Archaic
Butts	9BS13	3678400	231340	Late Archaic
Butts	9BS29	3695040	778140	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Butts	9BS30	3695710	221840	Late Archaic
Butts	9BS32	3695670	222240	Late Archaic
Butts	9BS40	3697800	222610	Late Archaic
Butts	9BS45	3696580	222910	Late Archaic
Butts	9BS55	3680581	768423	Late Archaic
Chatham	9CH1	3554272	487006	Late Archaic
Chatham	9CH10	3552880	480310	Late Archaic
Chatham	9CH1044	3541207	484590	Late Archaic
Chatham	9CH1076	3561650	482390	Late Archaic
Chatham	9CH1097	3553406	483166	Late Archaic
Chatham	9CH11	3539816	502528	Late Archaic
Chatham	9CH111	3530495	496294	Late Archaic
Chatham	9CH1152	3549407	481153	Late Archaic
Chatham	9CH1153	3549108	481011	Late Archaic
Chatham	9CH1154	3549138	480889	Late Archaic
Chatham	9CH119	3536920	497140	Late Archaic
Chatham	9CH12	3537288	500168	Late Archaic
Chatham	9CH1230	3563566	487357	Late Archaic
Chatham	9CH125	3536730	496870	Late Archaic
Chatham	9CH1275	3546658	480012	Late Archaic
Chatham	9CH1382	3555950	488400	Late Archaic
Chatham	9CH14	3540852	504106	Late Archaic
Chatham	9CH146	3519840	487260	Late Archaic
Chatham	9CH147	3521552	489936	Late Archaic
Chatham	9CH148	3522392	489936	Late Archaic
Chatham	9CH1510	3532100	490665	Late Archaic
Chatham	9CH154	3520300	491168	Late Archaic
Chatham	9CH155	3514041	486240	Late Archaic
Chatham	9CH159	3517432	487468	Late Archaic
Chatham	9CH2	3548276	494576	Late Archaic
Chatham	9CH203	3515706	486867	Late Archaic
Chatham	9CH296	3530120	495960	Late Archaic
Chatham	9CH297	3530240	496072	Late Archaic
Chatham	9CH300	3530456	496252	Late Archaic
Chatham	9CH306	3531309	496670	Late Archaic
Chatham	9CH307	3531576	496756	Late Archaic
Chatham	9CH309	3531972	496864	Late Archaic
Chatham	9CH342	3530432	496216	Late Archaic
Chatham	9CH35	3522912	489792	Late Archaic
Chatham	9CH377	3538583	507393	Late Archaic
Chatham	9CH4	3548142	492995	Late Archaic
Chatham	9CH408	3512816	488144	Late Archaic
Chatham	9CH476	3538704	507565	Late Archaic
Chatham	9CH481	3538588	507480	Late Archaic
Chatham	9CH482	3538519	507379	Late Archaic
Chatham	9CH488	3538552	507564	Late Archaic
Chatham	9CH492	3538852	507744	Late Archaic
Chatham	9CH61	3534492	498108	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Chatham	9CH62	3534360	498036	Late Archaic
Chatham	9CH624	3529228	491864	Late Archaic
Chatham	9CH68	3534140	494080	Late Archaic
Chatham	9CH733	3533689	493932	Late Archaic
Chatham	9CH76	3532096	496876	Late Archaic
Chatham	9CH77	3528603	495712	Late Archaic
Chatham	9CH774	3551620	489300	Late Archaic
Chatham	9CH775	3544620	497440	Late Archaic
Chatham	9CH777	3535787	485893	Late Archaic
Chatham	9CH8	3541924	504072	Late Archaic
Chatham	9CH826	3537590	497550	Late Archaic
Chatham	9CH867	3537040	490100	Late Archaic
Chatham	9CH917	3564680	480660	Late Archaic
Chatham	9CH936	3565209	480667	Late Archaic
Chatham	9CH937	3565050	481100	Late Archaic
Chatham	9CH944	3564460	480970	Late Archaic
Chatham	9CH976	3549643	482964	Late Archaic
Chatham	9CH983	3549730	478740	Late Archaic
Clarke	9CA107	3763250	271105	Late Archaic
Clarke	9CA108	3755500	285170	Late Archaic
Clarke	9CA119	3758920	280650	Late Archaic
Clarke	9CA141	3759580	279140	Late Archaic
Clarke	9CA145	3760231	279557	Late Archaic
Clarke	9CA204	3756135	288308	Late Archaic
Clarke	9CA33	3754160	290750	Late Archaic
Clarke	9CA37	3762980	280420	Late Archaic
Clarke	9CA71	3755400	285200	Late Archaic
Clayton	9CN123	3720690	740950	Late Archaic
Clayton	9CN126	3720860	740940	Late Archaic
Clayton	9CN127	3721060	741020	Late Archaic
Clayton	9CN138	3721390	739840	Late Archaic
Clayton	9CN144	3721490	738600	Late Archaic
Clayton	9CN27	3693704	743070	Late Archaic
Clayton	9CN28	3708820	741850	Late Archaic
Clayton	9CN29	3707219	751195	Late Archaic
Clayton	9CN32	3708520	741600	Late Archaic
Clayton	9CN48	3725320	746700	Late Archaic
Clayton	9CN63	3708880	751450	Late Archaic
Clayton	9CN66	3697627	742584	Late Archaic
Clayton	9CN75	3713980	749640	Late Archaic
Clayton	9CN76	3712322	749540	Late Archaic
Clayton	9CN84	3712500	751400	Late Archaic
Coffee	9CF1	3487620	334600	Late Archaic
Coffee	9CF100	3477000	335800	Late Archaic
Coffee	9CF110	3487140	338240	Late Archaic
Coffee	9CF114	3495032	331562	Late Archaic
Coffee	9CF120	3515380	320280	Late Archaic
Coffee	9CF129	3515220	317000	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Coffee	9CF134	3487200	334600	Late Archaic
Coffee	9CF14	3516920	324150	Late Archaic
Coffee	9CF141	3481770	334060	Late Archaic
Coffee	9CF146	3489520	334300	Late Archaic
Coffee	9CF15	3481130	311520	Late Archaic
Coffee	9CF16	3480930	311500	Late Archaic
Coffee	9CF163	3494540	335540	Late Archaic
Coffee	9CF17	3518975	325250	Late Archaic
Coffee	9CF181	3516720	313380	Late Archaic
Coffee	9CF2	3490580	327220	Late Archaic
Coffee	9CF22	3517440	318080	Late Archaic
Coffee	9CF226	3493410	330110	Late Archaic
Coffee	9CF245	3485820	335460	Late Archaic
Coffee	9CF248	3493950	335480	Late Archaic
Coffee	9CF25	3517590	324580	Late Archaic
Coffee	9CF256	3490870	327700	Late Archaic
Coffee	9CF28	3517700	324625	Late Archaic
Coffee	9CF3	3495400	325160	Late Archaic
Coffee	9CF31	3478160	320750	Late Archaic
Coffee	9CF320	3493354	306884	Late Archaic
Coffee	9CF321	3493059	306205	Late Archaic
Coffee	9CF327	3486839	335117	Late Archaic
Coffee	9CF337	3493776	324452	Late Archaic
Coffee	9CF37	3488205	326700	Late Archaic
Coffee	9CF4	3494320	331400	Late Archaic
Coffee	9CF41	3493380	329180	Late Archaic
Coffee	9CF44	3516440	325960	Late Archaic
Coffee	9CF46	3518640	325700	Late Archaic
Coffee	9CF48	3517000	325700	Late Archaic
Coffee	9CF54	3515050	323000	Late Archaic
Coffee	9CF57	3517300	325400	Late Archaic
Coffee	9CF58	3483800	334000	Late Archaic
Coffee	9CF59	3515250	323040	Late Archaic
Coffee	9CF60	3517150	319600	Late Archaic
Coffee	9CF61	3498001	324160	Late Archaic
Coffee	9CF63	3517120	312980	Late Archaic
Coffee	9CF69	3516760	325800	Late Archaic
Coffee	9CF71	3518180	324780	Late Archaic
Coffee	9CF73	3518170	325430	Late Archaic
Coffee	9CF74	3506410	318520	Late Archaic
Coffee	9CF79	3486960	333560	Late Archaic
Coffee	9CF8	3488720	324040	Late Archaic
Coffee	9CF83	3472600	340700	Late Archaic
Coffee	9CF92	3516780	325460	Late Archaic
Coffee	9CF93	3481990	334060	Late Archaic
Columbia	9CB117	3693610	381990	Late Archaic
Columbia	9CB120	3694620	383280	Late Archaic
Columbia	9CB121	3694660	383400	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Columbia	9CB127	3717850	393400	Late Archaic
Columbia	9CB128	3717498	393394	Late Archaic
Columbia	9CB138	3712680	403170	Late Archaic
Columbia	9CB139	3723125	378355	Late Archaic
Columbia	9CB140	3718450	386200	Late Archaic
Columbia	9CB142	3717050	394520	Late Archaic
Columbia	9CB148	3728700	374730	Late Archaic
Columbia	9CB150	3726200	387660	Late Archaic
Columbia	9CB152	3725455	388350	Late Archaic
Columbia	9CB154	3725700	387910	Late Archaic
Columbia	9CB156	3723590	372500	Late Archaic
Columbia	9CB160	3725420	388465	Late Archaic
Columbia	9CB161	3728400	375180	Late Archaic
Columbia	9CB162	3725980	387760	Late Archaic
Columbia	9CB169	3712320	378160	Late Archaic
Columbia	9CB170	3712190	378420	Late Archaic
Columbia	9CB197	3715427	399084	Late Archaic
Columbia	9CB2	3719552	390720	Late Archaic
Columbia	9CB200	3723485	379460	Late Archaic
Columbia	9CB213	3724050	388480	Late Archaic
Columbia	9CB22	3726048	388000	Late Archaic
Columbia	9CB25	3719650	390800	Late Archaic
Columbia	9CB283	3722735	381640	Late Archaic
Columbia	9CB284	3722855	381950	Late Archaic
Columbia	9CB314	3723540	380770	Late Archaic
Columbia	9CB41	3726820	381480	Late Archaic
Columbia	9CB415	3727230	378800	Late Archaic
Columbia	9CB420	3727040	375325	Late Archaic
Columbia	9CB458	3726010	374390	Late Archaic
Columbia	9CB498	3723220	367290	Late Archaic
Columbia	9CB51	3713405	396825	Late Archaic
Columbia	9CB545	3718918	392204	Late Archaic
Columbia	9CB559	3717747	392839	Late Archaic
Columbia	9CB587	3712520	403356	Late Archaic
Columbia	9CB595	3727560	378410	Late Archaic
Columbia	9CB618	3714689	399757	Late Archaic
Columbia	9CB73	3693870	382260	Late Archaic
Columbia	9CB81	3694520	383600	Late Archaic
Crawford	9CD20	3604130	781160	Late Archaic
DeKalb	9DA10	3745640	764660	Late Archaic
DeKalb	9DA103	3726408	748576	Late Archaic
DeKalb	9DA105	3728456	748240	Late Archaic
DeKalb	9DA106	3728312	748504	Late Archaic
DeKalb	9DA107	3728552	750864	Late Archaic
DeKalb	9DA109	3728696	750264	Late Archaic
DeKalb	9DA110	3728912	752000	Late Archaic
DeKalb	9DA113	3727192	751816	Late Archaic
DeKalb	9DA116	3728792	751696	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
DeKalb	9DA117	3730624	753864	Late Archaic
DeKalb	9DA118	3729432	753768	Late Archaic
DeKalb	9DA133	3732888	749240	Late Archaic
DeKalb	9DA134	3730816	750552	Late Archaic
DeKalb	9DA139	3728340	745890	Late Archaic
DeKalb	9DA14	3755020	747620	Late Archaic
DeKalb	9DA148	3728140	752000	Late Archaic
DeKalb	9DA149	3728050	751560	Late Archaic
DeKalb	9DA150	3728440	751650	Late Archaic
DeKalb	9DA17	3729140	751260	Late Archaic
DeKalb	9DA18	3728500	752940	Late Archaic
DeKalb	9DA19	3729040	749180	Late Archaic
DeKalb	9DA20	3729080	749070	Late Archaic
DeKalb	9DA21	3729450	752050	Late Archaic
DeKalb	9DA22	3755060	747410	Late Archaic
DeKalb	9DA234	3732000	747480	Late Archaic
DeKalb	9DA235	3731245	747040	Late Archaic
DeKalb	9DA239	3731360	747312	Late Archaic
DeKalb	9DA244	3746160	764750	Late Archaic
DeKalb	9DA255	3742240	769140	Late Archaic
DeKalb	9DA256	3731220	753490	Late Archaic
DeKalb	9DA264	3728160	751720	Late Archaic
DeKalb	9DA265	3728360	751550	Late Archaic
DeKalb	9DA266	3727640	751300	Late Archaic
DeKalb	9DA27	3744570	753420	Late Archaic
DeKalb	9DA270	3727890	750420	Late Archaic
DeKalb	9DA271	3728380	750470	Late Archaic
DeKalb	9DA275	3745820	763200	Late Archaic
DeKalb	9DA276	3744240	765280	Late Archaic
DeKalb	9DA278	3744380	765040	Late Archaic
DeKalb	9DA279	3745920	764480	Late Archaic
DeKalb	9DA280	3744511	765120	Late Archaic
DeKalb	9DA281	3745710	764920	Late Archaic
DeKalb	9DA283	3745510	762760	Late Archaic
DeKalb	9DA284	3745780	763940	Late Archaic
DeKalb	9DA29	3743360	755072	Late Archaic
DeKalb	9DA31	3735912	772888	Late Archaic
DeKalb	9DA310	3731730	769800	Late Archaic
DeKalb	9DA350	3736900	772240	Late Archaic
DeKalb	9DA358	3729460	751900	Late Archaic
DeKalb	9DA362	3728750	748607	Late Archaic
DeKalb	9DA364	3729134	748793	Late Archaic
DeKalb	9DA37	3740816	761000	Late Archaic
DeKalb	9DA385	3727614	754958	Late Archaic
DeKalb	9DA388	3727394	754130	Late Archaic
DeKalb	9DA411	3754050	756300	Late Archaic
DeKalb	9DA431	3726907	751174	Late Archaic
DeKalb	9DA451	3745385	759183	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
DeKalb	9DA455	3727807	746194	Late Archaic
DeKalb	9DA49	3728624	748408	Late Archaic
DeKalb	9DA50	3728658	748363	Late Archaic
DeKalb	9DA53	3727185	749155	Late Archaic
DeKalb	9DA57	3726936	746360	Late Archaic
DeKalb	9DA6	3745528	763744	Late Archaic
DeKalb	9DA60	3728816	751168	Late Archaic
DeKalb	9DA68	3729106	748329	Late Archaic
DeKalb	9DA71	3748312	749048	Late Archaic
DeKalb	9DA73	3748096	749912	Late Archaic
DeKalb	9DA81	3732192	754456	Late Archaic
DeKalb	9DA82	3729000	750912	Late Archaic
DeKalb	9DA86	3728888	750720	Late Archaic
DeKalb	9DA9	3744660	765320	Late Archaic
DeKalb	9DA93	3730240	750480	Late Archaic
DeKalb	9DA94	3729936	749672	Late Archaic
DeKalb	9DA95	3730120	749768	Late Archaic
DeKalb	9DA99	3729264	746846	Late Archaic
Dodge	9DG11	3567450	282530	Late Archaic
Dodge	9DG113	3576150	285930	Late Archaic
Dodge	9DG131	3555435	285593	Late Archaic
Dodge	9DG132	3573774	305361	Late Archaic
Dodge	9DG133	3542077	287808	Late Archaic
Dodge	9DG138	3570449	297077	Late Archaic
Dodge	9DG152	3575020	286276	Late Archaic
Dodge	9DG3	3565700	284400	Late Archaic
Dodge	9DG5	3565580	284300	Late Archaic
Dodge	9DG56	3544250	285980	Late Archaic
Dodge	9DG57	3541380	299940	Late Archaic
Dodge	9DG64	3569920	298860	Late Archaic
Dodge	9DG69	3561900	320700	Late Archaic
Dodge	9DG76	3557800	298920	Late Archaic
Dodge	9DG8	3541700	284720	Late Archaic
Dodge	9DG88	3554280	302460	Late Archaic
Dooly	9DY10	3554750	232900	Late Archaic
Dooly	9DY11	3554450	233050	Late Archaic
Dooly	9DY12	3554800	233175	Late Archaic
Dooly	9DY13	3554875	233400	Late Archaic
Dooly	9DY14	3558500	236300	Late Archaic
Dooly	9DY2	3554300	233400	Late Archaic
Dooly	9DY3	3554570	234500	Late Archaic
Dooly	9DY4	3554600	233360	Late Archaic
Dooly	9DY43	3554132	234897	Late Archaic
Dooly	9DY5	3554600	233110	Late Archaic
Dooly	9DY50	3548661	239235	Late Archaic
Dooly	9DY59	3559625	223474	Late Archaic
Dooly	9DY6	3554460	233560	Late Archaic
Dooly	9DY8	3555000	233245	Late Archaic

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Dooly	9DY9	3554940	232950	Late Archaic
Effingham	9EF108	3575150	482150	Late Archaic
Effingham	9EF123	3575240	481340	Late Archaic
Effingham	9EF134	3577460	483920	Late Archaic
Effingham	9EF143	3576450	483180	Late Archaic
Effingham	9EF165	3602800	462700	Late Archaic
Effingham	9EF166	3602740	462700	Late Archaic
Effingham	9EF167	3603300	462180	Late Archaic
Effingham	9EF184	3569095	483185	Late Archaic
Effingham	9EF187	3580070	483690	Late Archaic
Effingham	9EF192	3589300	450330	Late Archaic
Effingham	9EF193	3597860	453510	Late Archaic
Effingham	9EF204	3595480	451060	Late Archaic
Effingham	9EF212	3579510	454215	Late Archaic
Effingham	9EF218	3579770	454600	Late Archaic
Effingham	9EF230	3581380	469740	Late Archaic
Effingham	9EF243	3582580	482634	Late Archaic
Effingham	9EF245	3567780	481511	Late Archaic
Effingham	9EF268	3566630	480462	Late Archaic
Effingham	9EF269	3566357	480056	Late Archaic
Effingham	9EF270	3565875	479045	Late Archaic
Effingham	9EF315	3569069	481155	Late Archaic
Effingham	9EF318	3573417	482969	Late Archaic
Effingham	9EF324	3574428	482904	Late Archaic
Effingham	9EF325	3574690	482418	Late Archaic
Effingham	9EF332	3565838	474927	Late Archaic
Effingham	9EF95	3578600	474800	Late Archaic
Effingham	9EF97	3577130	483870	Late Archaic
Elbert	9EB1	3762500	353500	Late Archaic
Elbert	9EB10	3794984	336912	Late Archaic
Elbert	9EB120	3770890	346840	Late Archaic
Elbert	9EB155	3771260	347960	Late Archaic
Elbert	9EB163	3770500	346610	Late Archaic
Elbert	9EB167	3770330	348120	Late Archaic
Elbert	9EB17	3794009	337700	Late Archaic
Elbert	9EB171	3761650	352800	Late Archaic
Elbert	9EB173	3761450	352900	Late Archaic
Elbert	9EB19	3774940	338570	Late Archaic
Elbert	9EB194	3780060	326080	Late Archaic
Elbert	9EB199	3765190	351970	Late Archaic
Elbert	9EB2	3772800	318400	Late Archaic
Elbert	9EB204	3772600	345828	Late Archaic
Elbert	9EB207	3771816	347048	Late Archaic
Elbert	9EB208	3771660	346660	Late Archaic
Elbert	9EB218	3771552	345600	Late Archaic
Elbert	9EB219	3771900	345740	Late Archaic
Elbert	9EB255	3767300	351264	Late Archaic
Elbert	9EB259	3786696	339288	Late Archaic

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Elbert	9EB261	3787660	339372	Late Archaic
Elbert	9EB281	3787870	338465	Late Archaic
Elbert	9EB283	3783384	338168	Late Archaic
Elbert	9EB285	3783384	337864	Late Archaic
Elbert	9EB286	3782864	338492	Late Archaic
Elbert	9EB291	3782792	339852	Late Archaic
Elbert	9EB3	3772250	318400	Late Archaic
Elbert	9EB300	3783036	340192	Late Archaic
Elbert	9EB315	3781552	339312	Late Archaic
Elbert	9EB320	3775144	345960	Late Archaic
Elbert	9EB327	3778744	340888	Late Archaic
Elbert	9EB328	3778960	341336	Late Archaic
Elbert	9EB341	3778300	342552	Late Archaic
Elbert	9EB351	3776912	344480	Late Archaic
Elbert	9EB366	3778804	341480	Late Archaic
Elbert	9EB368	3781384	340348	Late Archaic
Elbert	9EB388	3785816	339288	Late Archaic
Elbert	9EB395	3784288	338756	Late Archaic
Elbert	9EB405	3774852	345000	Late Archaic
Elbert	9EB418	3782936	338264	Late Archaic
Elbert	9EB480	3765100	352000	Late Archaic
Elbert	9EB484	3764800	352270	Late Archaic
Elbert	9EB485	3764730	352310	Late Archaic
Elbert	9EB488	3764570	352390	Late Archaic
Elbert	9EB492	3764000	352700	Late Archaic
Elbert	9EB499	3763470	352960	Late Archaic
Elbert	9EB51	3760800	348760	Late Archaic
Elbert	9EB513	3762840	353400	Late Archaic
Elbert	9EB518	3768820	325440	Late Archaic
Elbert	9EB526	3779630	341240	Late Archaic
Elbert	9EB527	3762070	350840	Late Archaic
Elbert	9EB528	3762200	350400	Late Archaic
Elbert	9EB56	3773740	339930	Late Archaic
Elbert	9EB57	3773810	339710	Late Archaic
Elbert	9EB580	3760050	353070	Late Archaic
Elbert	9EB60	3783580	339260	Late Archaic
Elbert	9EB612	3763050	350260	Late Archaic
Elbert	9EB613	3761340	351130	Late Archaic
Elbert	9EB617	3761350	349660	Late Archaic
Elbert	9EB63	3775204	338312	Late Archaic
Elbert	9EB631	3763270	350200	Late Archaic
Elbert	9EB642	3762480	346880	Late Archaic
Elbert	9EB645	3762280	346630	Late Archaic
Elbert	9EB661	3761960	348500	Late Archaic
Elbert	9EB675	3761730	347680	Late Archaic
Elbert	9EB728	3764981	336006	Late Archaic
Elbert	9EB76	3774708	346504	Late Archaic
Elbert	9EB80	3779576	328240	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Elbert	9EB88	3783750	339300	Late Archaic
Elbert	9EB92	3772396	346516	Late Archaic
Elbert	9EB94	3777456	345240	Late Archaic
Emanuel	9EM113	3628907	378366	Late Archaic
Emanuel	9EM144	3587368	375352	Late Archaic
Emanuel	9EM22	3629080	383650	Late Archaic
Emanuel	9EM38	3616780	359880	Late Archaic
Emanuel	9EM70	3600413	373060	Late Archaic
Evans	9EU430	3550682	430746	Late Archaic
Evans	9EV111	3562200	418750	Late Archaic
Evans	9EV112	3553181	428085	Late Archaic
Evans	9EV171	3549074	423339	Late Archaic
Evans	9EV196	3550400	424297	Late Archaic
Evans	9EV3	3565300	408732	Late Archaic
Evans	9EV400	3552674	428116	Late Archaic
Evans	9EV408	3552732	426201	Late Archaic
Evans	9EV409	3552993	426656	Late Archaic
Evans	9EV413	3552237	428228	Late Archaic
Evans	9EV414	3551321	427694	Late Archaic
Evans	9EV430	3550682	430746	Late Archaic
Evans	9EV51	3551034	430380	Late Archaic
Evans	9EV53	3550854	431088	Late Archaic
Evans	9EV6	3552815	425676	Late Archaic
Evans	9EV62	3550006	430568	Late Archaic
Evans	9EV66	3551000	427425	Late Archaic
Evans	9EV70	3553496	425892	Late Archaic
Evans	9EV73	3553145	425996	Late Archaic
Evans	9EV76	3552928	425495	Late Archaic
Franklin	9FK15	3817700	309920	Late Archaic
Fulton	9FU105	3727504	745360	Late Archaic
Fulton	9FU124	3761530	743880	Late Archaic
Fulton	9FU140	3770150	755010	Late Archaic
Fulton	9FU145	3728600	745680	Late Archaic
Fulton	9FU147	3728293	745313	Late Archaic
Fulton	9FU148	3780840	751940	Late Archaic
Fulton	9FU149	3780680	752040	Late Archaic
Fulton	9FU153	3780490	752310	Late Archaic
Fulton	9FU166	3771183	750290	Late Archaic
Fulton	9FU177	3726000	717000	Late Archaic
Fulton	9FU178	3723780	720280	Late Archaic
Fulton	9FU22	3715100	730525	Late Archaic
Fulton	9FU357	3726620	719440	Late Archaic
Fulton	9FU378	3767940	755860	Late Archaic
Fulton	9FU380	3768270	755790	Late Archaic
Fulton	9FU430	3719010	710180	Late Archaic
Fulton	9FU479	3715297	721070	Late Archaic
Fulton	9FU49	3727816	745336	Late Archaic
Fulton	9FU519	3724344	720886	Late Archaic

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Fulton	9FU520	3726168	728965	Late Archaic
Fulton	9FU523	3726253	729449	Late Archaic
Fulton	9FU532	3769040	743470	Late Archaic
Fulton	9FU554	3721139	709289	Late Archaic
Fulton	9FU557	3721276	708433	Late Archaic
Fulton	9FU601	3721376	732574	Late Archaic
Fulton	9FU658	3730459	743072	Late Archaic
Fulton	9FU659	3764074	751886	Late Archaic
Fulton	9FU71	3711912	702480	Late Archaic
Fulton	9FU806	3728932	745091	Late Archaic
Fulton	9FU808	3728283	745459	Late Archaic
Fulton	9FU97	3737720	737550	Late Archaic
Glascock	9GL18	3684463	349131	Late Archaic
Glascock	9GL6	3677800	353360	Late Archaic
Glynn	9GN143	3454000	446912	Late Archaic
Glynn	9GN172	3462080	467240	Late Archaic
Glynn	9GN174	3440624	447888	Late Archaic
Glynn	9GN176	3456100	457550	Late Archaic
Glynn	9GN19	3454359	466419	Late Archaic
Glynn	9GN203	3459260	464580	Late Archaic
Glynn	9GN211	3458480	465580	Late Archaic
Glynn	9GN213	3458192	455204	Late Archaic
Glynn	9GN216	3440820	461310	Late Archaic
Glynn	9GN22	3447096	463768	Late Archaic
Glynn	9GN240	3435000	457430	Late Archaic
Glynn	9GN247	3448000	461000	Late Archaic
Glynn	9GN272	3460040	454110	Late Archaic
Glynn	9GN276	3460550	450060	Late Archaic
Glynn	9GN293	3455925	453990	Late Archaic
Glynn	9GN31	3456630	466470	Late Archaic
Glynn	9GN319	3451312	440857	Late Archaic
Glynn	9GN326	3445804	453613	Late Archaic
Glynn	9GN343	3445189	453607	Late Archaic
Glynn	9GN371	3465147	455047	Late Archaic
Glynn	9GN390	3466553	453174	Late Archaic
Glynn	9GN392	3466454	453672	Late Archaic
Glynn	9GN40	3453168	456288	Late Archaic
Glynn	9GN400	3466442	452643	Late Archaic
Glynn	9GN402	3467201	451103	Late Archaic
Glynn	9GN414	3463750	456155	Late Archaic
Glynn	9GN42	3440810	461470	Late Archaic
Glynn	9GN437	3458505	458290	Late Archaic
Glynn	9GN44	3440463	460379	Late Archaic
Glynn	9GN442	3458468	455180	Late Archaic
Glynn	9GN446	3440660	461518	Late Archaic
Glynn	9GN45	3437740	459460	Late Archaic
Glynn	9GN53	3456024	467180	Late Archaic
Glynn	9GN58	3456096	467264	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Glynn	9GN59	3458827	467799	Late Archaic
Glynn	9GN60	3459660	468257	Late Archaic
Glynn	9GN61	3440672	449960	Late Archaic
Glynn	9GN63	3439780	449816	Late Archaic
Glynn	9GN8	3444492	462732	Late Archaic
Glynn	9GN87	3456650	457200	Late Archaic
Glynn	9GN94	3444204	448720	Late Archaic
Greene	9GE1000	3706370	291980	Late Archaic
Greene	9GE1002	3705931	291817	Late Archaic
Greene	9GE1004	3706008	292096	Late Archaic
Greene	9GE1005	3706219	292047	Late Archaic
Greene	9GE1007	3706200	291780	Late Archaic
Greene	9GE1008	3706690	292041	Late Archaic
Greene	9GE1011	3706560	289640	Late Archaic
Greene	9GE1012	3706580	289300	Late Archaic
Greene	9GE1015	3706660	289560	Late Archaic
Greene	9GE1016	3706880	289240	Late Archaic
Greene	9GE1018	3706500	290340	Late Archaic
Greene	9GE1020	3721420	286100	Late Archaic
Greene	9GE1027	3721000	296384	Late Archaic
Greene	9GE1047	3721456	295672	Late Archaic
Greene	9GE1054	3721035	289350	Late Archaic
Greene	9GE1055	3720800	289375	Late Archaic
Greene	9GE1062	3719912	297156	Late Archaic
Greene	9GE1063	3719768	297156	Late Archaic
Greene	9GE1065	3719984	296624	Late Archaic
Greene	9GE1071	3720960	297336	Late Archaic
Greene	9GE1076	3721288	296456	Late Archaic
Greene	9GE108	3704280	290100	Late Archaic
Greene	9GE1116	3720385	309950	Late Archaic
Greene	9GE114	3713650	293600	Late Archaic
Greene	9GE116	3697030	295340	Late Archaic
Greene	9GE1226	3723540	313400	Late Archaic
Greene	9GE1278	3726580	288910	Late Archaic
Greene	9GE129	3694180	298240	Late Archaic
Greene	9GE130	3694108	298240	Late Archaic
Greene	9GE1317	3720467	290244	Late Archaic
Greene	9GE132	3692978	298830	Late Archaic
Greene	9GE133	3693350	298860	Late Archaic
Greene	9GE1334	3727390	286340	Late Archaic
Greene	9GE1335	3727900	286380	Late Archaic
Greene	9GE136	3693440	298350	Late Archaic
Greene	9GE1373	3724945	293580	Late Archaic
Greene	9GE1390	3699340	301960	Late Archaic
Greene	9GE1397	3699320	301720	Late Archaic
Greene	9GE1398	3699740	301420	Late Archaic
Greene	9GE1400	3699560	301700	Late Archaic
Greene	9GE1403	3700240	301990	Late Archaic

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Greene	9GE1404	3700280	302100	Late Archaic
Greene	9GE1406	3700280	302240	Late Archaic
Greene	9GE141	3697096	296312	Late Archaic
Greene	9GE1410	3699640	302500	Late Archaic
Greene	9GE1411	3699520	302220	Late Archaic
Greene	9GE1413	3699840	302340	Late Archaic
Greene	9GE145	3728288	287672	Late Archaic
Greene	9GE1470	3735540	288060	Late Archaic
Greene	9GE1479	3735520	288440	Late Archaic
Greene	9GE1489	3698000	295100	Late Archaic
Greene	9GE1539	3728200	290440	Late Archaic
Greene	9GE1552	3709620	295920	Late Archaic
Greene	9GE1553	3727400	290920	Late Archaic
Greene	9GE1581	3726820	292060	Late Archaic
Greene	9GE1590	3727970	292470	Late Archaic
Greene	9GE162	3693800	297980	Late Archaic
Greene	9GE1622	3728520	292540	Late Archaic
Greene	9GE1632	3724897	300440	Late Archaic
Greene	9GE1661	3696760	294370	Late Archaic
Greene	9GE1662	3696500	294380	Late Archaic
Greene	9GE1694	3699160	294820	Late Archaic
Greene	9GE1703	3699400	294420	Late Archaic
Greene	9GE1719	3700100	295060	Late Archaic
Greene	9GE1747	3701920	294060	Late Archaic
Greene	9GE1748	3701970	294380	Late Archaic
Greene	9GE176	3696216	296888	Late Archaic
Greene	9GE1776	3702400	296000	Late Archaic
Greene	9GE1781	3702500	294820	Late Archaic
Greene	9GE1784	3702800	294980	Late Archaic
Greene	9GE1804	3725680	288760	Late Archaic
Greene	9GE1809	3721280	283560	Late Archaic
Greene	9GE1815	3719680	283560	Late Archaic
Greene	9GE1896	3703430	290810	Late Archaic
Greene	9GE191	3697420	297380	Late Archaic
Greene	9GE1928	3703718	293723	Late Archaic
Greene	9GE204	3692995	298540	Late Archaic
Greene	9GE2082	3703347	294078	Late Archaic
Greene	9GE2085	3702568	293493	Late Archaic
Greene	9GE2091	3703358	293345	Late Archaic
Greene	9GE21	3714120	287456	Late Archaic
Greene	9GE2102	3702850	295410	Late Archaic
Greene	9GE2123	3704105	293310	Late Archaic
Greene	9GE2128	3704130	292780	Late Archaic
Greene	9GE2152	3706375	290620	Late Archaic
Greene	9GE2158	3700380	294090	Late Archaic
Greene	9GE2169	3706001	292688	Late Archaic
Greene	9GE23	3714672	287048	Late Archaic
Greene	9GE2461	3707810	300862	Late Archaic

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Greene	9GE2465	3703198	306143	Late Archaic
Greene	9GE26	3717168	287768	Late Archaic
Greene	9GE2703	3706832	289436	Late Archaic
Greene	9GE2778	3702884	290333	Late Archaic
Greene	9GE28	3714048	289192	Late Archaic
Greene	9GE309	3695330	298290	Late Archaic
Greene	9GE312	3705590	292420	Late Archaic
Greene	9GE319	3704400	293970	Late Archaic
Greene	9GE34	3707672	288408	Late Archaic
Greene	9GE340	3702380	295420	Late Archaic
Greene	9GE3534	3702841	299289	Late Archaic
Greene	9GE3558	3701764	299265	Late Archaic
Greene	9GE357	3706160	297660	Late Archaic
Greene	9GE3570	3701412	297256	Late Archaic
Greene	9GE3587	3700948	297141	Late Archaic
Greene	9GE359	3706360	297790	Late Archaic
Greene	9GE3601	3700412	296644	Late Archaic
Greene	9GE3611	3701625	298526	Late Archaic
Greene	9GE362	3706750	298100	Late Archaic
Greene	9GE3624	3721577	297422	Late Archaic
Greene	9GE3680	3724866	287251	Late Archaic
Greene	9GE3696	3733160	285650	Late Archaic
Greene	9GE3700	3733728	286060	Late Archaic
Greene	9GE3702	3734022	286117	Late Archaic
Greene	9GE3703	3733862	286063	Late Archaic
Greene	9GE374	3698080	292480	Late Archaic
Greene	9GE393	3698640	292510	Late Archaic
Greene	9GE403	3695530	297540	Late Archaic
Greene	9GE405	3695780	296870	Late Archaic
Greene	9GE410	3695540	298220	Late Archaic
Greene	9GE411	3695710	298350	Late Archaic
Greene	9GE412	3695720	298460	Late Archaic
Greene	9GE414	3695830	298560	Late Archaic
Greene	9GE418	3695720	298800	Late Archaic
Greene	9GE42	3700800	296530	Late Archaic
Greene	9GE448	3696340	299720	Late Archaic
Greene	9GE449	3696670	300270	Late Archaic
Greene	9GE458	3695400	298320	Late Archaic
Greene	9GE46	3698850	297490	Late Archaic
Greene	9GE475	3694570	299200	Late Archaic
Greene	9GE480	3695040	298470	Late Archaic
Greene	9GE486	3695040	298260	Late Archaic
Greene	9GE487	3694610	298200	Late Archaic
Greene	9GE492	3694300	298380	Late Archaic
Greene	9GE511	3698070	291930	Late Archaic
Greene	9GE513	3698040	291820	Late Archaic
Greene	9GE52	3726660	279920	Late Archaic
Greene	9GE531	3698240	293180	Late Archaic

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Greene	9GE533	3698130	293610	Late Archaic
Greene	9GE569	3696840	293650	Late Archaic
Greene	9GE58	3719984	289576	Late Archaic
Greene	9GE585	3699999	297617	Late Archaic
Greene	9GE586	3700017	297774	Late Archaic
Greene	9GE599	3699490	297530	Late Archaic
Greene	9GE603	3699040	297740	Late Archaic
Greene	9GE605	3699197	297415	Late Archaic
Greene	9GE615	3698320	297620	Late Archaic
Greene	9GE616	3698170	297620	Late Archaic
Greene	9GE62	3714190	289100	Late Archaic
Greene	9GE624	3698050	297520	Late Archaic
Greene	9GE645	3701880	297830	Late Archaic
Greene	9GE663	3697670	297330	Late Archaic
Greene	9GE668	3701440	297000	Late Archaic
Greene	9GE67	3732548	286408	Late Archaic
Greene	9GE676	3700910	296500	Late Archaic
Greene	9GE678	3702280	297720	Late Archaic
Greene	9GE679	3702100	297640	Late Archaic
Greene	9GE680	3702120	297560	Late Archaic
Greene	9GE682	3702040	297310	Late Archaic
Greene	9GE686	3701580	296910	Late Archaic
Greene	9GE687	3701540	296860	Late Archaic
Greene	9GE688	3696280	298230	Late Archaic
Greene	9GE691	3696580	298160	Late Archaic
Greene	9GE692	3696670	298200	Late Archaic
Greene	9GE695	3696880	298220	Late Archaic
Greene	9GE696	3696860	298190	Late Archaic
Greene	9GE698	3696790	298040	Late Archaic
Greene	9GE699	3696710	298020	Late Archaic
Greene	9GE705	3696660	298000	Late Archaic
Greene	9GE706	3696600	297970	Late Archaic
Greene	9GE707	3696660	297880	Late Archaic
Greene	9GE708	3696510	297960	Late Archaic
Greene	9GE713	3697310	295400	Late Archaic
Greene	9GE715	3697540	295760	Late Archaic
Greene	9GE716	3697190	296120	Late Archaic
Greene	9GE717	3697290	296130	Late Archaic
Greene	9GE720	3697160	296270	Late Archaic
Greene	9GE737	3697680	296820	Late Archaic
Greene	9GE74	3733924	287223	Late Archaic
Greene	9GE742	3697710	296680	Late Archaic
Greene	9GE747	3697890	296870	Late Archaic
Greene	9GE75	3734047	287348	Late Archaic
Greene	9GE76	3733885	286902	Late Archaic
Greene	9GE760	3713780	287490	Late Archaic
Greene	9GE77	3733647	286893	Late Archaic
Greene	9GE770	3716072	285936	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Greene	9GE78	3734063	286800	Late Archaic
Greene	9GE786	3714060	288648	Late Archaic
Greene	9GE790	3714550	288900	Late Archaic
Greene	9GE795	3714648	288720	Late Archaic
Greene	9GE796	3714744	288960	Late Archaic
Greene	9GE799	3716828	288252	Late Archaic
Greene	9GE83	3732419	286165	Late Archaic
Greene	9GE84	3732438	286009	Late Archaic
Greene	9GE893	3702630	289670	Late Archaic
Greene	9GE899	3701450	296180	Late Archaic
Greene	9GE92	3733198	286186	Late Archaic
Greene	9GE946	3701030	296390	Late Archaic
Greene	9GE952	3700457	296311	Late Archaic
Greene	9GE955	3700092	296410	Late Archaic
Greene	9GE960	3699350	296380	Late Archaic
Greene	9GE985	3719048	290228	Late Archaic
Greene	9GE986	3724350	286990	Late Archaic
Greene	9GE987	3724278	287290	Late Archaic
Greene	9GE989	3722920	281960	Late Archaic
Greene	9GE994	3718610	284530	Late Archaic
Gwinnett	9GW153	3757150	754340	Late Archaic
Gwinnett	9GW17	3764600	759888	Late Archaic
Gwinnett	9GW173	3746550	766250	Late Archaic
Gwinnett	9GW174	3746240	765980	Late Archaic
Gwinnett	9GW177	3759900	763300	Late Archaic
Gwinnett	9GW194	3776760	766830	Late Archaic
Gwinnett	9GW203	3778140	767500	Late Archaic
Gwinnett	9GW224	3773740	766240	Late Archaic
Gwinnett	9GW24	3772000	767000	Late Archaic
Gwinnett	9GW291	3763360	753630	Late Archaic
Gwinnett	9GW297	3768220	231720	Late Archaic
Gwinnett	9GW322	3775620	768180	Late Archaic
Gwinnett	9GW330	3762580	774300	Late Archaic
Gwinnett	9GW336	3755680	770890	Late Archaic
Gwinnett	9GW357	3767800	764020	Late Archaic
Gwinnett	9GW361	3768090	764320	Late Archaic
Gwinnett	9GW395	3773720	774180	Late Archaic
Gwinnett	9GW470	3773720	767810	Late Archaic
Gwinnett	9GW476	3773890	767200	Late Archaic
Gwinnett	9GW493	3772970	766310	Late Archaic
Gwinnett	9GW497	3773550	766140	Late Archaic
Gwinnett	9GW541	3773950	774486	Late Archaic
Gwinnett	9GW555	3771363	236542	Late Archaic
Gwinnett	9GW659	3761900	775060	Late Archaic
Gwinnett	9GW68	3761900	775060	Late Archaic
Gwinnett	9GW680	3774138	225384	Late Archaic
Gwinnett	9GW70	3772830	767480	Late Archaic
Habersham	9HM123	3845450	274450	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Habersham	9HM173	3828440	268140	Late Archaic
Habersham	9HM275	3843787	278244	Late Archaic
Habersham	9HM278	3845631	277321	Late Archaic
Habersham	9HM296	3834222	268263	Late Archaic
Habersham	9HM35	3832888	276720	Late Archaic
Habersham	9HM51	3842420	277160	Late Archaic
Habersham	9HM94	3845220	280020	Late Archaic
Hall	9HL109	3785480	775768	Late Archaic
Hall	9HL131	3799648	229852	Late Archaic
Hall	9HL164	3804696	238360	Late Archaic
Hall	9HL173	3803120	228780	Late Archaic
Hall	9HL225	3805660	239300	Late Archaic
Hall	9HL234	3810612	235804	Late Archaic
Hall	9HL293	3804384	237888	Late Archaic
Hall	9HL329	3793120	229276	Late Archaic
Hall	9HL332	3811192	250240	Late Archaic
Hall	9HL364	3813264	227192	Late Archaic
Hall	9HL367	3808312	226048	Late Archaic
Hall	9HL380	3789767	226694	Late Archaic
Hall	9HL437	3781450	224940	Late Archaic
Hall	9HL444	3794960	245280	Late Archaic
Hall	9HL462	3812700	248154	Late Archaic
Hall	9HL474	3813140	248114	Late Archaic
Hall	9HL517	3789208	236990	Late Archaic
Hall	9HL524	3808012	235385	Late Archaic
Hall	9HL525	3807857	235557	Late Archaic
Hall	9HL526	3807762	235339	Late Archaic
Hall	9HL85	3785720	773768	Late Archaic
Hall	9HL87	3786120	773792	Late Archaic
Hancock	9HK104	3688350	301040	Late Archaic
Hancock	9HK105	3688140	300900	Late Archaic
Hancock	9HK143	3696820	308780	Late Archaic
Hancock	9HK147	3696590	309120	Late Archaic
Hancock	9HK149	3696130	308890	Late Archaic
Hancock	9HK160	3695800	309100	Late Archaic
Hancock	9HK171	3696280	308660	Late Archaic
Hancock	9HK190	3699715	308795	Late Archaic
Hancock	9HK203	3698220	307795	Late Archaic
Hancock	9HK206	3698160	309560	Late Archaic
Hancock	9HK213	3700603	308612	Late Archaic
Hancock	9HK214	3700183	308747	Late Archaic
Hancock	9HK219	3697010	309485	Late Archaic
Hancock	9HK220	3696813	308259	Late Archaic
Hancock	9HK246	3683785	319613	Late Archaic
Hancock	9HK52	3674520	316960	Late Archaic
Hancock	9HK53	3674620	315820	Late Archaic
Hancock	9HK56	3675330	314840	Late Archaic
Hancock	9HK64	3679840	309090	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Hancock	9HK83	3676200	294430	Late Archaic
Hancock	9HK85	3674210	294210	Late Archaic
Hancock	9HK90	3675300	294440	Late Archaic
Hancock	9HK91	3674500	293750	Late Archaic
Hancock	9HK94	3674480	289820	Late Archaic
Hancock	9HK98	3681440	292560	Late Archaic
Hart	9HA111	3791280	311800	Late Archaic
Hart	9HA142	3815807	311483	Late Archaic
Hart	9HA174	3805116	232446	Late Archaic
Henry	9HY16	3711341	761160	Late Archaic
Henry	9HY21	3702080	772640	Late Archaic
Henry	9HY223	3693410	757270	Late Archaic
Henry	9HY235	3693090	757650	Late Archaic
Henry	9HY243	3692080	757820	Late Archaic
Henry	9HY249	3695582	748892	Late Archaic
Henry	9HY25	3701700	769900	Late Archaic
Henry	9HY260	3709280	758350	Late Archaic
Henry	9HY261	3709660	758160	Late Archaic
Henry	9HY262	3709940	758270	Late Archaic
Henry	9HY265	3699290	746470	Late Archaic
Henry	9HY291	3696760	777650	Late Archaic
Henry	9HY292	3696800	777300	Late Archaic
Henry	9HY351	3697190	764670	Late Archaic
Henry	9HY357	3695700	764800	Late Archaic
Henry	9HY36	3693200	758170	Late Archaic
Henry	9HY367	3696050	763810	Late Archaic
Henry	9HY37	3692950	758270	Late Archaic
Henry	9HY38	3692750	758450	Late Archaic
Henry	9HY39	3692310	758630	Late Archaic
Henry	9HY404	3706084	754660	Late Archaic
Henry	9HY407	3708218	761323	Late Archaic
Henry	9HY41	3689540	765300	Late Archaic
Henry	9HY42	3689520	765440	Late Archaic
Henry	9HY440	3708401	222914	Late Archaic
Henry	9HY441	3708563	222654	Late Archaic
Henry	9HY446	3708346	222187	Late Archaic
Henry	9HY449	3707866	223194	Late Archaic
Henry	9HY453	3709066	222110	Late Archaic
Henry	9HY457	3707258	223335	Late Archaic
Henry	9HY476	3692252	765105	Late Archaic
Henry	9HY484	3692562	765804	Late Archaic
Henry	9HY70	3694060	758050	Late Archaic
Henry	9HY78	3692790	757950	Late Archaic
Henry	9HY98	3700640	747340	Late Archaic
Houston	9HT112	3598690	249565	Late Archaic
Houston	9HT139	3598037	250325	Late Archaic
Houston	9HT148	3590047	253713	Late Archaic
Houston	9HT169	3607371	257091	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Houston	9HT170	3610395	257770	Late Archaic
Houston	9HT190	3610496	258084	Late Archaic
Houston	9HT194	3592436	243635	Late Archaic
Houston	9HT199	3600149	260889	Late Archaic
Houston	9HT21	3603400	260140	Late Archaic
Houston	9HT226	3594443	238859	Late Archaic
Houston	9HT231	3586862	259230	Late Archaic
Houston	9HT246	3603263	246384	Late Archaic
Houston	9HT249	3589244	258164	Late Archaic
Houston	9HT250	3600317	259188	Late Archaic
Houston	9HT26	3607354	258427	Late Archaic
Houston	9HT27	3607636	258410	Late Archaic
Houston	9HT29	3607920	258460	Late Archaic
Houston	9HT30	3607330	257460	Late Archaic
Houston	9HT31	3607223	257229	Late Archaic
Houston	9HT33	3608910	257670	Late Archaic
Houston	9HT35	3608580	258810	Late Archaic
Houston	9HT37	3607170	259160	Late Archaic
Houston	9HT40	3608830	259170	Late Archaic
Houston	9HT41	3609067	259064	Late Archaic
Houston	9HT42	3609420	258830	Late Archaic
Houston	9HT44	3610605	257538	Late Archaic
Houston	9HT46	3610918	258344	Late Archaic
Houston	9HT47	3611339	258282	Late Archaic
Houston	9HT54	3608970	258520	Late Archaic
Houston	9HT55	3616240	255630	Late Archaic
Houston	9HT63	3598560	239145	Late Archaic
Houston	9HT7	3607380	258000	Late Archaic
Houston	9HT72	3590650	242400	Late Archaic
Houston	9HT76	3591120	244100	Late Archaic
Houston	9HT8	3607830	258750	Late Archaic
Houston	9HT93	3615660	257460	Late Archaic
Irwin	9IR1	3506020	268320	Late Archaic
Irwin	9IR2	3498000	301000	Late Archaic
Irwin	9IR20	3511580	276001	Late Archaic
Irwin	9IR3	3484040	295680	Late Archaic
Irwin	9IR32	3511310	279640	Late Archaic
Jackson	9JK112	3778880	269940	Late Archaic
Jackson	9JK179	3762760	267802	Late Archaic
Jackson	9JK226	3775120	259472	Late Archaic
Jackson	9JK231	3779640	242845	Late Archaic
Jackson	9JK240	3784379	255800	Late Archaic
Jackson	9JK242	3784864	255159	Late Archaic
Jackson	9JK26	3784740	271720	Late Archaic
Jackson	9JK293	3783867	255898	Late Archaic
Jackson	9JK301	3776790	243415	Late Archaic
Jackson	9JK33	3783550	256640	Late Archaic
Jackson	9JK36	3783450	256730	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Jackson	9JK54	3776700	272700	Late Archaic
Jackson	9JK65	3781150	270790	Late Archaic
Jackson	9JK71	3787710	268090	Late Archaic
Jackson	9JK78	3776850	268890	Late Archaic
Jackson	9JK80	3763040	267780	Late Archaic
Jackson	9JK81	3763670	267240	Late Archaic
Jackson	9JK82	3763310	267230	Late Archaic
Jasper	9JA111	3683090	240280	Late Archaic
Jasper	9JA113	3683320	240370	Late Archaic
Jasper	9JA166	3677250	241210	Late Archaic
Jasper	9JA196	3676410	261360	Late Archaic
Jasper	9JA227	3692200	234490	Late Archaic
Jasper	9JA228	3691940	234500	Late Archaic
Jasper	9JA229	3692000	234445	Late Archaic
Jasper	9JA237	3672200	250040	Late Archaic
Jasper	9JA265	3678100	236550	Late Archaic
Jasper	9JA269	3677809	236870	Late Archaic
Jasper	9JA318	3678550	237850	Late Archaic
Jasper	9JA323	3685430	246080	Late Archaic
Jasper	9JA325	3685830	246140	Late Archaic
Jasper	9JA356	3690980	254450	Late Archaic
Jasper	9JA358	3689430	254830	Late Archaic
Jasper	9JA47	3674450	237300	Late Archaic
Jasper	9JA576	3699920	236510	Late Archaic
Jasper	9JA577	3699810	236540	Late Archaic
Jasper	9JA61	3674500	236850	Late Archaic
Jasper	9JA611	3676526	248652	Late Archaic
Jasper	9JA632	3676984	246788	Late Archaic
Jasper	9JA657	3676781	246338	Late Archaic
Jasper	9JA666	3686027	243038	Late Archaic
Jasper	9JA710	3678830	247897	Late Archaic
Jeff Davis	9JD16	3536050	356920	Late Archaic
Jeff Davis	9JD44	3518550	327770	Late Archaic
Jeff Davis	9JD49	3531600	342660	Late Archaic
Jeff Davis	9JD51	3531100	343280	Late Archaic
Jeff Davis	9JD52	3505300	336400	Late Archaic
Jeff Davis	9JD55	3505860	335840	Late Archaic
Jeff Davis	9JD56	3506960	333260	Late Archaic
Jeff Davis	9JD59	3536170	356860	Late Archaic
Jeff Davis	9JD60	3516420	326140	Late Archaic
Jeff Davis	9JD81	3525900	334000	Late Archaic
Jefferson	9JF150	3684650	376870	Late Archaic
Jefferson	9JF162	3672400	368220	Late Archaic
Jefferson	9JF19	3686040	374030	Late Archaic
Jefferson	9JF20	3685630	374170	Late Archaic
Jefferson	9JF21	3685890	373200	Late Archaic
Jefferson	9JF224	3649826	373300	Late Archaic
Jefferson	9JF23	3685710	375770	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Jefferson	9JF238	3656700	361820	Late Archaic
Jefferson	9JF240	3637386	377073	Late Archaic
Jefferson	9JF246	3644114	375395	Late Archaic
Jefferson	9JF27	3683620	377930	Late Archaic
Jefferson	9JF28	3683680	378120	Late Archaic
Jefferson	9JF319	3640748	376686	Late Archaic
Jefferson	9JF330	3679555	365910	Late Archaic
Jefferson	9JF344	3649575	369715	Late Archaic
Jefferson	9JF347	3642447	359200	Late Archaic
Jefferson	9JF348	3665457	352860	Late Archaic
Jefferson	9JF361	3635696	368036	Late Archaic
Jefferson	9JF396	3631686	372399	Late Archaic
Jefferson	9JF49	3682660	379100	Late Archaic
Jefferson	9JF54	3653400	355250	Late Archaic
Jefferson	9JF69	3684250	374200	Late Archaic
Jefferson	9JF94	3684360	377860	Late Archaic
Jenkins	9JS102	3627735	410002	Late Archaic
Jenkins	9JS103	3627417	410126	Late Archaic
Jenkins	9JS14	3615540	411210	Late Archaic
Jenkins	9JS20	3617450	410180	Late Archaic
Jenkins	9JS56	3630650	394681	Late Archaic
Jenkins	9JS65	3630324	419920	Late Archaic
Jenkins	9JS70	3635364	415541	Late Archaic
Jenkins	9JS71	3636886	414198	Late Archaic
Jenkins	9JS79	3632343	418404	Late Archaic
Jenkins	9JS9	3614390	411800	Late Archaic
Jenkins	9JS96	3631266	399066	Late Archaic
Jenkins	9JS97	3630515	403783	Late Archaic
Johnson	9JH12	3625750	317760	Late Archaic
Johnson	9JH3	3618732	349228	Late Archaic
Johnson	9JH4	3619444	349228	Late Archaic
Jones	9JO102	3666400	267000	Late Archaic
Jones	9JO104	3665960	267540	Late Archaic
Jones	9JO115	3669420	258110	Late Archaic
Jones	9JO194	3645400	250820	Late Archaic
Jones	9JO199	3644200	249550	Late Archaic
Jones	9JO21	3656840	269980	Late Archaic
Jones	9JO22	3656780	269360	Late Archaic
Jones	9JO232	3643960	250260	Late Archaic
Jones	9JO252	3654380	264912	Late Archaic
Jones	9JO253	3669950	257350	Late Archaic
Jones	9JO256	3671609	256758	Late Archaic
Jones	9JO259	3664720	245850	Late Archaic
Jones	9JO260	3664720	245820	Late Archaic
Jones	9JO262	3664400	246120	Late Archaic
Jones	9JO264	3664820	245650	Late Archaic
Jones	9JO275	3652940	259365	Late Archaic
Jones	9JO293	3670855	257476	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Jones	9JO32	3667650	273150	Late Archaic
Jones	9JO33	3668000	273300	Late Archaic
Jones	9JO4	3663933	259150	Late Archaic
Jones	9JO40	3664660	269880	Late Archaic
Jones	9JO402	3670489	248043	Late Archaic
Jones	9JO444	3670530	256237	Late Archaic
Jones	9JO474	3658569	245095	Late Archaic
Jones	9JO5	3664994	259262	Late Archaic
Jones	9JO51	3656870	262040	Late Archaic
Jones	9JO57	3658120	263730	Late Archaic
Jones	9JO6	3643240	251050	Late Archaic
Lamar	9LR13	3668020	769500	Late Archaic
Lamar	9LR16	3668710	769750	Late Archaic
Lamar	9LR34	3672900	769320	Late Archaic
Lamar	9LR41	3673412	768333	Late Archaic
Lamar	9LR49	3673416	767769	Late Archaic
Lamar	9LR50	3673448	768675	Late Archaic
Laurens	9LS119	3602190	315800	Late Archaic
Laurens	9LS121	3598860	297340	Late Archaic
Laurens	9LS125	3604380	315140	Late Archaic
Laurens	9LS130	3602370	314190	Late Archaic
Laurens	9LS164	3577320	319310	Late Archaic
Laurens	9LS241	3605935	338900	Late Archaic
Laurens	9LS255	3599121	311283	Late Archaic
Laurens	9LS263	3588414	307050	Late Archaic
Laurens	9LS283	3600350	310504	Late Archaic
Laurens	9LS320	3596284	329971	Late Archaic
Laurens	9LS335	3595570	328357	Late Archaic
Laurens	9LS337	3595793	327611	Late Archaic
Laurens	9LS44	3597500	324800	Late Archaic
Laurens	9LS45	3603190	306910	Late Archaic
Laurens	9LS5	3597220	324940	Late Archaic
Laurens	9LS82	3596500	307600	Late Archaic
Laurens	9LS87	3563200	320300	Late Archaic
Laurens	9LS91	3606860	294701	Late Archaic
Liberty	9LI1026	3532802	435998	Late Archaic
Liberty	9LI1078	3537580	437373	Late Archaic
Liberty	9LI1091	3536644	440170	Late Archaic
Liberty	9LI1098	3531536	437471	Late Archaic
Liberty	9LI1118	3543849	436788	Late Archaic
Liberty	9LI1152	3516350	459650	Late Archaic
Liberty	9LI1158	3513680	462860	Late Archaic
Liberty	9LI1261	3534421	456693	Late Archaic
Liberty	9LI1263	3534620	456490	Late Archaic
Liberty	9LI1321	3504281	461483	Late Archaic
Liberty	9LI1368	3525982	447763	Late Archaic
Liberty	9LI137	3504520	487080	Late Archaic
Liberty	9LI1379	3531184	456604	Late Archaic

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Liberty	9LI1392	3548927	434217	Late Archaic
Liberty	9LI1411	3549602	433377	Late Archaic
Liberty	9LI1412	3548871	434121	Late Archaic
Liberty	9LI1427	3548592	434520	Late Archaic
Liberty	9LI1431	3548786	435029	Late Archaic
Liberty	9LI1439	3549340	433016	Late Archaic
Liberty	9LI1451	3549145	434110	Late Archaic
Liberty	9LI1463	3549540	433771	Late Archaic
Liberty	9LI1466	3548681	435074	Late Archaic
Liberty	9LI1479	3547567	436494	Late Archaic
Liberty	9LI1486	3547161	436416	Late Archaic
Liberty	9LI1488	3548634	435346	Late Archaic
Liberty	9LI1493	3546222	436493	Late Archaic
Liberty	9LI1513	3546937	436974	Late Archaic
Liberty	9LI1519	3547385	436594	Late Archaic
Liberty	9LI1547	3528524	441411	Late Archaic
Liberty	9LI1549	3530140	441336	Late Archaic
Liberty	9LI1555	3530302	441372	Late Archaic
Liberty	9LI1556	3530106	441281	Late Archaic
Liberty	9LI1572	3531406	442158	Late Archaic
Liberty	9LI1617	3536779	454995	Late Archaic
Liberty	9LI1618	3536779	455145	Late Archaic
Liberty	9LI1636	3510052	464107	Late Archaic
Liberty	9LI1648	3499558	485324	Late Archaic
Liberty	9LI1689	3535832	451123	Late Archaic
Liberty	9LI1697	3536002	451997	Late Archaic
Liberty	9LI1733	3531766	448938	Late Archaic
Liberty	9LI1765	3535889	452478	Late Archaic
Liberty	9LI1919	3509689	473870	Late Archaic
Liberty	9LI1947	3549417	432570	Late Archaic
Liberty	9LI2007	3499065	481260	Late Archaic
Liberty	9LI2009	3497133	483273	Late Archaic
Liberty	9LI2044	3504797	486817	Late Archaic
Liberty	9LI2047	3504312	486970	Late Archaic
Liberty	9LI2051	3522829	455387	Late Archaic
Liberty	9LI2052	3523307	440765	Late Archaic
Liberty	9LI2056	3523020	446790	Late Archaic
Liberty	9LI2095	3531702	432359	Late Archaic
Liberty	9LI2141	3496677	483359	Late Archaic
Liberty	9LI231	3502000	483910	Late Archaic
Liberty	9LI239	3505040	486540	Late Archaic
Liberty	9LI247	3500550	484800	Late Archaic
Liberty	9LI248	3500535	484570	Late Archaic
Liberty	9LI249	3500530	484380	Late Archaic
Liberty	9LI252	3502540	486300	Late Archaic
Liberty	9LI254	3499522	485060	Late Archaic
Liberty	9LI257	3513619	473082	Late Archaic
Liberty	9LI266	3546886	437244	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Liberty	9LI267	3533907	440576	Late Archaic
Liberty	9LI268	3533350	436250	Late Archaic
Liberty	9LI271	3535475	453100	Late Archaic
Liberty	9LI275	3549750	434450	Late Archaic
Liberty	9LI277	3528231	433075	Late Archaic
Liberty	9LI278	3536010	446230	Late Archaic
Liberty	9LI291	3512700	465700	Late Archaic
Liberty	9LI295	3513300	459700	Late Archaic
Liberty	9LI296	3513700	460550	Late Archaic
Liberty	9LI297	3540010	424145	Late Archaic
Liberty	9LI301	3513480	451390	Late Archaic
Liberty	9LI302	3513950	451420	Late Archaic
Liberty	9LI317	3535759	441439	Late Archaic
Liberty	9LI355	3549898	432607	Late Archaic
Liberty	9LI367	3529205	440400	Late Archaic
Liberty	9LI41	3512300	467250	Late Archaic
Liberty	9LI462	3539928	425527	Late Archaic
Liberty	9LI463	3540293	426365	Late Archaic
Liberty	9LI507	3532890	440380	Late Archaic
Liberty	9LI509	3532200	440500	Late Archaic
Liberty	9LI534	3532560	453800	Late Archaic
Liberty	9LI544	3535293	441128	Late Archaic
Liberty	9LI578	3534043	440645	Late Archaic
Liberty	9LI580	3533945	440300	Late Archaic
Liberty	9LI581	3533833	440173	Late Archaic
Liberty	9LI593	3534121	440375	Late Archaic
Liberty	9LI705	3534830	448744	Late Archaic
Liberty	9LI711	3535648	447289	Late Archaic
Liberty	9LI721	3535128	447459	Late Archaic
Liberty	9LI735	3545127	439763	Late Archaic
Liberty	9LI786	3540846	432565	Late Archaic
Liberty	9LI878	3550059	433475	Late Archaic
Liberty	9LI901	3533173	436441	Late Archaic
Liberty	9LI914	3533057	436397	Late Archaic
Lincoln	9LC101	3753400	356140	Late Archaic
Lincoln	9LC102	3753300	356230	Late Archaic
Lincoln	9LC1038	3737669	380036	Late Archaic
Lincoln	9LC230	3756970	351780	Late Archaic
Lincoln	9LC24	3732800	378650	Late Archaic
Lincoln	9LC241	3723720	363020	Late Archaic
Lincoln	9LC256	3759930	352100	Late Archaic
Lincoln	9LC268	3729900	371840	Late Archaic
Lincoln	9LC296	3760020	352470	Late Archaic
Lincoln	9LC338	3757740	351320	Late Archaic
Lincoln	9LC341	3757780	349800	Late Archaic
Lincoln	9LC344	3757600	348950	Late Archaic
Lincoln	9LC392	3757670	354850	Late Archaic
Lincoln	9LC40	3737760	376550	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Lincoln	9LC41	3744350	368120	Late Archaic
Lincoln	9LC43	3743350	368650	Late Archaic
Lincoln	9LC445	3752290	355420	Late Archaic
Lincoln	9LC448	3752650	355530	Late Archaic
Lincoln	9LC450	3752570	355350	Late Archaic
Lincoln	9LC465	3753170	356200	Late Archaic
Lincoln	9LC482	3754200	358460	Late Archaic
Lincoln	9LC487	3754570	358780	Late Archaic
Lincoln	9LC488	3755020	358840	Late Archaic
Lincoln	9LC491	3754460	358920	Late Archaic
Lincoln	9LC495	3755020	359970	Late Archaic
Lincoln	9LC496	3755040	360120	Late Archaic
Lincoln	9LC499	3754950	360450	Late Archaic
Lincoln	9LC508	3753870	360030	Late Archaic
Lincoln	9LC51	3747250	369275	Late Archaic
Lincoln	9LC517	3752750	361950	Late Archaic
Lincoln	9LC529	3752340	362250	Late Archaic
Lincoln	9LC53	3747630	369265	Late Archaic
Lincoln	9LC533	3751250	363240	Late Archaic
Lincoln	9LC54	3747795	369420	Late Archaic
Lincoln	9LC541	3750480	364150	Late Archaic
Lincoln	9LC546	3750410	364450	Late Archaic
Lincoln	9LC550	3751990	362780	Late Archaic
Lincoln	9LC554	3750010	363920	Late Archaic
Lincoln	9LC56	3728840	372980	Late Archaic
Lincoln	9LC567	3750430	363540	Late Archaic
Lincoln	9LC574	3750770	362280	Late Archaic
Lincoln	9LC576	3749300	360950	Late Archaic
Lincoln	9LC578	3749150	361720	Late Archaic
Lincoln	9LC597	3748760	361860	Late Archaic
Lincoln	9LC614	3747630	367610	Late Archaic
Lincoln	9LC630	3746720	368090	Late Archaic
Lincoln	9LC633	3746880	368260	Late Archaic
Lincoln	9LC667	3737442	380056	Late Archaic
Lincoln	9LC683	3737470	377040	Late Archaic
Lincoln	9LC700	3738170	378050	Late Archaic
Lincoln	9LC709	3738540	377980	Late Archaic
Lincoln	9LC805	3744240	374100	Late Archaic
Lincoln	9LC844	3741610	367470	Late Archaic
Lincoln	9LC85	3757210	352940	Late Archaic
Lincoln	9LC852	3740350	366890	Late Archaic
Lincoln	9LC888	3744060	363920	Late Archaic
Lincoln	9LC889	3744530	364880	Late Archaic
Lincoln	9LC92	3744350	363300	Late Archaic
Lincoln	9LC93	3744590	364050	Late Archaic
Lincoln	9LC959	3744550	370870	Late Archaic
Lincoln	9LC974	3743000	368950	Late Archaic
Lincoln	9LC983	3730300	367950	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Lincoln	9LC99	3754990	357400	Late Archaic
Long	9LG12	3505400	451800	Late Archaic
Long	9LG153	3534720	419980	Late Archaic
Long	9LG163	3534808	423130	Late Archaic
Long	9LG258	3504500	430380	Late Archaic
Long	9LG263	3503920	430850	Late Archaic
Long	9LG268	3503710	429690	Late Archaic
Long	9LG277	3503480	431190	Late Archaic
Long	9LG294	3502800	428560	Late Archaic
Long	9LG3	3499400	437840	Late Archaic
Long	9LG308	3502360	429940	Late Archaic
Long	9LG320	3501660	429030	Late Archaic
Long	9LG328	3501150	431400	Late Archaic
Long	9LG333	3499340	431810	Late Archaic
Long	9LG344	3532200	426670	Late Archaic
Long	9LG352	3503192	424789	Late Archaic
Long	9LG388	3532846	419975	Late Archaic
Long	9LG394	3530823	423813	Late Archaic
Long	9LG397	3531316	423071	Late Archaic
Long	9LG4	3498400	443420	Late Archaic
Long	9LG415	3530779	424964	Late Archaic
Long	9LG421	3531989	425012	Late Archaic
Long	9LG5	3500930	436380	Late Archaic
Long	9LG524	3534123	417399	Late Archaic
Long	9LG562	3533713	416719	Late Archaic
Long	9LG592	3533320	417946	Late Archaic
Long	9LG641	3516866	418268	Late Archaic
Long	9LG646	3535208	421053	Late Archaic
Long	9LG65	3501380	429300	Late Archaic
Long	9LG650	3535342	423521	Late Archaic
Long	9LG659	3506180	444481	Late Archaic
Long	9LG68	3499910	430660	Late Archaic
Long	9LG79	3500550	429630	Late Archaic
Long	9LG83	3500180	429950	Late Archaic
Macon	9MA18	3592420	778180	Late Archaic
Macon	9MA19	3565580	779900	Late Archaic
Macon	9MA20	3571140	779380	Late Archaic
Macon	9MA26	3584080	780400	Late Archaic
Macon	9MA31	3572730	220990	Late Archaic
Macon	9MA32	3598240	778520	Late Archaic
Macon	9MA53	3565150	770300	Late Archaic
Macon	9MA55	3584150	780785	Late Archaic
Macon	9MA56	3584100	780550	Late Archaic
Macon	9MA69	3579900	226240	Late Archaic
Macon	9MA84	3575394	779587	Late Archaic
Madison	9MD10	3781672	294648	Late Archaic
Madison	9MD181	3782830	306091	Late Archaic
Madison	9MD193	3767002	309037	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Madison	9MD22	3773930	287380	Late Archaic
Madison	9MD24	3774250	288330	Late Archaic
Madison	9MD25	3774180	288530	Late Archaic
Madison	9MD26	3774280	288530	Late Archaic
Madison	9MD27	3774370	288510	Late Archaic
Madison	9MD33	3774200	287850	Late Archaic
Madison	9MD35	3773970	288350	Late Archaic
Madison	9MD36	3773970	288470	Late Archaic
Madison	9MD38	3773610	287160	Late Archaic
Madison	9MD42	3773790	288420	Late Archaic
Madison	9MD43	3774120	288730	Late Archaic
Madison	9MD48	3773800	288230	Late Archaic
Madison	9MD56	3768100	294140	Late Archaic
Madison	9MD78	3787860	289220	Late Archaic
Madison	9MD93	3787660	285940	Late Archaic
McDuffie	9MF130	3691710	378620	Late Archaic
McDuffie	9MF133	3690550	378220	Late Archaic
McDuffie	9MF161	3720510	358060	Late Archaic
McDuffie	9MF183	3719850	360580	Late Archaic
McDuffie	9MF20	3687390	374150	Late Archaic
McDuffie	9MF240	3721240	364130	Late Archaic
McDuffie	9MF25	3690280	378320	Late Archaic
McDuffie	9MF26	3690400	378500	Late Archaic
McDuffie	9MF266	3720000	349370	Late Archaic
McDuffie	9MF27	3692270	377190	Late Archaic
McDuffie	9MF28	3692260	377520	Late Archaic
McDuffie	9MF287	3718440	358780	Late Archaic
McDuffie	9MF37	3717840	358000	Late Archaic
McDuffie	9MF38	3716680	357880	Late Archaic
McDuffie	9MF394	3718810	356710	Late Archaic
McDuffie	9MF432	3718620	358730	Late Archaic
McDuffie	9MF487	3722120	364800	Late Archaic
McDuffie	9MF502	3693165	363404	Late Archaic
McDuffie	9MF510	3705210	363120	Late Archaic
McDuffie	9MF514	3722720	362388	Late Archaic
McDuffie	9MF57	3687700	374350	Late Archaic
McDuffie	9MF572	3722597	354395	Late Archaic
McDuffie	9MF577	3722240	355304	Late Archaic
McDuffie	9MF728	3723841	359348	Late Archaic
McDuffie	9MF795	3722171	357171	Late Archaic
McDuffie	9MF81	3686880	372950	Late Archaic
McDuffie	9MF87	3686860	372410	Late Archaic
McDuffie	9MF879	3718264	358391	Late Archaic
McDuffie	9MF9	3687100	374050	Late Archaic
McDuffie	9MF90	3687020	372640	Late Archaic
McDuffie	9MF932	3720067	348393	Late Archaic
McDuffie	9MF936	3705641	353291	Late Archaic
McIntosh	9MC10	3469890	460460	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
McIntosh	9MC101	3468800	455850	Late Archaic
McIntosh	9MC104	3479150	459920	Late Archaic
McIntosh	9MC115	3480440	460070	Late Archaic
McIntosh	9MC118	3480690	460280	Late Archaic
McIntosh	9MC120	3481030	448570	Late Archaic
McIntosh	9MC128	3479540	449380	Late Archaic
McIntosh	9MC131	3482560	447600	Late Archaic
McIntosh	9MC140	3484670	452570	Late Archaic
McIntosh	9MC142	3482395	452990	Late Archaic
McIntosh	9MC145	3485420	452510	Late Archaic
McIntosh	9MC147	3483240	453255	Late Archaic
McIntosh	9MC148	3482880	453490	Late Archaic
McIntosh	9MC152	3497190	454380	Late Archaic
McIntosh	9MC153	3497500	454360	Late Archaic
McIntosh	9MC154	3497600	454340	Late Archaic
McIntosh	9MC156	3497340	454520	Late Archaic
McIntosh	9MC160	3498990	455360	Late Archaic
McIntosh	9MC161	3498820	455440	Late Archaic
McIntosh	9MC164	3499750	457960	Late Archaic
McIntosh	9MC167	3499680	458700	Late Archaic
McIntosh	9MC172	3500050	456730	Late Archaic
McIntosh	9MC173	3500050	457000	Late Archaic
McIntosh	9MC177	3500090	451040	Late Archaic
McIntosh	9MC180	3500950	453020	Late Archaic
McIntosh	9MC183	3478100	453130	Late Archaic
McIntosh	9MC184	3478360	452850	Late Archaic
McIntosh	9MC185	3478400	453340	Late Archaic
McIntosh	9MC186	3478720	453090	Late Archaic
McIntosh	9MC195	3478840	452520	Late Archaic
McIntosh	9MC206	3489700	439110	Late Archaic
McIntosh	9MC222	3486190	458700	Late Archaic
McIntosh	9MC226	3485870	460610	Late Archaic
McIntosh	9MC227	3500030	464660	Late Archaic
McIntosh	9MC228	3499640	464690	Late Archaic
McIntosh	9MC23	3486390	476720	Late Archaic
McIntosh	9MC232	3501590	453620	Late Archaic
McIntosh	9MC234	3501830	452820	Late Archaic
McIntosh	9MC242	3479410	459600	Late Archaic
McIntosh	9MC243	3479595	459575	Late Archaic
McIntosh	9MC266	3478205	453355	Late Archaic
McIntosh	9MC267	3490014	446494	Late Archaic
McIntosh	9MC320	3493010	476925	Late Archaic
McIntosh	9MC323	3493280	479080	Late Archaic
McIntosh	9MC333	3497240	479770	Late Archaic
McIntosh	9MC344	3487380	469880	Late Archaic
McIntosh	9MC349	3480733	472606	Late Archaic
McIntosh	9MC350	3479799	472706	Late Archaic
McIntosh	9MC353	3476800	471400	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
McIntosh	9MC360	3471000	458300	Late Archaic
McIntosh	9MC368	3470074	459105	Late Archaic
McIntosh	9MC372	3473096	457110	Late Archaic
McIntosh	9MC398	3477720	457800	Late Archaic
McIntosh	9MC420	3487920	464760	Late Archaic
McIntosh	9MC427	3476000	456330	Late Archaic
McIntosh	9MC429	3475985	457010	Late Archaic
McIntosh	9MC433	3476485	457730	Late Archaic
McIntosh	9MC446	3494245	472757	Late Archaic
McIntosh	9MC447	3493641	472209	Late Archaic
McIntosh	9MC448	3494412	472870	Late Archaic
McIntosh	9MC449	3494388	472963	Late Archaic
McIntosh	9MC450	3494452	473164	Late Archaic
McIntosh	9MC451	3494201	473258	Late Archaic
McIntosh	9MC452	3493560	472621	Late Archaic
McIntosh	9MC454	3494220	472859	Late Archaic
McIntosh	9MC455	3494127	472941	Late Archaic
McIntosh	9MC456	3494456	473003	Late Archaic
McIntosh	9MC457	3493287	471444	Late Archaic
McIntosh	9MC458	3493089	471721	Late Archaic
McIntosh	9MC462	3492674	471560	Late Archaic
McIntosh	9MC466	3493444	472059	Late Archaic
McIntosh	9MC47	3469700	456510	Late Archaic
McIntosh	9MC470	3492915	471844	Late Archaic
McIntosh	9MC471	3492736	471842	Late Archaic
McIntosh	9MC472	3493061	472271	Late Archaic
McIntosh	9MC473	3493327	472453	Late Archaic
McIntosh	9MC478	3492726	472091	Late Archaic
McIntosh	9MC479	3492553	471822	Late Archaic
McIntosh	9MC48	3487530	446663	Late Archaic
McIntosh	9MC480	3492555	471707	Late Archaic
McIntosh	9MC481	3492450	471564	Late Archaic
McIntosh	9MC482	3492581	471605	Late Archaic
McIntosh	9MC484	3492127	471867	Late Archaic
McIntosh	9MC486	3492510	472622	Late Archaic
McIntosh	9MC487	3492229	472411	Late Archaic
McIntosh	9MC488	3492367	472175	Late Archaic
McIntosh	9MC493	3480550	467850	Late Archaic
McIntosh	9MC496	3473639	473740	Late Archaic
McIntosh	9MC499	3474738	475309	Late Archaic
McIntosh	9MC508	3488316	445497	Late Archaic
McIntosh	9MC515	3485303	476031	Late Archaic
McIntosh	9MC550	3476747	475168	Late Archaic
McIntosh	9MC562	3492674	471560	Late Archaic
McIntosh	9MC566	3493444	472059	Late Archaic
McIntosh	9MC570	3492915	471844	Late Archaic
McIntosh	9MC571	3492736	471842	Late Archaic
McIntosh	9MC572	3493061	472271	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
McIntosh	9MC573	3493327	472453	Late Archaic
McIntosh	9MC578	3492726	472091	Late Archaic
McIntosh	9MC579	3492553	471822	Late Archaic
McIntosh	9MC580	3492555	471707	Late Archaic
McIntosh	9MC581	3492450	471564	Late Archaic
McIntosh	9MC582	3492581	471605	Late Archaic
McIntosh	9MC584	3492127	471867	Late Archaic
McIntosh	9MC586	3492510	472622	Late Archaic
McIntosh	9MC587	3492229	472411	Late Archaic
McIntosh	9MC588	3492367	472175	Late Archaic
McIntosh	9MC6	3477255	462936	Late Archaic
McIntosh	9MC69	3486590	476840	Late Archaic
McIntosh	9MC81	3488400	470000	Late Archaic
McIntosh	9MC87	3484540	468640	Late Archaic
McIntosh	9MC89	3500430	462500	Late Archaic
Monroe	9MO1	3669860	236480	Late Archaic
Monroe	9MO333	3661450	234150	Late Archaic
Monroe	9MO337	3660350	235550	Late Archaic
Monroe	9MO338	3660600	235150	Late Archaic
Monroe	9MO340	3661450	234800	Late Archaic
Monroe	9MO341	3661150	233650	Late Archaic
Monroe	9MO342	3661000	233700	Late Archaic
Monroe	9MO343	3661295	234480	Late Archaic
Monroe	9MO353	3661600	232300	Late Archaic
Monroe	9MO355	3660650	233550	Late Archaic
Monroe	9MO360	3660500	233750	Late Archaic
Monroe	9MO361	3660650	234050	Late Archaic
Monroe	9MO371	3660600	235600	Late Archaic
Monroe	9MO378	3660900	232300	Late Archaic
Monroe	9MO384	3651410	235290	Late Archaic
Monroe	9MO397	3650620	234640	Late Archaic
Monroe	9MO416	3651350	235720	Late Archaic
Monroe	9MO419	3650330	234850	Late Archaic
Monroe	9MO421	3650630	234790	Late Archaic
Monroe	9MO425	3652330	236160	Late Archaic
Monroe	9MO426	3652400	236080	Late Archaic
Monroe	9MO432	3650560	233700	Late Archaic
Monroe	9MO433	3651460	234540	Late Archaic
Monroe	9MO434	3650550	233480	Late Archaic
Monroe	9MO438	3650050	234570	Late Archaic
Monroe	9MO439	3649700	234400	Late Archaic
Monroe	9MO448	3649785	234775	Late Archaic
Monroe	9MO454	3651608	235500	Late Archaic
Monroe	9MO461	3651520	233520	Late Archaic
Monroe	9MO462	3649690	232000	Late Archaic
Monroe	9MO479	3659550	242960	Late Archaic
Monroe	9MO487	3663150	238840	Late Archaic
Monroe	9MO506	3676840	230380	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Monroe	9MO507	3667150	233450	Late Archaic
Monroe	9MO548	3669880	777070	Late Archaic
Monroe	9MO558	3674795	777825	Late Archaic
Monroe	9MO559	3662691	238323	Late Archaic
Montgomery	9MY10	3540020	353380	Late Archaic
Montgomery	9MY11	3539410	353220	Late Archaic
Montgomery	9MY14	3551800	351270	Late Archaic
Montgomery	9MY23	3542000	352430	Late Archaic
Montgomery	9MY25	3541290	352650	Late Archaic
Montgomery	9MY38	3545876	350286	Late Archaic
Montgomery	9MY39	3561990	347017	Late Archaic
Montgomery	9MY46	3572238	358701	Late Archaic
Montgomery	9MY9	3539730	353100	Late Archaic
Morgan	9MG112	3706528	285096	Late Archaic
Morgan	9MG113	3706728	285072	Late Archaic
Morgan	9MG13	3715050	278280	Late Archaic
Morgan	9MG187	3714792	286360	Late Archaic
Morgan	9MG189	3715516	286084	Late Archaic
Morgan	9MG191	3715624	286048	Late Archaic
Morgan	9MG192	3715660	286084	Late Archaic
Morgan	9MG195	3714588	286240	Late Archaic
Morgan	9MG198	3715744	285984	Late Archaic
Morgan	9MG199	3715828	286108	Late Archaic
Morgan	9MG21	3718100	263100	Late Archaic
Morgan	9MG219	3720950	278750	Late Archaic
Morgan	9MG221	3721050	279850	Late Archaic
Morgan	9MG222	3720700	280750	Late Archaic
Morgan	9MG235	3742400	267800	Late Archaic
Morgan	9MG256	3707250	262150	Late Archaic
Morgan	9MG257	3706200	269700	Late Archaic
Morgan	9MG258	3707110	269100	Late Archaic
Morgan	9MG259	3708900	268300	Late Archaic
Morgan	9MG260	3707960	269120	Late Archaic
Morgan	9MG261	3708150	269300	Late Archaic
Morgan	9MG262	3709160	269350	Late Archaic
Morgan	9MG263	3708975	269500	Late Archaic
Morgan	9MG268	3707040	269775	Late Archaic
Morgan	9MG269	3708250	269660	Late Archaic
Morgan	9MG270	3708025	269480	Late Archaic
Morgan	9MG271	3725910	277400	Late Archaic
Morgan	9MG273	3704560	264380	Late Archaic
Morgan	9MG274	3705000	264720	Late Archaic
Morgan	9MG3	3718700	274720	Late Archaic
Morgan	9MG313	3705600	266600	Late Archaic
Morgan	9MG34	3727480	273900	Late Archaic
Morgan	9MG349	3707000	268700	Late Archaic
Morgan	9MG350	3706900	268760	Late Archaic
Morgan	9MG351	3706760	268680	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Morgan	9MG353	3706780	268800	Late Archaic
Morgan	9MG360	3706500	268500	Late Archaic
Morgan	9MG379	3722900	257920	Late Archaic
Morgan	9MG381	3716480	280980	Late Archaic
Morgan	9MG382	3708840	282180	Late Archaic
Morgan	9MG417	3705009	264444	Late Archaic
Morgan	9MG43	3715624	285528	Late Archaic
Morgan	9MG439	3728180	273400	Late Archaic
Morgan	9MG449	3733190	274260	Late Archaic
Morgan	9MG471	3726475	257462	Late Archaic
Morgan	9MG51	3709640	277980	Late Archaic
Morgan	9MG582	3715718	285547	Late Archaic
Morgan	9MG73	3714576	286696	Late Archaic
Morgan	9MG734	3721986	253796	Late Archaic
Morgan	9MG8	3725100	273050	Late Archaic
Morgan	9MG90	3710360	288000	Late Archaic
Newton	9NE10	3720950	242400	Late Archaic
Newton	9NE100	3722540	238790	Late Archaic
Newton	9NE125	3715740	234800	Late Archaic
Newton	9NE158	3705500	240100	Late Archaic
Newton	9NE165	3707760	240510	Late Archaic
Newton	9NE174	3709400	239390	Late Archaic
Newton	9NE183	3705860	239480	Late Archaic
Newton	9NE186	3711710	240200	Late Archaic
Newton	9NE197	3728100	238300	Late Archaic
Newton	9NE212	3719860	237768	Late Archaic
Newton	9NE213	3719602	237712	Late Archaic
Newton	9NE221	3718707	238267	Late Archaic
Newton	9NE230	3707214	227400	Late Archaic
Newton	9NE63	3727050	239890	Late Archaic
Newton	9NE71	3726400	240460	Late Archaic
Newton	9NE76	3697450	235060	Late Archaic
Newton	9NE81	3726800	228220	Late Archaic
Newton	9NE83	3725860	240420	Late Archaic
Newton	9NE84	3726540	228680	Late Archaic
Newton	9NE85	3726580	228320	Late Archaic
Newton	9NE91	3705640	239290	Late Archaic
Oconee	9OC101	3733900	280342	Late Archaic
Oconee	9OC102	3733362	279980	Late Archaic
Oconee	9OC103	3734308	279800	Late Archaic
Oconee	9OC112	3734366	280440	Late Archaic
Oconee	9OC113	3734340	280547	Late Archaic
Oconee	9OC115	3734710	280193	Late Archaic
Oconee	9OC117	3734650	280320	Late Archaic
Oconee	9OC120	3734250	280125	Late Archaic
Oconee	9OC176	3733260	280200	Late Archaic
Oconee	9OC179	3754320	278400	Late Archaic
Oconee	9OC19	3746144	285768	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Oconee	9OC199	3752957	273202	Late Archaic
Oconee	9OC201	3752000	273800	Late Archaic
Oconee	9OC204	3735320	286620	Late Archaic
Oconee	9OC208	3743180	286000	Late Archaic
Oconee	9OC209	3738470	277000	Late Archaic
Oconee	9OC218	3746340	286410	Late Archaic
Oconee	9OC225	3747490	284970	Late Archaic
Oconee	9OC230	3743400	285640	Late Archaic
Oconee	9OC24	3745168	286048	Late Archaic
Oconee	9OC26	3746432	285648	Late Archaic
Oconee	9OC267	3734000	274760	Late Archaic
Oconee	9OC27	3746240	285540	Late Archaic
Oconee	9OC276	3746300	275000	Late Archaic
Oconee	9OC285	3743450	275370	Late Archaic
Oconee	9OC29	3746000	286360	Late Archaic
Oconee	9OC30	3746480	285240	Late Archaic
Oconee	9OC301	3754158	264262	Late Archaic
Oconee	9OC302	3750630	273758	Late Archaic
Oconee	9OC324	3739990	275115	Late Archaic
Oconee	9OC33	3745432	286120	Late Archaic
Oconee	9OC342	3743099	276102	Late Archaic
Oconee	9OC35	3745432	286504	Late Archaic
Oconee	9OC36	3745204	286264	Late Archaic
Oconee	9OC37	3745432	286672	Late Archaic
Oconee	9OC382	3749982	282844	Late Archaic
Oconee	9OC383	3750300	282776	Late Archaic
Oconee	9OC39	3745576	286696	Late Archaic
Oconee	9OC4	3743320	270300	Late Archaic
Oconee	9OC40	3745552	286288	Late Archaic
Oconee	9OC401	3749970	281800	Late Archaic
Oconee	9OC413	3750958	260811	Late Archaic
Oconee	9OC416	3738188	273870	Late Archaic
Oconee	9OC44	3745288	286984	Late Archaic
Oconee	9OC49	3747100	276050	Late Archaic
Oconee	9OC51	3744350	285250	Late Archaic
Oconee	9OC52	3744120	285610	Late Archaic
Oconee	9OC53	3744450	285780	Late Archaic
Oconee	9OC55	3744200	285800	Late Archaic
Oconee	9OC75	3733580	279850	Late Archaic
Oconee	9OC78	3733700	280260	Late Archaic
Oconee	9OC81	3733600	280650	Late Archaic
Oconee	9OC82	3734540	280960	Late Archaic
Oconee	9OC83	3734530	280120	Late Archaic
Oconee	9OC87	3734500	280375	Late Archaic
Oconee	9OC88	3734265	280380	Late Archaic
Oconee	9OC90	3734980	280333	Late Archaic
Oconee	9OC97	3734275	280755	Late Archaic
Oglethorpe	9OG1	3746250	308060	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Oglethorpe	9OG126	3741805	292365	Late Archaic
Oglethorpe	9OG151	3743520	289910	Late Archaic
Oglethorpe	9OG155	3743770	290140	Late Archaic
Oglethorpe	9OG156	3746430	291250	Late Archaic
Oglethorpe	9OG163	3742860	289440	Late Archaic
Oglethorpe	9OG167	3742570	290560	Late Archaic
Oglethorpe	9OG179	3742850	288890	Late Archaic
Oglethorpe	9OG184	3748740	297750	Late Archaic
Oglethorpe	9OG187	3748890	297980	Late Archaic
Oglethorpe	9OG19	3746420	307080	Late Archaic
Oglethorpe	9OG214	3767590	318720	Late Archaic
Oglethorpe	9OG215	3767490	318600	Late Archaic
Oglethorpe	9OG229	3767670	318370	Late Archaic
Oglethorpe	9OG234	3767260	318180	Late Archaic
Oglethorpe	9OG240	3751370	319880	Late Archaic
Oglethorpe	9OG243	3746920	296660	Late Archaic
Oglethorpe	9OG244	3751400	320320	Late Archaic
Oglethorpe	9OG255	3751400	319960	Late Archaic
Oglethorpe	9OG273	3750740	319640	Late Archaic
Oglethorpe	9OG285	3763460	324220	Late Archaic
Oglethorpe	9OG297	3763410	323760	Late Archaic
Oglethorpe	9OG301	3763610	323720	Late Archaic
Oglethorpe	9OG31	3746860	306730	Late Archaic
Oglethorpe	9OG311	3762800	323310	Late Archaic
Oglethorpe	9OG316	3762630	323300	Late Archaic
Oglethorpe	9OG331	3760750	321300	Late Archaic
Oglethorpe	9OG334	3760750	321710	Late Archaic
Oglethorpe	9OG337	3761220	321540	Late Archaic
Oglethorpe	9OG341	3761130	322090	Late Archaic
Oglethorpe	9OG350	3761000	321930	Late Archaic
Oglethorpe	9OG355	3761740	321550	Late Archaic
Oglethorpe	9OG357	3760620	322470	Late Archaic
Oglethorpe	9OG36	3747600	292850	Late Archaic
Oglethorpe	9OG361	3760630	322240	Late Archaic
Oglethorpe	9OG368	3760890	322100	Late Archaic
Oglethorpe	9OG370	3747060	292830	Late Archaic
Oglethorpe	9OG383	3747150	293000	Late Archaic
Oglethorpe	9OG398	3747140	292710	Late Archaic
Oglethorpe	9OG40	3747170	297260	Late Archaic
Oglethorpe	9OG401	3747400	292680	Late Archaic
Oglethorpe	9OG417	3747100	292450	Late Archaic
Oglethorpe	9OG444	3767600	317640	Late Archaic
Oglethorpe	9OG447	3749840	295660	Late Archaic
Oglethorpe	9OG448	3762160	302700	Late Archaic
Oglethorpe	9OG458	3756100	301315	Late Archaic
Oglethorpe	9OG459	3754660	302280	Late Archaic
Oglethorpe	9OG460	3752430	312450	Late Archaic
Oglethorpe	9OG461	3752680	312100	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Oglethorpe	9OG463	3746400	299490	Late Archaic
Oglethorpe	9OG464	3757800	320440	Late Archaic
Oglethorpe	9OG465	3757680	319980	Late Archaic
Oglethorpe	9OG468	3758720	322320	Late Archaic
Oglethorpe	9OG469	3755340	322290	Late Archaic
Oglethorpe	9OG470	3759400	322530	Late Archaic
Oglethorpe	9OG471	3760380	324320	Late Archaic
Oglethorpe	9OG472	3760880	324680	Late Archaic
Oglethorpe	9OG474	3754500	315300	Late Archaic
Oglethorpe	9OG476	3759760	319340	Late Archaic
Oglethorpe	9OG477	3759620	319340	Late Archaic
Oglethorpe	9OG478	3759500	319340	Late Archaic
Oglethorpe	9OG479	3759640	319500	Late Archaic
Oglethorpe	9OG480	3763599	326028	Late Archaic
Oglethorpe	9OG481	3757000	327100	Late Archaic
Oglethorpe	9OG483	3759600	325400	Late Archaic
Oglethorpe	9OG486	3754400	315520	Late Archaic
Oglethorpe	9OG487	3757500	324840	Late Archaic
Oglethorpe	9OG5	3746300	319800	Late Archaic
Oglethorpe	9OG51	3748890	295540	Late Archaic
Oglethorpe	9OG512	3748167	295527	Late Archaic
Oglethorpe	9OG515	3745958	296178	Late Archaic
Oglethorpe	9OG516	3745800	295847	Late Archaic
Oglethorpe	9OG518	3746143	296293	Late Archaic
Oglethorpe	9OG520	3746710	295140	Late Archaic
Oglethorpe	9OG526	3747314	295952	Late Archaic
Oglethorpe	9OG530	3743782	290630	Late Archaic
Oglethorpe	9OG531	3743454	290566	Late Archaic
Oglethorpe	9OG537	3745648	292184	Late Archaic
Oglethorpe	9OG539	3744554	291825	Late Archaic
Oglethorpe	9OG54	3747660	296640	Late Archaic
Oglethorpe	9OG55	3747860	296580	Late Archaic
Oglethorpe	9OG550	3754678	315000	Late Archaic
Oglethorpe	9OG57	3748200	295880	Late Archaic
Oglethorpe	9OG571	3756293	318384	Late Archaic
Oglethorpe	9OG579	3758173	319831	Late Archaic
Oglethorpe	9OG6	3757000	331200	Late Archaic
Oglethorpe	9OG65	3747240	296300	Late Archaic
Oglethorpe	9OG66	3747180	296010	Late Archaic
Oglethorpe	9OG69	3747350	295180	Late Archaic
Oglethorpe	9OG70	3746980	296150	Late Archaic
Oglethorpe	9OG74	3744880	295500	Late Archaic
Oglethorpe	9OG83	3737660	289660	Late Archaic
Peach	9PE1	3604100	241540	Late Archaic
Peach	9PE16	3600550	237780	Late Archaic
Peach	9PE17	3607920	229120	Late Archaic
Peach	9PE26	3608650	241280	Late Archaic
Peach	9PE34	3603260	241610	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Peach	9PE39	3602537	227929	Late Archaic
Pulaski	9PU1	3574700	269100	Late Archaic
Pulaski	9PU10	3558280	276760	Late Archaic
Pulaski	9PU100	3559270	271503	Late Archaic
Pulaski	9PU108	3583302	265013	Late Archaic
Pulaski	9PU110	3580300	265551	Late Archaic
Pulaski	9PU115	3574172	268211	Late Archaic
Pulaski	9PU116	3578579	267827	Late Archaic
Pulaski	9PU119	3577230	266540	Late Archaic
Pulaski	9PU20	3572000	258560	Late Archaic
Pulaski	9PU23	3568740	270500	Late Archaic
Pulaski	9PU24	3569000	271720	Late Archaic
Pulaski	9PU28	3564400	254980	Late Archaic
Pulaski	9PU37	3585826	266153	Late Archaic
Pulaski	9PU43	3579630	258740	Late Archaic
Pulaski	9PU44	3579830	264170	Late Archaic
Pulaski	9PU45	3580240	264410	Late Archaic
Pulaski	9PU46	3579840	263540	Late Archaic
Pulaski	9PU52	3568570	271460	Late Archaic
Pulaski	9PU57	3585716	265205	Late Archaic
Pulaski	9PU67	3585460	266390	Late Archaic
Pulaski	9PU69	3585546	265614	Late Archaic
Pulaski	9PU71	3585436	265521	Late Archaic
Pulaski	9PU92	3584165	265770	Late Archaic
Pulaski	9PU94	3560919	259759	Late Archaic
Putnam	9PM1005	3678900	269500	Late Archaic
Putnam	9PM1041	3681220	269800	Late Archaic
Putnam	9PM1067	3702770	280360	Late Archaic
Putnam	9PM1076	3692220	270900	Late Archaic
Putnam	9PM1080	3691800	271000	Late Archaic
Putnam	9PM1125	3705350	280030	Late Archaic
Putnam	9PM1129	3695050	290580	Late Archaic
Putnam	9PM113	3705580	285880	Late Archaic
Putnam	9PM116	3699624	291456	Late Archaic
Putnam	9PM1205	3703300	273327	Late Archaic
Putnam	9PM121	3693768	297600	Late Archaic
Putnam	9PM122	3693940	297190	Late Archaic
Putnam	9PM126	3694216	297528	Late Archaic
Putnam	9PM131	3695240	297072	Late Archaic
Putnam	9PM1395	3692160	297120	Late Archaic
Putnam	9PM140	3692255	297594	Late Archaic
Putnam	9PM1402	3691130	299270	Late Archaic
Putnam	9PM1405	3691895	297315	Late Archaic
Putnam	9PM141	3704504	287552	Late Archaic
Putnam	9PM142	3695192	293960	Late Archaic
Putnam	9PM143	3695864	294528	Late Archaic
Putnam	9PM1459	3700895	290400	Late Archaic
Putnam	9PM1574	3702336	269946	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Putnam	9PM1580	3702434	269854	Late Archaic
Putnam	9PM1857	3700131	273882	Late Archaic
Putnam	9PM1872	3701761	272355	Late Archaic
Putnam	9PM1978	3700425	274009	Late Archaic
Putnam	9PM201	3705144	288336	Late Archaic
Putnam	9PM205	3695072	294456	Late Archaic
Putnam	9PM2074	3691792	270451	Late Archaic
Putnam	9PM2075	3692222	270486	Late Archaic
Putnam	9PM212	3696720	296360	Late Archaic
Putnam	9PM2176	3699361	278840	Late Archaic
Putnam	9PM2231	3674331	275966	Late Archaic
Putnam	9PM233	3696000	296408	Late Archaic
Putnam	9PM235	3696048	294696	Late Archaic
Putnam	9PM2420	3690465	270575	Late Archaic
Putnam	9PM2451	3684862	268407	Late Archaic
Putnam	9PM251	3693096	297768	Late Archaic
Putnam	9PM260	3693336	297744	Late Archaic
Putnam	9PM285	3692720	296888	Late Archaic
Putnam	9PM296	3698024	289792	Late Archaic
Putnam	9PM304	3694480	296888	Late Archaic
Putnam	9PM334	3695528	296576	Late Archaic
Putnam	9PM336	3695408	296792	Late Archaic
Putnam	9PM426	3700830	269200	Late Archaic
Putnam	9PM448	3699020	287170	Late Archaic
Putnam	9PM452	3698888	287864	Late Archaic
Putnam	9PM454	3698768	288072	Late Archaic
Putnam	9PM455	3698696	288192	Late Archaic
Putnam	9PM457	3698960	288216	Late Archaic
Putnam	9PM461	3698504	288456	Late Archaic
Putnam	9PM465	3698432	288432	Late Archaic
Putnam	9PM466	3698288	288720	Late Archaic
Putnam	9PM467	3698120	288984	Late Archaic
Putnam	9PM469	3698216	289072	Late Archaic
Putnam	9PM473	3698192	289768	Late Archaic
Putnam	9PM478	3697936	290360	Late Archaic
Putnam	9PM481	3698000	290648	Late Archaic
Putnam	9PM482	3697912	290744	Late Archaic
Putnam	9PM483	3698600	291216	Late Archaic
Putnam	9PM489	3698888	291288	Late Archaic
Putnam	9PM495	3699912	291360	Late Archaic
Putnam	9PM498	3700800	290540	Late Archaic
Putnam	9PM500	3701216	290192	Late Archaic
Putnam	9PM503	3700864	290744	Late Archaic
Putnam	9PM536	3705500	286460	Late Archaic
Putnam	9PM537	3705545	286660	Late Archaic
Putnam	9PM542	3705210	285520	Late Archaic
Putnam	9PM543	3705370	286580	Late Archaic
Putnam	9PM544	3705270	286720	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Putnam	9PM552	3704900	286850	Late Archaic
Putnam	9PM554	3704900	287000	Late Archaic
Putnam	9PM555	3705011	287255	Late Archaic
Putnam	9PM556	3704990	287370	Late Archaic
Putnam	9PM563	3705190	288130	Late Archaic
Putnam	9PM564	3704790	288530	Late Archaic
Putnam	9PM593	3698240	290680	Late Archaic
Putnam	9PM595	3698030	290075	Late Archaic
Putnam	9PM600	3706140	285890	Late Archaic
Putnam	9PM629	3689690	295830	Late Archaic
Putnam	9PM634	3687070	283370	Late Archaic
Putnam	9PM649	3683510	266000	Late Archaic
Putnam	9PM657	3682400	263880	Late Archaic
Putnam	9PM679	3689510	295090	Late Archaic
Putnam	9PM697	3681110	268545	Late Archaic
Putnam	9PM720	3675820	266250	Late Archaic
Putnam	9PM721	3675900	266420	Late Archaic
Putnam	9PM722	3675890	266630	Late Archaic
Putnam	9PM723	3675860	266820	Late Archaic
Putnam	9PM737	3698680	276720	Late Archaic
Putnam	9PM770	3674250	263680	Late Archaic
Putnam	9PM834	3687700	263470	Late Archaic
Putnam	9PM845	3695220	269160	Late Archaic
Putnam	9PM910	3690720	272980	Late Archaic
Putnam	9PM918	3691740	274080	Late Archaic
Putnam	9PM929	3692880	273720	Late Archaic
Putnam	9PM979	3675766	286272	Late Archaic
Putnam	9PM996	3699870	287520	Late Archaic
Rabun	9RA119	3847400	280020	Late Archaic
Rabun	9RA141	3874312	274960	Late Archaic
Rabun	9RA203	3864910	272200	Late Archaic
Rabun	9RA208	3858700	259530	Late Archaic
Rabun	9RA224	3870340	281810	Late Archaic
Rabun	9RA225	3855670	278270	Late Archaic
Rabun	9RA226	3856430	278220	Late Archaic
Rabun	9RA227	3848065	280660	Late Archaic
Rabun	9RA321	3865042	286761	Late Archaic
Rabun	9RA388	3850576	284869	Late Archaic
Rabun	9RA39	3869570	287300	Late Archaic
Rabun	9RA40	3869500	287460	Late Archaic
Rabun	9RA72	3855420	274050	Late Archaic
Richmond	9RI1007	3697300	388580	Late Archaic
Richmond	9RI101	3692030	385110	Late Archaic
Richmond	9RI102	3691960	385050	Late Archaic
Richmond	9RI104	3687840	383920	Late Archaic
Richmond	9RI1061	3710150	404920	Late Archaic
Richmond	9RI107	3688400	384690	Late Archaic
Richmond	9RI1083	3697840	408280	Late Archaic

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Richmond	9RI110	3697000	389260	Late Archaic
Richmond	9RI112	3699700	393880	Late Archaic
Richmond	9RI116	3697300	387720	Late Archaic
Richmond	9RI118	3697340	388130	Late Archaic
Richmond	9RI119	3697320	389090	Late Archaic
Richmond	9RI120	3697950	389580	Late Archaic
Richmond	9RI121	3698091	389602	Late Archaic
Richmond	9RI122	3698410	391480	Late Archaic
Richmond	9RI133	3684100	378910	Late Archaic
Richmond	9RI135	3691100	380100	Late Archaic
Richmond	9RI138	3691530	383540	Late Archaic
Richmond	9RI141	3687000	384060	Late Archaic
Richmond	9RI146	3695660	411680	Late Archaic
Richmond	9RI153	3695560	411580	Late Archaic
Richmond	9RI158	3708480	406280	Late Archaic
Richmond	9RI16	3697264	410684	Late Archaic
Richmond	9RI163	3687910	385410	Late Archaic
Richmond	9RI164	3693092	383276	Late Archaic
Richmond	9RI17	3697336	410408	Late Archaic
Richmond	9RI171	3708000	407000	Late Archaic
Richmond	9RI172	3708260	406960	Late Archaic
Richmond	9RI173	3707880	407220	Late Archaic
Richmond	9RI176	3697780	409510	Late Archaic
Richmond	9RI206	3690380	391690	Late Archaic
Richmond	9RI247	3687520	385370	Late Archaic
Richmond	9RI251	3695220	384800	Late Archaic
Richmond	9RI256	3689500	389740	Late Archaic
Richmond	9RI275	3689240	390000	Late Archaic
Richmond	9RI276	3689560	390170	Late Archaic
Richmond	9RI277	3689570	389910	Late Archaic
Richmond	9RI309	3687150	385480	Late Archaic
Richmond	9RI31	3697456	410552	Late Archaic
Richmond	9RI327	3707000	407690	Late Archaic
Richmond	9RI331	3699790	392770	Late Archaic
Richmond	9RI332	3700102	392161	Late Archaic
Richmond	9RI346	3699500	393730	Late Archaic
Richmond	9RI365	3691300	383790	Late Archaic
Richmond	9RI366	3692000	383700	Late Archaic
Richmond	9RI37	3697696	408144	Late Archaic
Richmond	9RI375	3698520	391540	Late Archaic
Richmond	9RI380	3697560	409280	Late Archaic
Richmond	9RI381	3697570	409430	Late Archaic
Richmond	9RI386	3690920	379520	Late Archaic
Richmond	9RI4	3685450	415950	Late Archaic
Richmond	9RI410	3691080	384080	Late Archaic
Richmond	9RI413	3692060	384930	Late Archaic
Richmond	9RI422	3706840	401500	Late Archaic
Richmond	9RI433	3691600	392350	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Richmond	9RI436	3700300	395480	Late Archaic
Richmond	9RI45	3696672	409456	Late Archaic
Richmond	9RI451	3697775	409400	Late Archaic
Richmond	9RI46	3697220	399080	Late Archaic
Richmond	9RI464	3697730	409480	Late Archaic
Richmond	9RI484	3698310	391220	Late Archaic
Richmond	9RI489	3696910	392170	Late Archaic
Richmond	9RI5	3686583	413897	Late Archaic
Richmond	9RI51	3690444	400072	Late Archaic
Richmond	9RI57	3694540	403910	Late Archaic
Richmond	9RI587	3693660	392820	Late Archaic
Richmond	9RI603	3697870	388700	Late Archaic
Richmond	9RI610	3690110	384300	Late Archaic
Richmond	9RI636	3688130	384480	Late Archaic
Richmond	9RI637	3688040	384300	Late Archaic
Richmond	9RI648	3686190	383790	Late Archaic
Richmond	9RI654	3686680	383660	Late Archaic
Richmond	9RI666	3685820	383700	Late Archaic
Richmond	9RI676	3686170	383520	Late Archaic
Richmond	9RI684	3688800	384310	Late Archaic
Richmond	9RI685	3688170	384090	Late Archaic
Richmond	9RI693	3689140	384310	Late Archaic
Richmond	9RI696	3688360	383820	Late Archaic
Richmond	9RI705	3691670	382680	Late Archaic
Richmond	9RI71	3694500	409740	Late Archaic
Richmond	9RI72	3692910	411220	Late Archaic
Richmond	9RI721	3691000	383820	Late Archaic
Richmond	9RI752	3690360	383420	Late Archaic
Richmond	9RI756	3690590	384060	Late Archaic
Richmond	9RI76	3693110	410460	Late Archaic
Richmond	9RI768	3686280	381800	Late Archaic
Richmond	9RI770	3686790	382840	Late Archaic
Richmond	9RI781	3686560	381040	Late Archaic
Richmond	9RI81	3694170	410310	Late Archaic
Richmond	9RI859	3683050	379320	Late Archaic
Richmond	9RI86	3700082	412881	Late Archaic
Richmond	9RI887	3693940	389100	Late Archaic
Richmond	9RI888	3692710	389000	Late Archaic
Richmond	9RI911	3692380	389380	Late Archaic
Richmond	9RI923	3695910	387720	Late Archaic
Richmond	9RI93	3692560	388900	Late Archaic
Richmond	9RI95	3692680	389380	Late Archaic
Richmond	9RI96	3691480	392250	Late Archaic
Richmond	9RI967	3694820	388550	Late Archaic
Richmond	9RI968	3694950	388650	Late Archaic
Richmond	9RI97	3689610	390040	Late Archaic
Richmond	9RI974	3694150	389280	Late Archaic
Richmond	9RI978	3693570	387720	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Richmond	9RI98	3689420	389800	Late Archaic
Richmond	9RI99	3688850	384600	Late Archaic
Richmond	9RI997	3692660	388770	Late Archaic
Rockdale	9RO10	3736080	227930	Late Archaic
Rockdale	9RO112	3738700	226520	Late Archaic
Rockdale	9RO13	3736250	228040	Late Archaic
Rockdale	9RO130	3737300	227300	Late Archaic
Rockdale	9RO135	3725281	763493	Late Archaic
Rockdale	9RO18	3736720	228020	Late Archaic
Rockdale	9RO2	3728780	222670	Late Archaic
Rockdale	9RO20	3738390	227355	Late Archaic
Rockdale	9RO21	3736150	227650	Late Archaic
Rockdale	9RO23	3736400	227250	Late Archaic
Rockdale	9RO24	3736340	227800	Late Archaic
Rockdale	9RO27	3735150	226770	Late Archaic
Rockdale	9RO30	3737710	227850	Late Archaic
Rockdale	9RO32	3734990	227450	Late Archaic
Rockdale	9RO33	3735460	227080	Late Archaic
Rockdale	9RO35	3735240	227430	Late Archaic
Rockdale	9RO36	3735590	227700	Late Archaic
Rockdale	9RO53	3727710	227825	Late Archaic
Rockdale	9RO57	3721620	769520	Late Archaic
Rockdale	9RO6	3735170	227890	Late Archaic
Rockdale	9RO7	3737200	227660	Late Archaic
Rockdale	9RO75	3738192	227219	Late Archaic
Rockdale	9RO78	3729280	227460	Late Archaic
Rockdale	9RO8	3737050	227780	Late Archaic
Rockdale	9RO84	3728550	227460	Late Archaic
Rockdale	9RO9	3738080	227850	Late Archaic
Screven	9SN138	3637000	453400	Late Archaic
Screven	9SN165	3608660	450640	Late Archaic
Screven	9SN168	3608640	451280	Late Archaic
Screven	9SN211	3613703	435533	Late Archaic
Screven	9SN223	3600775	450135	Late Archaic
Screven	9SN246	3621744	429552	Late Archaic
Screven	9SN248	3633945	438406	Late Archaic
Screven	9SN250	3620771	459708	Late Archaic
Screven	9SN260	3638040	448922	Late Archaic
Screven	9SN33	3607755	428049	Late Archaic
Screven	9SN37	3633600	454380	Late Archaic
Screven	9SN38	3632700	454660	Late Archaic
Screven	9SN39	3630750	454940	Late Archaic
Screven	9SN41	3630460	454410	Late Archaic
Screven	9SN51	3612034	459716	Late Archaic
Screven	9SN56	3633800	446140	Late Archaic
Screven	9SN59	3628800	456000	Late Archaic
Screven	9SN64	3630520	454560	Late Archaic
Screven	9SN67	3630985	452800	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Screven	9SN68	3631030	452160	Late Archaic
Screven	9SN70	3631160	450840	Late Archaic
Screven	9SN72	3631600	450040	Late Archaic
Screven	9SN81	3633950	445820	Late Archaic
Screven	9SN82	3634200	445400	Late Archaic
Screven	9SN90	3645500	441300	Late Archaic
Screven	9SN92	3635720	455280	Late Archaic
Spalding	9SP100	3689275	756778	Late Archaic
Spalding	9SP14	3690940	759480	Late Archaic
Spalding	9SP15	3689410	765120	Late Archaic
Spalding	9SP170	3677595	738286	Late Archaic
Spalding	9SP173	3677483	734312	Late Archaic
Spalding	9SP19	3689620	765460	Late Archaic
Spalding	9SP20	3689665	765555	Late Archaic
Spalding	9SP21	3689740	765750	Late Archaic
Spalding	9SP29	3690490	759760	Late Archaic
Spalding	9SP44	3691450	758860	Late Archaic
Spalding	9SP89	3689500	757852	Late Archaic
Spalding	9SP92	3689190	757789	Late Archaic
Stephens	9ST182	3820060	278650	Late Archaic
Stephens	9ST220	3831525	295750	Late Archaic
Stephens	9ST263	3825852	304060	Late Archaic
Stephens	9ST35	3823000	276470	Late Archaic
Stephens	9ST373	3822156	280736	Late Archaic
Stephens	9ST381	3817780	278339	Late Archaic
Stephens	9ST39	3818040	300315	Late Archaic
Stephens	9ST49	3822076	281113	Late Archaic
Taliaferro	9TL10	3721200	318200	Late Archaic
Taliaferro	9TL24	3726680	320880	Late Archaic
Tattnall	9TT34	3546540	388960	Late Archaic
Tattnall	9TT35	3554540	387640	Late Archaic
Tattnall	9TT4	3540095	393785	Late Archaic
Tattnall	9TT65	3551640	392000	Late Archaic
Tattnall	9TT86	3551920	391610	Late Archaic
Telfair	9TF10	3518440	310440	Late Archaic
Telfair	9TF100	3537760	339320	Late Archaic
Telfair	9TF103	3537940	339000	Late Archaic
Telfair	9TF104	3537680	338250	Late Archaic
Telfair	9TF106	3537720	338780	Late Archaic
Telfair	9TF108	3535800	329160	Late Archaic
Telfair	9TF11	3519130	311080	Late Archaic
Telfair	9TF13	3519070	310560	Late Archaic
Telfair	9TF133	3524840	327520	Late Archaic
Telfair	9TF134	3525100	327350	Late Archaic
Telfair	9TF137	3530300	294100	Late Archaic
Telfair	9TF139	3519320	312300	Late Archaic
Telfair	9TF142	3537800	302370	Late Archaic
Telfair	9TF144	3535090	304880	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Telfair	9TF149	3550000	323120	Late Archaic
Telfair	9TF15	3519520	312060	Late Archaic
Telfair	9TF158	3520300	306160	Late Archaic
Telfair	9TF16	3527550	333820	Late Archaic
Telfair	9TF165	3529300	314220	Late Archaic
Telfair	9TF166	3530000	315420	Late Archaic
Telfair	9TF167	3530220	315660	Late Archaic
Telfair	9TF199	3541938	316506	Late Archaic
Telfair	9TF2	3522810	298200	Late Archaic
Telfair	9TF25	3536040	340300	Late Archaic
Telfair	9TF26	3523720	328600	Late Archaic
Telfair	9TF27	3520580	308360	Late Archaic
Telfair	9TF28	3531080	339120	Late Archaic
Telfair	9TF3	3519600	311320	Late Archaic
Telfair	9TF30	3520840	303680	Late Archaic
Telfair	9TF31	3519470	317580	Late Archaic
Telfair	9TF33	3521260	304000	Late Archaic
Telfair	9TF34	3523590	327500	Late Archaic
Telfair	9TF36	3524560	327860	Late Archaic
Telfair	9TF37	3524260	328880	Late Archaic
Telfair	9TF39	3524340	329260	Late Archaic
Telfair	9TF4	3523520	298100	Late Archaic
Telfair	9TF40	3524430	329290	Late Archaic
Telfair	9TF42	3524830	329120	Late Archaic
Telfair	9TF43	3523600	328940	Late Archaic
Telfair	9TF45	3523280	328160	Late Archaic
Telfair	9TF47	3529420	336460	Late Archaic
Telfair	9TF48	3529520	336780	Late Archaic
Telfair	9TF49	3530700	338820	Late Archaic
Telfair	9TF5	3519290	308810	Late Archaic
Telfair	9TF51	3530340	337920	Late Archaic
Telfair	9TF52	3529310	336910	Late Archaic
Telfair	9TF55	3529560	336630	Late Archaic
Telfair	9TF57	3530200	322820	Late Archaic
Telfair	9TF58	3521510	303160	Late Archaic
Telfair	9TF6	3518740	310370	Late Archaic
Telfair	9TF65	3521960	303340	Late Archaic
Telfair	9TF66	3518000	309450	Late Archaic
Telfair	9TF67	3533600	318520	Late Archaic
Telfair	9TF7	3518600	309800	Late Archaic
Telfair	9TF74	3524200	298400	Late Archaic
Telfair	9TF78	3518600	310600	Late Archaic
Telfair	9TF79	3518670	310840	Late Archaic
Telfair	9TF8	3518770	311210	Late Archaic
Telfair	9TF80	3523500	327400	Late Archaic
Telfair	9TF84	3524680	327700	Late Archaic
Telfair	9TF85	3527100	333250	Late Archaic
Telfair	9TF9	3519000	309780	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Telfair	9TF90	3537570	339200	Late Archaic
Telfair	9TF92	3524950	328900	Late Archaic
Telfair	9TF93	3526240	330880	Late Archaic
Telfair	9TF94	3526200	330640	Late Archaic
Telfair	9TF95	3538340	338710	Late Archaic
Telfair	9TF97	3526130	330500	Late Archaic
Telfair	9TF98	3526040	330320	Late Archaic
Telfair	9TF99	3536850	339620	Late Archaic
Toombs	9TS10	3535350	371600	Late Archaic
Toombs	9TS55	3543414	372918	Late Archaic
Toombs	9TS7	3535440	370820	Late Archaic
Towns	9TO103	3869770	247480	Late Archaic
Towns	9TO108	3872630	245870	Late Archaic
Towns	9TO125	3873380	244360	Late Archaic
Towns	9TO134	3874450	242060	Late Archaic
Towns	9TO136	3874640	242400	Late Archaic
Towns	9TO14	3867400	250840	Late Archaic
Towns	9TO142	3869820	248860	Late Archaic
Towns	9TO146	3873080	249860	Late Archaic
Towns	9TO150	3872640	249580	Late Archaic
Towns	9TO189	3873140	248620	Late Archaic
Towns	9TO199	3873150	249800	Late Archaic
Towns	9TO24	3870000	239360	Late Archaic
Towns	9TO25	3869663	239271	Late Archaic
Towns	9TO277	3874902	248261	Late Archaic
Towns	9TO294	3869710	239385	Late Archaic
Towns	9TO298	3867650	239130	Late Archaic
Towns	9TO35	3870300	246120	Late Archaic
Towns	9TO36	3860750	252650	Late Archaic
Towns	9TO42	3870330	239220	Late Archaic
Towns	9TO44	3870760	239340	Late Archaic
Towns	9TO49	3870900	239520	Late Archaic
Towns	9TO68	3858060	245600	Late Archaic
Towns	9TO85	3871380	247360	Late Archaic
Towns	9TO9	3868804	244000	Late Archaic
Towns	9TO96	3869470	248780	Late Archaic
Treutlen	9TU10	3579000	337420	Late Archaic
Treutlen	9TU15	3579820	337150	Late Archaic
Treutlen	9TU17	3575180	340700	Late Archaic
Treutlen	9TU3	3581000	338300	Late Archaic
Twiggs	9TW102	3599760	272100	Late Archaic
Twiggs	9TW116	3614700	262700	Late Archaic
Twiggs	9TW117	3615180	262800	Late Archaic
Twiggs	9TW135	3612600	286400	Late Archaic
Twiggs	9TW154	3610853	278954	Late Archaic
Twiggs	9TW34	3612950	285750	Late Archaic
Twiggs	9TW72	3606760	271380	Late Archaic
Twiggs	9TW80	3622760	276300	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Twiggs	9TW91	3617992	270252	Late Archaic
Twiggs	9TW97	3606940	263460	Late Archaic
Twiggs	9TW98	3613610	261600	Late Archaic
Upson	9UP1	3624100	757250	Late Archaic
Upson	9UP10	3620400	762350	Late Archaic
Upson	9UP14	3648050	732050	Late Archaic
Upson	9UP18	3636400	741240	Late Archaic
Upson	9UP22	3626050	755800	Late Archaic
Upson	9UP26	3640900	733480	Late Archaic
Upson	9UP42	3652590	748390	Late Archaic
Upson	9UP53	3651860	747640	Late Archaic
Upson	9UP73	3645055	749350	Late Archaic
Walton	9WN10	3743450	258200	Late Archaic
Walton	9WN104	3730020	255840	Late Archaic
Walton	9WN112	3730420	255780	Late Archaic
Walton	9WN113	3730200	255820	Late Archaic
Walton	9WN114	3730250	255950	Late Archaic
Walton	9WN119	3754870	250600	Late Archaic
Walton	9WN12	3736500	245600	Late Archaic
Walton	9WN132	3743139	245353	Late Archaic
Walton	9WN142	3730666	253920	Late Archaic
Walton	9WN143	3730341	253701	Late Archaic
Walton	9WN144	3729801	253811	Late Archaic
Walton	9WN145	3729578	254049	Late Archaic
Walton	9WN17	3746690	244000	Late Archaic
Walton	9WN18	3746890	243900	Late Archaic
Walton	9WN29	3751790	253290	Late Archaic
Walton	9WN49	3743900	251720	Late Archaic
Walton	9WN70	3730040	254120	Late Archaic
Walton	9WN72	3730400	253520	Late Archaic
Walton	9WN79	3730120	255180	Late Archaic
Walton	9WN86	3733500	253570	Late Archaic
Warren	9WR11	3689350	364920	Late Archaic
Warren	9WR17	3693100	342000	Late Archaic
Warren	9WR23	3699510	350450	Late Archaic
Warren	9WR77	3687468	363544	Late Archaic
Warren	9WR96	3683350	366700	Late Archaic
Washington	9WG100	3649990	310600	Late Archaic
Washington	9WG112	3649700	320130	Late Archaic
Washington	9WG127	3656890	309300	Late Archaic
Washington	9WG129	3651290	348280	Late Archaic
Washington	9WG141	3662350	315170	Late Archaic
Washington	9WG156	3654239	323171	Late Archaic
Washington	9WG203	3644328	332287	Late Archaic
Washington	9WG206	3647121	333712	Late Archaic
Washington	9WG230	3656318	311709	Late Archaic
Washington	9WG245	3659799	324024	Late Archaic
Washington	9WG29	3644500	354200	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Washington	9WG3	3654080	353520	Late Archaic
Washington	9WG32	3646051	347919	Late Archaic
Washington	9WG44	3662520	332840	Late Archaic
Washington	9WG51	3664450	329230	Late Archaic
Wayne	9WY15	3484352	438147	Late Archaic
Wayne	9WY19	3474925	434857	Late Archaic
Wayne	9WY3	3482545	439802	Late Archaic
Wayne	9WY34	3478550	434560	Late Archaic
Wayne	9WY38	3475000	435000	Late Archaic
Wayne	9WY4	3482860	439546	Late Archaic
Wayne	9WY40	3489500	418200	Late Archaic
Wayne	9WY42	3478250	439350	Late Archaic
Wayne	9WY48	3483269	439037	Late Archaic
Wayne	9WY5	3484378	438425	Late Archaic
Wayne	9WY6	3481588	439555	Late Archaic
Wayne	9WY7	3483900	438679	Late Archaic
Wayne	9WY70	3484160	438590	Late Archaic
Wayne	9WY73	3483520	438732	Late Archaic
Wayne	9WY99	3487822	436547	Late Archaic
Wheeler	9WL113	3554260	320870	Late Archaic
Wheeler	9WL118	3555691	321590	Late Archaic
Wheeler	9WL23	3548700	325700	Late Archaic
Wheeler	9WL27	3535900	346130	Late Archaic
Wheeler	9WL52	3549360	339000	Late Archaic
Wheeler	9WL60	3535330	343840	Late Archaic
Wheeler	9WL63	3574110	340110	Late Archaic
Wheeler	9WL77	3552010	320910	Late Archaic
Wheeler	9WL78	3535880	345840	Late Archaic
Wheeler	9WL95	3553180	321310	Late Archaic
Wilcox	9WI17	3547640	281280	Late Archaic
Wilcox	9WI23	3552660	274320	Late Archaic
Wilcox	9WI24	3552580	274840	Late Archaic
Wilcox	9WI5	3553640	279260	Late Archaic
Wilcox	9WI6	3536940	286200	Late Archaic
Wilcox	9WI7	3550530	279020	Late Archaic
Wilcox	9WI8	3552580	274620	Late Archaic
Wilkes	9WS104	3720280	347460	Late Archaic
Wilkes	9WS106	3721540	347320	Late Archaic
Wilkes	9WS118	3720260	349300	Late Archaic
Wilkes	9WS122	3723350	352530	Late Archaic
Wilkes	9WS158	3724720	352490	Late Archaic
Wilkes	9WS159	3724660	352800	Late Archaic
Wilkes	9WS214	3757290	336510	Late Archaic
Wilkes	9WS250	3757740	348300	Late Archaic
Wilkes	9WS256	3752670	349300	Late Archaic
Wilkes	9WS258	3753000	349780	Late Archaic
Wilkes	9WS267	3761900	346840	Late Archaic
Wilkes	9WS29	3760240	336390	Late Archaic

County	Site Number	Northing	Easting	Cultural Affiliation
Wilkes	9WS319	3753180	327000	Late Archaic
Wilkes	9WS320	3753480	327840	Late Archaic
Wilkes	9WS322	3754050	326620	Late Archaic
Wilkes	9WS323	3754040	326940	Late Archaic
Wilkes	9WS324	3754060	327070	Late Archaic
Wilkes	9WS327	3754100	326750	Late Archaic
Wilkes	9WS331	3753600	327200	Late Archaic
Wilkes	9WS381	3736581	332030	Late Archaic
Wilkes	9WS399	3735446	333043	Late Archaic
Wilkes	9WS43	3757430	346635	Late Archaic
Wilkes	9WS447	3740751	319758	Late Archaic
Wilkes	9WS448	3760309	336512	Late Archaic
Wilkes	9WS48	3761920	347000	Late Archaic
Wilkes	9WS51	3761920	346670	Late Archaic
Wilkes	9WS55	3728100	335100	Late Archaic
Wilkes	9WS63	3724300	352670	Late Archaic
Wilkes	9WS67	3747800	352400	Late Archaic
Wilkinson	9WK103	3635560	300720	Late Archaic
Wilkinson	9WK124	3636740	288166	Late Archaic
Wilkinson	9WK139	3622633	307975	Late Archaic
Wilkinson	9WK141	3611989	292064	Late Archaic
Wilkinson	9WK143	3622122	304155	Late Archaic
Wilkinson	9WK22	3639180	277500	Late Archaic
Wilkinson	9WK24	3644150	282100	Late Archaic
Wilkinson	9WK31	3627450	296940	Late Archaic
Wilkinson	9WK32	3627000	297000	Late Archaic
Wilkinson	9WK68	3648659	300880	Late Archaic
Wilkinson	9WK96	3628380	316275	Late Archaic

APPENDIX D: Paleoindian Database of the Americas (PIDBA) County Biface Data

COUNTY	EARLY-MIDDLE PALEOINDIAN				MIDDLE-LATE PALEOINDIAN				LATE PALEOINDIAN						
	Clovis	Clovis Variant	Cumberland	Redstone	Beaver Lake	Quad	Suwannee	Simpson	Dalton	Dalton-Basal Thinning	Dalton-Lanceolate	Dalton-Side Notch	Greenbriar	Dalton-Nuckolls	Hardaway
APPLING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BALDWIN	11	0	1	0	0	2	2	3	32	5	1	0	1	0	1
BANKS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BARROW	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
BEN HILL	1	0	0	0	0	0	1	1	2	1	0	0	0	0	1
BIBB	2	0	0	1	1	1	0	0	4	3	0	0	0	0	0
BLECKLEY	1	0	0	0	1	0	0	1	3	5	0	0	0	0	0
BRANTLEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRYAN	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BULLOCH	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0
BURKE	49	0	0	8	3	4	6	12	46	86	1	0	3	1	4
BUTTS	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0
CANDLER	1	0	0	1	0	0	0	0	2	0	0	0	0	0	0
CHATHAM	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
CLARKE	1	0	0	0	0	0	0	0	1	8	0	0	0	0	0
CLAYTON	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0
COFFEE	6	0	0	0	0	0	0	3	3	3	0	0	0	0	1
COLUMBIA	10	0	0	0	0	0	2	0	4	55	0	0	1	0	6
CRAWFORD	4	0	0	0	1	0	0	1	1	7	0	0	0	0	0
DE KALB	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
DODGE	11	0	0	0	0	0	0	0	8	8	0	0	0	0	0
DOOLY	7	0	0	0	1	0	2	4	14	0	1	0	0	0	0
EFFINGHAM	1	0	0	0	0	0	0	0	0	3	0	0	0	0	1
ELBERT	5	0	0	0	0	1	2	0	6	1	0	0	0	0	2
EMANUEL	3	0	0	0	0	0	1	0	1	2	0	0	0	0	0
EVANS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FRANKLIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FULTON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GLASCOCK	2	0	0	0	0	0	1	0	19	5	0	0	0	0	0
GLYNN	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
GREENE	10	0	0	1	1	3	0	0	30	17	2	0	2	0	1
GWINNETT	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0
HABERSHAM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HALL	1	0	0	0	0	0	0	0	3	1	0	0	0	0	0

COUNTY	EARLY-MIDDLE PALEOINDIAN				MIDDLE-LATE PALEOINDIAN				LATE PALEOINDIAN						
	Clovis	Clovis Variant	Cumberland	Redstone	Beaver Lake	Quad	Suwannee	Simpson	Dalton	Dalton-Basal Thinning	Dalton-Lanceolate	Dalton-Side Notch	Greenbriar	Dalton-Nuckolls	Hardaway
HANCOCK	2	0	0	0	0	1	0	0	9	3	0	0	0	0	1
HART	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HENRY	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0
HOUSTON	6	0	0	0	0	0	7	4	16	6	4	0	0	0	0
IRWIN	6	0	0	0	0	0	1	1	0	0	0	0	0	0	0
JACKSON	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
JASPER	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0
JEFF DAVIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JEFFERSON	2	0	0	0	0	0	1	1	8	5	0	0	0	0	0
JENKINS	6	0	0	0	0	0	1	1	10	1	0	0	0	0	0
JOHNSON	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0
JONES	3	0	0	1	0	0	1	0	5	1	0	0	0	0	0
LAMAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LAURENS	7	0	0	0	0	0	0	0	8	5	1	0	0	0	0
LIBERTY	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
LINCOLN	8	0	0	0	0	1	2	1	27	4	1	0	0	0	0
LONG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
McDUFFIE	1	0	0	0	0	0	0	2	5	1	0	0	0	0	0
McINTOSH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MACON	2	0	0	0	0	0	0	1	3	6	0	0	0	0	0
MADISON	1	0	0	0	0	0	0	0	1	2	0	0	0	0	0
MONROE	2	0	0	0	0	0	0	0	4	1	0	0	0	0	0
MONTGOMERY	0	0	0	0	0	0	1	0	3	1	0	0	0	0	0
MORGAN	0	0	0	0	0	0	0	0	7	3	0	0	0	0	0
NEWTON	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
OCONEE	1	0	0	0	1	1	0	1	8	23	0	0	2	0	2
OGLETHORPE	2	0	0	0	1	1	0	1	6	3	1	0	0	0	0
PEACH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PULASKI	3	0	0	0	0	2	1	2	0	8	0	0	0	0	0
PUTNAM	0	0	0	0	1	1	1	1	9	7	1	0	0	0	0
RABUN	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
RICHMOND	6	0	0	0	0	0	0	2	6	4	0	0	0	0	1
ROCKDALE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCREVEN	3	0	0	0	0	0	0	0	11	2	0	0	0	0	1
SPALDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STEPHENS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

COUNTY	EARLY-MIDDLE PALEOINDIAN				MIDDLE-LATE PALEOINDIAN				LATE PALEOINDIAN						
	Clovis	Clovis Variant	Cumberland	Redstone	Beaver Lake	Quad	Suwannee	Simpson	Dalton	Dalton-Basal Thinning	Dalton-Lanceolate	Dalton-Side Notch	Greenbriar	Dalton-Nuckolls	Hardaway
TALIAFERRO	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0
TATTNALL	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
TELFAIR	4	0	0	0	0	0	1	1	7	2	0	0	0	0	0
TOOMBS	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
TOWNS	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TREUTLEN	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1
TWIGGS	0	0	0	0	0	0	0	1	18	6	0	0	0	0	2
UPSON	0	0	0	0	0	0	0	1	2	4	0	0	0	0	0
WALTON	1	0	0	0	0	1	0	0	2	0	0	0	0	0	0
WARREN	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
WASHINGTON	6	0	0	0	1	2	2	3	22	17	1	0	0	0	2
WAYNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WHEELER	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
WILCOX	3	0	0	0	0	0	1	0	3	2	0	0	0	0	0
WILKES	1	0	0	0	1	0	0	2	8	3	0	0	0	0	0
WILKINSON	6	0	0	0	1	2	7	4	30	5	1	0	3	0	1

APPENDIX E: Spatial Statistical Outputs (Getis Ord Gi* Z-scores) and Habitat Suitabilities for all Counties in Watershed Study Area

PSuit = Pollen Habitat Suitability
PLSuit = Pollen and Lithic Habitat Suitability
PGiZ = Getis Ord Gi* Z-scores for Pollen Habitat Suitability
PLGiZ = Getis Ord Gi* Z-scores for Pollen and Lithic Habitat Suitability

SOURCE_ID	COUNTY	Sqkm	14K_ PSuit	13K_ PSuit	12K_ PSuit	11K_ PSuit	10K_ PSuit	9K_ PSuit	8K_ PSuit	7K_ PSuit	6K_ PSuit	5K_ PSuit	4K_ PSuit	3K_ PSuit
0	APPLING	1832.22	2	2	2	2	2	2	1	1	1	1	1	1
1	BALDWIN	984.16	2	2	3	2	2	2	1	1	1	1	1	1
2	BANKS	886.94	2	2	3	3	3	3	3	3	3	3	3	3
3	BARROW	612.68	2	2	3	2	2	2	3	3	3	3	3	3
4	BEN HILL	908.05	2	2	2	2	2	2	1	1	1	1	1	1
5	BIBB	934.26	2	2	2	2	2	2	2	1	1	1	1	1
6	BLECKLEY	794.90	2	2	2	2	2	2	1	1	1	1	1	1
7	BRANTLEY	1580.24	2	2	2	2	2	2	1	1	1	1	1	1
8	BRYAN	1605.68	2	2	2	2	2	2	1	1	1	1	1	1
9	BULLOCH	2498.20	3	2	2	2	2	2	1	1	1	1	1	1
10	BURKE	3072.51	3	2	3	2	2	2	1	1	1	1	1	1
11	BUTTS	696.06	2	2	3	2	2	2	2	1	1	1	1	1
12	CANDLER	902.27	2	2	2	2	2	2	1	1	1	1	1	1
13	CHATHAM	1727.29	3	3	2	2	2	2	1	1	1	1	1	1
14	CLARKE	455.32	2	2	3	2	2	2	3	3	3	3	3	3
15	CLAYTON	537.51	2	2	3	2	2	2	3	2	3	3	3	3
16	COFFEE	2144.76	2	2	2	2	2	2	1	1	1	1	1	1
17	COLUMBIA	1145.04	3	2	3	2	2	2	1	1	1	1	1	1
18	CRAWFORD	1192.11	2	2	2	2	2	2	2	1	1	1	1	1
19	DEKALB	1013.60	2	2	3	2	2	2	3	2	3	3	3	3
20	DODGE	1815.31	2	2	2	2	2	2	1	1	1	1	1	1
21	DOOLY	1432.90	2	2	2	2	2	2	2	1	1	1	1	1
22	EFFINGHAM	1749.37	3	3	2	2	2	2	1	1	1	1	1	1
23	ELBERT	1411.92	2	2	3	2	2	2	2	1	1	2	2	1
24	EMANUEL	2513.86	2	2	2	2	2	2	1	1	1	1	1	1

SOURCE_ID	COUNTY	Sqkm	14K_PSuit	13K_PSuit	12K_PSuit	11K_PSuit	10K_PSuit	9K_PSuit	8K_PSuit	7K_PSuit	6K_PSuit	5K_PSuit	4K_PSuit	3K_PSuit
25	EVANS	674.15	3	2	2	2	2	2	1	1	1	1	1	1
26	FRANKLIN	1010.21	2	2	3	3	3	3	3	3	3	3	3	3
27	FULTON	1999.77	2	1	3	3	3	3	3	3	3	3	3	3
28	GLASCOCK	533.46	2	2	3	2	2	2	1	1	1	1	1	1
29	GLYNN	1568.61	2	2	2	2	2	2	1	1	1	1	1	1
30	GREENE	1512.84	2	2	3	2	2	2	2	1	1	1	1	1
31	GWINNETT	1640.92	2	1	3	3	3	3	3	3	3	3	3	3
32	HABERSHAM	1065.38	2	2	3	3	3	3	3	3	3	3	3	3
33	HALL	1626.27	2	1	3	3	3	3	3	3	3	3	3	3
34	HANCOCK	1769.87	2	2	3	2	2	2	2	1	1	1	1	1
35	HART	972.52	2	2	3	2	2	2	2	2	3	3	3	1
36	HENRY	1212.01	2	2	3	2	2	2	3	2	3	3	3	3
37	HOUSTON	1380.66	2	2	2	2	2	2	1	1	1	1	1	1
38	IRWIN	1292.93	2	2	2	2	2	2	1	1	1	1	1	1
39	JACKSON	1294.03	2	2	3	2	2	2	3	3	3	3	3	3
40	JASPER	1382.81	2	2	3	2	2	2	2	1	1	1	1	1
41	JEFF DAVIS	1200.65	2	2	2	2	2	2	1	1	1	1	1	1
42	JEFFERSON	1948.85	3	2	3	2	2	2	1	1	1	1	1	1
43	JENKINS	1288.94	3	2	3	2	2	2	1	1	1	1	1	1
44	JOHNSON	1118.80	2	2	3	2	2	2	1	1	1	1	1	1
45	JONES	1454.47	2	2	3	2	2	2	2	1	1	1	1	1
46	LAMAR	684.65	2	1	3	2	2	2	3	2	2	3	3	2
47	LAURENS	2971.29	2	2	2	2	2	2	1	1	1	1	1	1
48	LIBERTY	1921.35	2	2	2	2	2	2	1	1	1	1	1	1
49	LINCOLN	962.95	2	2	3	2	2	2	1	1	1	1	1	1
50	LONG	1442.47	2	2	2	2	2	2	1	1	1	1	1	1
51	MCDUFFIE	989.48	2	2	3	2	2	2	1	1	1	1	1	1
52	MCINTOSH	1617.74	2	2	2	2	2	2	1	1	1	1	1	1
53	MACON	1470.50	2	2	2	2	2	2	2	1	1	1	1	1
54	MADISON	1077.06	2	2	3	2	2	2	2	1	1	2	2	1
55	MONROE	1461.62	2	2	3	2	2	2	2	1	1	1	1	1
56	MONTGOMERY	883.80	2	2	2	2	2	2	1	1	1	1	1	1
57	MORGAN	1320.37	2	2	3	2	2	2	2	1	1	3	3	1
58	NEWTON	1038.76	2	2	3	2	2	2	2	1	1	3	3	1
59	OCONEE	697.79	2	2	3	2	2	2	3	3	3	3	3	3

SOURCE_ID	COUNTY	Sqkm	14K_PSuit	13K_PSuit	12K_PSuit	11K_PSuit	10K_PSuit	9K_PSuit	8K_PSuit	7K_PSuit	6K_PSuit	5K_PSuit	4K_PSuit	3K_PSuit
60	OGLETHORPE	1658.27	2	2	3	2	2	2	2	1	1	2	2	1
61	PEACH	550.87	2	2	2	2	2	2	2	1	1	1	1	1
62	PULASKI	907.42	2	2	2	2	2	2	1	1	1	1	1	1
63	PUTNAM	1335.23	2	2	3	2	2	2	2	1	1	1	1	1
64	RABUN	1447.29	3	3	3	3	2	3	3	3	3	3	3	3
65	RICHMOND	1216.99	3	2	3	2	2	2	1	1	1	1	1	1
66	ROCKDALE	493.03	2	2	3	2	2	2	3	2	3	3	3	3
67	SCREVEN	2395.93	3	2	3	2	2	2	1	1	1	1	1	1
68	SPALDING	738.40	2	1	3	2	2	2	3	2	2	3	3	2
69	STEPHENS	701.97	2	2	3	3	3	3	3	3	3	3	3	3
70	TALIAFERRO	727.70	2	2	3	2	2	2	2	1	1	1	1	1
71	TATTNALL	1756.42	2	2	2	2	2	2	1	1	1	1	1	1
72	TELFAIR	1594.13	2	2	2	2	2	2	1	1	1	1	1	1
73	TOOMBS	1336.99	2	2	2	2	2	2	1	1	1	1	1	1
74	TOWNS	661.58	2	2	3	3	3	3	3	3	3	3	3	3
75	TREUTLEN	734.35	2	2	2	2	2	2	1	1	1	1	1	1
76	TWIGGS	1322.05	2	2	2	2	2	2	1	1	1	1	1	1
77	UPSON	1200.60	2	2	2	2	2	2	2	1	1	1	1	1
78	WALTON	1235.04	2	2	3	2	2	2	2	1	1	3	3	1
79	WARREN	1063.79	2	2	3	2	2	2	1	1	1	1	1	1
80	WASHINGTON	2513.89	2	2	3	2	2	2	1	1	1	1	1	1
81	WAYNE	2309.34	2	2	2	2	2	2	1	1	1	1	1	1
82	WHEELER	1081.97	2	2	2	2	2	2	1	1	1	1	1	1
83	WILCOX	1373.05	2	2	2	2	2	2	1	1	1	1	1	1
84	WILKES	1773.31	2	2	3	2	2	2	1	1	1	1	1	1
85	WILKINSON	1653.57	2	2	3	2	2	2	1	1	1	1	1	1

SOURCE_ID	COUNTY	Sqkm	14K_ PLSuit	13K_ PLSuit	12K_ PLSuit	11K_ PLSuit	10K_ PLSuit	9K_ PLSuit	8K_ PLSuit	7K_ PLSuit	6K_ PLSuit	5K_ PLSuit	4K_ PLSuit	3K_ PLSuit
0	APPLING	1832.22	2	2	2	2	2	2	1	1	1	1	1	1
1	BALDWIN	984.16	3	3	4	3	3	3	2	2	2	2	2	2
2	BANKS	886.94	2	2	3	3	3	3	3	3	3	3	3	3
3	BARROW	612.68	2	2	3	2	2	2	3	3	3	3	3	3
4	BEN HILL	908.05	2	2	2	2	2	2	1	1	1	1	1	1
5	BIBB	934.26	3	3	3	3	3	3	3	2	2	2	2	2
6	BLECKLEY	794.90	3	3	3	3	3	3	2	2	2	2	2	2
7	BRANTLEY	1580.24	2	2	2	2	2	2	1	1	1	1	1	1
8	BRYAN	1605.68	2	2	2	2	2	2	1	1	1	1	1	1
9	BULLOCH	2498.20	3	2	2	2	2	2	1	1	1	1	1	1
10	BURKE	3072.51	4	3	4	3	3	3	2	2	2	2	2	2
11	BUTTS	696.06	2	2	3	2	2	2	2	1	1	1	1	1
12	CANDLER	902.27	2	2	2	2	2	2	1	1	1	1	1	1
13	CHATHAM	1727.29	3	3	2	2	2	2	1	1	1	1	1	1
14	CLARKE	455.32	2	2	3	2	2	2	3	3	3	3	3	3
15	CLAYTON	537.51	2	2	3	2	2	2	3	2	3	3	3	3
16	COFFEE	2144.76	2	2	2	2	2	2	1	1	1	1	1	1
17	COLUMBIA	1145.04	4	3	4	3	3	3	2	2	2	2	2	2
18	CRAWFORD	1192.11	2	2	2	2	2	2	2	1	1	1	1	1
19	DEKALB	1013.60	2	2	3	2	2	2	3	2	3	3	3	3
20	DODGE	1815.31	3	3	3	3	3	3	2	2	2	2	2	2
21	DOOLY	1432.90	3	3	3	3	3	3	3	2	2	2	2	2
22	EFFINGHAM	1749.37	3	3	2	2	2	2	1	1	1	1	1	1
23	ELBERT	1411.92	2	2	3	2	2	2	2	1	1	2	2	1
24	EMANUEL	2513.86	3	3	3	3	3	3	2	2	2	2	2	2
25	EVANS	674.15	3	2	2	2	2	2	1	1	1	1	1	1
26	FRANKLIN	1010.21	2	2	3	3	3	3	3	3	3	3	3	3
27	FULTON	1999.77	2	1	3	3	3	3	3	3	3	3	3	3
28	GLASCOCK	533.46	3	3	4	3	3	3	2	2	2	2	2	2
29	GLYNN	1568.61	2	2	2	2	2	2	1	1	1	1	1	1
30	GREENE	1512.84	2	2	3	2	2	2	2	1	1	1	1	1
31	GWINNETT	1640.92	2	1	3	3	3	3	3	3	3	3	3	3
32	HABERSHAM	1065.38	2	2	3	3	3	3	3	3	3	3	3	3
33	HALL	1626.27	2	1	3	3	3	3	3	3	3	3	3	3
34	HANCOCK	1769.87	3	3	4	3	3	3	3	2	2	2	2	2

SOURCE_ID	COUNTY	Sqkm	14K_ PLSuit	13K_ PLSuit	12K_ PLSuit	11K_ PLSuit	10K_ PLSuit	9K_ PLSuit	8K_ PLSuit	7K_ PLSuit	6K_ PLSuit	5K_ PLSuit	4K_ PLSuit	3K_ PLSuit
35	HART	972.52	2	2	3	2	2	2	2	2	3	3	3	1
36	HENRY	1212.01	2	2	3	2	2	2	3	2	3	3	3	3
37	HOUSTON	1380.66	3	3	3	3	3	3	2	2	2	2	2	2
38	IRWIN	1292.93	2	2	2	2	2	2	1	1	1	1	1	1
39	JACKSON	1294.03	2	2	3	2	2	2	3	3	3	3	3	3
40	JASPER	1382.81	2	2	3	2	2	2	2	1	1	1	1	1
41	JEFF DAVIS	1200.65	2	2	2	2	2	2	1	1	1	1	1	1
42	JEFFERSON	1948.85	4	3	4	3	3	3	2	2	2	2	2	2
43	JENKINS	1288.94	4	3	4	3	3	3	2	2	2	2	2	2
44	JOHNSON	1118.80	3	3	4	3	3	3	2	2	2	2	2	2
45	JONES	1454.47	3	3	4	3	3	3	3	2	2	2	2	2
46	LAMAR	684.65	2	1	3	2	2	2	3	2	2	3	3	2
47	LAURENS	2971.29	3	3	3	3	3	3	2	2	2	2	2	2
48	LIBERTY	1921.35	2	2	2	2	2	2	1	1	1	1	1	1
49	LINCOLN	962.95	3	3	4	3	3	3	2	2	2	2	2	2
50	LONG	1442.47	2	2	2	2	2	2	1	1	1	1	1	1
51	MCDUFFIE	989.48	3	3	4	3	3	3	2	2	2	2	2	2
52	MCINTOSH	1617.74	2	2	2	2	2	2	1	1	1	1	1	1
53	MACON	1470.50	3	3	3	3	3	3	3	2	2	2	2	2
54	MADISON	1077.06	2	2	3	2	2	2	2	1	1	2	2	1
55	MONROE	1461.62	2	2	3	2	2	2	2	1	1	1	1	1
56	MONTGOMERY	883.80	2	2	2	2	2	2	1	1	1	1	1	1
57	MORGAN	1320.37	3	3	4	3	3	3	3	2	2	4	4	2
58	NEWTON	1038.76	2	2	3	2	2	2	2	1	1	3	3	1
59	OCONEE	697.79	3	3	4	3	3	3	4	4	4	4	4	4
60	OGLETHORPE	1658.27	3	3	4	3	3	3	3	2	2	3	3	2
61	PEACH	550.87	3	3	3	3	3	3	3	2	2	2	2	2
62	PULASKI	907.42	3	3	3	3	3	3	2	2	2	2	2	2
63	PUTNAM	1335.23	2	2	3	2	2	2	2	1	1	1	1	1
64	RABUN	1447.29	3	3	3	3	2	3	3	3	3	3	3	3
65	RICHMOND	1216.99	4	3	4	3	3	3	2	2	2	2	2	2
66	ROCKDALE	493.03	2	2	3	2	2	2	3	2	3	3	3	3
67	SCREVEN	2395.93	4	3	4	3	3	3	2	2	2	2	2	2
68	SPALDING	738.40	2	1	3	2	2	2	3	2	2	3	3	2
69	STEPHENS	701.97	2	2	3	3	3	3	3	3	3	3	3	3

SOURCE_ID	COUNTY	Sqkm	14K_ PLSuit	13K_ PLSuit	12K_ PLSuit	11K_ PLSuit	10K_ PLSuit	9K_ PLSuit	8K_ PLSuit	7K_ PLSuit	6K_ PLSuit	5K_ PLSuit	4K_ PLSuit	3K_ PLSuit
70	TALIAFERRO	727.70	2	2	3	2	2	2	2	1	1	1	1	1
71	TATTNALL	1756.42	2	2	2	2	2	2	1	1	1	1	1	1
72	TELFAIR	1594.13	2	2	2	2	2	2	1	1	1	1	1	1
73	TOOMBS	1336.99	2	2	2	2	2	2	1	1	1	1	1	1
74	TOWNS	661.58	2	2	3	3	3	3	3	3	3	3	3	3
75	TREUTLEN	734.35	2	2	2	2	2	2	1	1	1	1	1	1
76	TWIGGS	1322.05	3	3	3	3	3	3	2	2	2	2	2	2
77	UPSON	1200.60	2	2	2	2	2	2	2	1	1	1	1	1
78	WALTON	1235.04	2	2	3	2	2	2	2	1	1	3	3	1
79	WARREN	1063.79	3	3	4	3	3	3	2	2	2	2	2	2
80	WASHINGTON	2513.89	3	3	4	3	3	3	2	2	2	2	2	2
81	WAYNE	2309.34	2	2	2	2	2	2	1	1	1	1	1	1
82	WHEELER	1081.97	2	2	2	2	2	2	1	1	1	1	1	1
83	WILCOX	1373.05	3	3	3	3	3	3	2	2	2	2	2	2
84	WILKES	1773.31	2	2	3	2	2	2	1	1	1	1	1	1
85	WILKINSON	1653.57	3	3	4	3	3	3	2	2	2	2	2	2

SOURCE_ID	COUNTY	Sqkm	3K_ PGiZ	4K_ PGiZ	5K_ PGiZ	6K_ PGiZ	7K_ PGiZ	8K_ PGiZ	9K_ PGiZ	10K_ PGiZ	11K_ PGiZ	12K_ PGiZ	13K_ PGiZ	14K_ PGiZ
0	APPLING	1832.217	-0.918	-1.131	-1.131	-0.950	-0.916	-1.483	-0.599	-0.561	-0.599	-2.017	0.134	-0.671
1	BALDWIN	984.162	-1.200	-1.478	-1.478	-1.241	-1.197	-0.243	-0.783	-0.734	-0.783	1.990	0.175	-0.877
2	BANKS	886.942	4.449	4.000	4.000	4.281	4.975	3.964	5.466	5.870	5.466	2.385	-1.079	-1.051
3	BARROW	612.679	4.449	4.444	4.444	4.281	4.975	3.964	1.623	1.821	1.623	2.385	-2.369	-1.051
4	BEN HILL	908.047	-1.067	-1.314	-1.314	-1.103	-1.064	-1.723	-0.696	-0.652	-0.696	-2.343	0.156	-0.780
5	BIBB	934.265	-1.437	-1.770	-1.770	-1.487	-1.435	0.096	-0.938	-0.879	-0.938	-1.575	0.210	-1.051
6	BLECKLEY	794.903	-1.322	-1.629	-1.629	-1.368	-1.320	-2.137	-0.863	-0.809	-0.863	-2.906	0.193	-0.967
7	BRANTLEY	1580.240	-0.745	-0.918	-0.918	-0.771	-0.744	-1.204	-0.486	-0.456	-0.486	-1.637	0.109	-0.545
8	BRYAN	1605.682	-0.918	-1.131	-1.131	-0.950	-0.916	-1.483	-0.599	-0.561	-0.599	-2.017	2.055	1.078
9	BULLOCH	2498.204	-1.067	-1.314	-1.314	-1.103	-1.064	-1.723	-0.696	-0.652	-0.696	-2.343	1.830	3.793
10	BURKE	3072.513	-1.067	-1.314	-1.314	-1.103	-1.064	-1.723	-0.696	-0.652	-0.696	1.769	0.156	5.317
11	BUTTS	696.056	0.525	1.781	1.781	0.436	0.168	2.514	-0.938	-0.879	-0.938	2.385	-2.369	-1.051
12	CANDLER	902.271	-1.322	-1.629	-1.629	-1.368	-1.320	-2.137	-0.863	-0.809	-0.863	-2.906	0.193	1.553
13	CHATHAM	1727.291	-0.918	-1.131	-1.131	-0.950	-0.916	-1.483	-0.599	-0.561	-0.599	-2.017	2.055	1.078
14	CLARKE	455.322	2.487	3.556	3.556	2.359	2.838	2.997	-0.938	-0.879	-0.938	2.385	0.210	-1.051
15	CLAYTON	537.508	4.469	4.089	4.089	4.308	2.693	4.092	0.512	0.640	0.512	2.194	-2.574	-0.967
16	COFFEE	2144.764	-0.745	-0.918	-0.918	-0.771	-0.744	-1.204	-0.486	-0.456	-0.486	-1.637	0.109	-0.545
17	COLUMBIA	1145.040	-1.067	-1.314	-1.314	-1.103	-1.064	-1.723	-0.696	-0.652	-0.696	1.769	0.156	2.269
18	CRAWFORD	1192.114	-1.322	-1.629	-1.629	-1.368	-1.320	0.978	-0.863	-0.809	-0.863	-2.056	0.193	-0.967
19	DEKALB	1013.601	4.996	4.089	4.089	4.824	3.266	4.092	1.886	2.089	1.886	2.194	-2.574	-0.967
20	DODGE	1815.309	-1.322	-1.629	-1.629	-1.368	-1.320	-2.137	-0.863	-0.809	-0.863	-2.906	0.193	-0.967
21	DOOLY	1432.896	-1.067	-1.314	-1.314	-1.103	-1.064	-0.467	-0.696	-0.652	-0.696	-2.343	0.156	-0.780
22	EFFINGHAM	1749.373	-0.745	-0.918	-0.918	-0.771	-0.744	-1.204	-0.486	-0.456	-0.486	-1.637	2.448	3.715
23	ELBERT	1411.925	-1.200	1.116	1.116	-0.118	-0.573	0.322	-0.783	-0.734	-0.783	1.990	0.175	-0.877
24	EMANUEL	2513.859	-1.200	-1.478	-1.478	-1.241	-1.197	-1.938	-0.783	-0.734	-0.783	-0.785	0.175	0.494
25	EVANS	674.145	-1.067	-1.314	-1.314	-1.103	-1.064	-1.723	-0.696	-0.652	-0.696	-2.343	0.156	2.269
26	FRANKLIN	1010.206	2.890	3.612	3.612	3.792	3.840	3.054	4.636	4.986	4.636	2.194	0.193	-0.967
27	FULTON	1999.771	3.468	2.838	2.838	3.349	2.268	2.841	1.309	1.450	1.309	1.523	-1.787	-0.671
28	GLASCOCK	533.464	-1.322	-1.629	-1.629	-1.368	-1.320	-1.618	-0.863	-0.809	-0.863	2.194	0.193	0.293
29	GLYNN	1568.615	-0.745	-0.918	-0.918	-0.771	-0.744	-1.204	-0.486	-0.456	-0.486	-1.637	0.109	-0.545
30	GREENE	1512.842	-0.456	0.449	0.449	-0.525	-0.366	1.546	-0.938	-0.879	-0.938	2.385	0.210	-1.051
31	GWINNETT	1640.925	3.386	3.709	3.709	3.253	2.547	3.147	0.714	0.844	0.714	1.990	-1.331	-0.877
32	HABERSHAM	1065.376	4.996	4.089	4.089	4.824	5.560	4.092	7.385	6.435	7.385	2.194	1.577	0.293
33	HALL	1626.271	4.029	3.298	3.298	3.890	4.484	3.300	2.630	2.853	2.630	1.769	-1.518	-0.780
34	HANCOCK	1769.875	-1.547	-1.905	-1.905	-1.600	-1.543	-0.678	-1.009	-0.946	-1.009	2.566	0.226	-1.131

SOURCE_ID	COUNTY	Sqkm	3K_ PGiZ	4K_ PGiZ	5K_ PGiZ	6K_ PGiZ	7K_ PGiZ	8K_ PGiZ	9K_ PGiZ	10K_ PGiZ	11K_ PGiZ	12K_ PGiZ	13K_ PGiZ	14K_ PGiZ
35	HART	972.520	1.093	2.672	2.672	2.129	1.923	2.017	2.210	2.421	2.210	1.990	0.175	-0.877
36	HENRY	1212.013	2.978	3.556	3.556	2.839	1.236	3.481	-0.938	-0.879	-0.938	2.385	-1.079	-1.051
37	HOUSTON	1380.661	-1.547	-1.905	-1.905	-1.600	-1.543	-0.678	-1.009	-0.946	-1.009	-3.398	0.226	-1.131
38	IRWIN	1292.931	-0.745	-0.918	-0.918	-0.771	-0.744	-1.204	-0.486	-0.456	-0.486	-1.637	0.109	-0.545
39	JACKSON	1294.028	4.449	4.000	4.000	4.281	4.975	3.964	1.623	1.821	1.623	2.385	-1.079	-1.051
40	JASPER	1382.811	-1.322	0.277	0.277	-1.368	-1.320	0.978	-0.863	-0.809	-0.863	2.194	0.193	-0.967
41	JEFF DAVIS	1200.649	-1.200	-1.478	-1.478	-1.241	-1.197	-1.938	-0.783	-0.734	-0.783	-2.636	0.175	-0.877
42	JEFFERSON	1948.854	-1.067	-1.314	-1.314	-1.103	-1.064	-1.723	-0.696	-0.652	-0.696	1.769	0.156	2.269
43	JENKINS	1288.940	-1.067	-1.314	-1.314	-1.103	-1.064	-1.723	-0.696	-0.652	-0.696	0.741	0.156	3.793
44	JOHNSON	1118.804	-1.200	-1.478	-1.478	-1.241	-1.197	-1.938	-0.783	-0.734	-0.783	-0.785	0.175	-0.877
45	JONES	1454.473	-1.322	-1.629	-1.629	-1.368	-1.320	0.459	-0.863	-0.809	-0.863	1.344	0.193	-0.967
46	LAMAR	684.647	-0.053	0.597	0.597	-0.118	0.051	2.017	-0.783	-0.734	-0.783	1.065	-2.838	-0.877
47	LAURENS	2971.294	-1.200	-1.478	-1.478	-1.241	-1.197	-1.938	-0.783	-0.734	-0.783	-1.711	0.175	-0.877
48	LIBERTY	1921.348	-1.200	-1.478	-1.478	-1.241	-1.197	-1.938	-0.783	-0.734	-0.783	-2.636	1.682	0.494
49	LINCOLN	962.953	-1.067	-1.314	-1.314	-1.103	-1.064	-1.723	-0.696	-0.652	-0.696	1.769	0.156	0.744
50	LONG	1442.469	-0.918	-1.131	-1.131	-0.950	-0.916	-1.483	-0.599	-0.561	-0.599	-2.017	0.134	-0.671
51	MCDUFFIE	989.482	-1.322	-1.629	-1.629	-1.368	-1.320	-1.618	-0.863	-0.809	-0.863	2.194	0.193	0.293
52	MCINTOSH	1617.738	-0.918	-1.131	-1.131	-0.950	-0.916	-1.483	-0.599	-0.561	-0.599	-2.017	0.134	-0.671
53	MACON	1470.504	-1.200	-1.478	-1.478	-1.241	-1.197	0.322	-0.783	-0.734	-0.783	-2.636	0.175	-0.877
54	MADISON	1077.057	2.731	3.915	3.915	3.445	3.601	3.381	1.211	1.402	1.211	2.739	0.241	-1.207
55	MONROE	1461.625	-0.947	-0.883	-0.883	-1.006	-0.901	1.546	-0.938	-0.879	-0.938	0.009	-1.079	-1.051
56	MONTGOMERY	883.799	-1.067	-1.314	-1.314	-1.103	-1.064	-1.723	-0.696	-0.652	-0.696	-2.343	0.156	-0.780
57	MORGAN	1320.375	-0.456	1.781	1.781	-0.525	-0.366	1.546	-0.938	-0.879	-0.938	2.385	0.210	-1.051
58	NEWTON	1038.763	0.525	2.669	2.669	0.436	-0.366	2.030	-0.938	-0.879	-0.938	2.385	0.210	-1.051
59	OCONEE	697.791	1.855	3.518	3.518	1.728	2.169	2.949	-1.078	-1.009	-1.078	2.739	0.241	-1.207
60	OGLETHORPE	1658.266	0.301	1.020	1.020	0.210	0.468	1.599	-1.009	-0.946	-1.009	2.566	0.226	-1.131
61	PEACH	550.870	-1.322	-1.629	-1.629	-1.368	-1.320	-0.060	-0.863	-0.809	-0.863	-2.906	0.193	-0.967
62	PULASKI	907.417	-1.322	-1.629	-1.629	-1.368	-1.320	-1.618	-0.863	-0.809	-0.863	-2.906	0.193	-0.967
63	PUTNAM	1335.226	-1.437	-0.883	-0.883	-1.487	-1.435	0.579	-0.938	-0.879	-0.938	2.385	0.210	-1.051
64	RABUN	1447.293	4.029	3.298	3.298	3.890	4.484	3.300	5.956	4.606	5.956	1.769	1.830	0.744
65	RICHMOND	1216.988	-0.918	-1.131	-1.131	-0.950	-0.916	-1.483	-0.599	-0.561	-0.599	1.523	0.134	4.577
66	ROCKDALE	493.032	3.468	4.444	4.444	3.320	1.770	3.481	0.343	0.471	0.343	2.385	-1.079	-1.051
67	SCREVEN	2395.927	-0.745	-0.918	-0.918	-0.771	-0.744	-1.204	-0.486	-0.456	-0.486	1.236	0.109	3.715
68	SPALDING	738.404	2.240	2.672	2.672	2.129	1.299	3.147	-0.783	-0.734	-0.783	1.990	-2.838	-0.877
69	STEPHENS	701.972	3.943	4.089	4.089	4.824	4.986	3.573	6.010	4.986	6.010	2.194	1.577	0.293

SOURCE_ID	COUNTY	Sqkm	3K_ PGiZ	4K_ PGiZ	5K_ PGiZ	6K_ PGiZ	7K_ PGiZ	8K_ PGiZ	9K_ PGiZ	10K_ PGiZ	11K_ PGiZ	12K_ PGiZ	13K_ PGiZ	14K_ PGiZ
70	TALIAFERRO	727.705	-1.437	-1.327	-1.327	-1.487	-1.435	-0.388	-0.938	-0.879	-0.938	2.385	0.210	-1.051
71	TATTNALL	1756.423	-1.200	-1.478	-1.478	-1.241	-1.197	-1.938	-0.783	-0.734	-0.783	-2.636	0.175	0.494
72	TELFAIR	1594.128	-1.200	-1.478	-1.478	-1.241	-1.197	-1.938	-0.783	-0.734	-0.783	-2.636	0.175	-0.877
73	TOOMBS	1336.985	-1.322	-1.629	-1.629	-1.368	-1.320	-2.137	-0.863	-0.809	-0.863	-2.906	0.193	-0.967
74	TOWNS	661.578	3.468	2.838	2.838	3.349	3.860	2.841	5.127	3.462	5.127	1.523	2.055	1.078
75	TREUTLEN	734.348	-1.437	-1.770	-1.770	-1.487	-1.435	-2.322	-0.938	-0.879	-0.938	-2.366	0.210	-1.051
76	TWIGGS	1322.048	-1.322	-1.629	-1.629	-1.368	-1.320	-1.098	-0.863	-0.809	-0.863	-2.056	0.193	-0.967
77	UPSON	1200.598	-0.430	-0.161	-0.161	-0.479	-0.371	1.416	-0.696	-0.652	-0.696	-0.287	-1.518	-0.780
78	WALTON	1235.045	3.072	4.781	4.781	2.926	2.982	3.420	0.196	0.325	0.196	2.566	-0.988	-1.131
79	WARREN	1063.790	-1.200	-1.478	-1.478	-1.241	-1.197	-0.808	-0.783	-0.734	-0.783	1.990	0.175	-0.877
80	WASHINGTON	2513.893	-1.322	-1.629	-1.629	-1.368	-1.320	-1.618	-0.863	-0.809	-0.863	2.194	0.193	0.293
81	WAYNE	2309.337	-0.918	-1.131	-1.131	-0.950	-0.916	-1.483	-0.599	-0.561	-0.599	-2.017	0.134	-0.671
82	WHEELER	1081.970	-1.322	-1.629	-1.629	-1.368	-1.320	-2.137	-0.863	-0.809	-0.863	-2.906	0.193	-0.967
83	WILCOX	1373.049	-1.067	-1.314	-1.314	-1.103	-1.064	-1.723	-0.696	-0.652	-0.696	-2.343	0.156	-0.780
84	WILKES	1773.311	-1.200	-0.440	-0.440	-1.241	-1.197	-0.243	-0.783	-0.734	-0.783	1.990	0.175	-0.877
85	WILKINSON	1653.570	-1.067	-1.314	-1.314	-1.103	-1.064	-1.723	-0.696	-0.652	-0.696	0.741	0.156	-0.780

SOURCE_ID	COUNTY	Sqkm	3K_ PLGiZ	4K_ PLGiZ	5K_ PLGiZ	6K_ PLGiZ	7K_ PLGiZ	8K_ PLGiZ	9K_ PLGiZ	10K_ PLGiZ	11K_ PLGiZ	12K_ PLGiZ	13K_ PLGiZ	14K_ PLGiZ
0	APPLING	1832.217	-1.743	-1.927	-1.927	-1.781	-1.776	-2.319	-1.634	-1.597	-1.634	-2.290	-1.014	-1.372
1	BALDWIN	984.162	0.061	-0.353	-0.353	-0.007	0.174	1.024	1.538	1.594	1.538	2.799	1.819	1.144
2	BANKS	886.942	3.276	3.006	3.006	3.169	3.626	2.812	1.371	1.438	1.371	0.269	-2.260	-2.148
3	BARROW	612.679	3.776	3.933	3.933	3.665	4.160	3.308	-0.201	-0.137	-0.201	0.820	-2.260	-1.520
4	BEN HILL	908.047	-1.375	-1.637	-1.637	-1.424	-1.370	-2.050	-0.878	-0.832	-0.878	-1.946	-0.305	-0.778
5	BIBB	934.265	-0.227	-0.700	-0.700	-0.306	-0.112	1.325	1.371	1.438	1.371	0.269	1.775	0.994
6	BLECKLEY	794.903	0.712	0.208	0.208	0.632	0.880	-0.148	2.708	2.772	2.708	0.247	2.871	2.070
7	BRANTLEY	1580.240	-1.414	-1.564	-1.564	-1.445	-1.442	-1.882	-1.327	-1.296	-1.327	-1.859	-0.823	-1.113
8	BRYAN	1605.682	-1.743	-1.927	-1.927	-1.781	-1.776	-2.319	-1.634	-1.597	-1.634	-2.290	-0.012	-0.435
9	BULLOCH	2498.204	-2.025	-2.238	-2.238	-2.069	-2.064	-2.694	-1.899	-1.855	-1.899	-2.661	-0.305	0.854
10	BURKE	3072.513	0.574	0.168	0.168	0.510	0.709	-0.120	2.184	2.235	2.184	3.060	2.315	4.933
11	BUTTS	696.056	-0.727	0.690	0.690	-0.802	-1.180	1.325	-2.559	-2.500	-2.559	0.269	-2.933	-2.148
12	CANDLER	902.271	-1.973	-2.278	-2.278	-2.032	-1.986	-2.808	-1.511	-1.455	-1.511	-2.708	-0.739	0.047
13	CHATHAM	1727.291	-1.743	-1.927	-1.927	-1.781	-1.776	-2.319	-1.634	-1.597	-1.634	-2.290	-0.012	-0.435
14	CLARKE	455.322	2.275	3.469	3.469	2.176	2.558	2.812	-0.987	-0.925	-0.987	1.370	-0.242	-0.891
15	CLAYTON	537.508	3.397	3.192	3.192	3.296	1.453	3.043	-1.511	-1.455	-1.511	0.247	-2.904	-1.976
16	COFFEE	2144.764	-1.414	-1.564	-1.564	-1.445	-1.442	-1.882	-1.327	-1.296	-1.327	-1.859	-0.823	-1.113
17	COLUMBIA	1145.040	0.574	0.168	0.168	0.510	0.709	-0.120	2.184	2.235	2.184	3.060	2.315	3.301
18	CRAWFORD	1192.114	-0.899	-1.284	-1.284	-0.967	-0.840	1.447	0.177	0.236	0.177	-0.935	0.705	0.047
19	DEKALB	1013.601	3.934	3.192	3.192	3.829	2.026	3.043	-0.667	-0.609	-0.667	0.247	-2.904	-1.976
20	DODGE	1815.309	0.175	-0.289	-0.289	0.099	0.307	-0.680	1.864	1.926	1.864	-0.344	2.149	1.396
21	DOOLY	1432.896	0.574	0.168	0.168	0.510	0.709	1.167	2.184	2.235	2.184	0.200	2.315	1.670
22	EFFINGHAM	1749.373	-1.414	-1.564	-1.564	-1.445	-1.442	-1.882	-1.327	-1.296	-1.327	-1.859	0.397	1.166
23	ELBERT	1411.925	-1.693	0.730	0.730	-0.587	-1.074	-0.135	-1.218	-1.166	-1.218	0.868	-0.539	-1.059
24	EMANUEL	2513.859	-0.523	-0.894	-0.894	-0.587	-0.450	-1.293	0.619	0.674	0.619	0.224	1.033	1.144
25	EVANS	674.145	-2.025	-2.238	-2.238	-2.069	-2.064	-2.694	-1.899	-1.855	-1.899	-2.661	-1.178	0.038
26	FRANKLIN	1010.206	1.786	2.695	2.695	2.763	2.599	1.979	1.020	1.081	1.020	0.247	-1.461	-1.976
27	FULTON	1999.771	2.731	2.216	2.216	2.658	1.406	2.113	-0.463	-0.423	-0.463	0.172	-2.016	-1.372
28	GLASCOCK	533.464	0.712	0.208	0.208	0.632	0.880	0.384	2.708	2.772	2.708	3.794	2.871	2.744
29	GLYNN	1568.615	-1.414	-1.564	-1.564	-1.445	-1.442	-1.882	-1.327	-1.296	-1.327	-1.859	-0.823	-1.113
30	GREENE	1512.842	0.273	1.153	1.153	0.190	0.422	2.317	0.585	0.650	0.585	2.472	1.103	0.365
31	GWINNETT	1640.925	2.400	2.896	2.896	2.314	1.422	2.182	-1.218	-1.166	-1.218	0.224	-2.111	-1.793
32	HABERSHAM	1065.376	3.934	3.192	3.192	3.829	4.318	3.043	2.708	1.926	2.708	0.247	-0.739	-1.302
33	HALL	1626.271	3.173	2.574	2.574	3.088	3.482	2.454	0.142	0.190	0.142	0.200	-2.051	-1.594
34	HANCOCK	1769.875	-0.581	-1.065	-1.065	-0.663	-0.479	0.293	0.946	1.017	0.946	2.882	1.458	0.646

SOURCE_ID	COUNTY	Sqkm	3K_ PLGiZ	4K_ PLGiZ	5K_ PLGiZ	6K_ PLGiZ	7K_ PLGiZ	8K_ PLGiZ	9K_ PLGiZ	10K_ PLGiZ	11K_ PLGiZ	12K_ PLGiZ	13K_ PLGiZ	14K_ PLGiZ
35	HART	972.520	0.061	1.813	1.813	1.153	0.798	1.024	-0.299	-0.246	-0.299	0.224	-1.325	-1.793
36	HENRY	1212.013	1.774	2.543	2.543	1.680	-0.112	2.317	-2.559	-2.500	-2.559	0.269	-2.260	-2.148
37	HOUSTON	1380.661	0.833	0.243	0.243	0.739	1.029	1.693	3.166	3.241	3.166	0.289	3.357	2.421
38	IRWIN	1292.931	-1.414	-1.564	-1.564	-1.445	-1.442	-1.882	-1.327	-1.296	-1.327	-1.859	-0.823	-1.113
39	JACKSON	1294.028	3.776	3.469	3.469	3.665	4.160	3.308	-0.201	-0.137	-0.201	0.820	-1.588	-1.520
40	JASPER	1382.811	-1.436	0.208	0.208	-1.499	-1.413	0.915	-0.667	-0.609	-0.667	1.430	-0.017	-0.627
41	JEFF DAVIS	1200.649	-2.277	-2.518	-2.518	-2.327	-2.321	-3.030	-2.136	-2.087	-2.136	-2.993	-1.325	-1.793
42	JEFFERSON	1948.854	0.574	0.168	0.168	0.510	0.709	-0.120	2.184	2.235	2.184	3.060	2.315	3.301
43	JENKINS	1288.940	0.574	0.168	0.168	0.510	0.709	-0.120	2.184	2.235	2.184	2.345	2.315	4.117
44	JOHNSON	1118.804	0.061	-0.353	-0.353	-0.007	0.174	-0.714	1.538	1.594	1.538	0.868	1.819	1.144
45	JONES	1454.473	-0.899	-1.284	-1.284	-0.967	-0.840	0.915	0.177	0.236	0.177	1.430	0.705	0.047
46	LAMAR	684.647	-1.108	-0.353	-0.353	-1.167	-1.074	1.024	-2.136	-2.087	-2.136	-0.419	-2.897	-1.793
47	LAURENS	2971.294	0.061	-0.353	-0.353	-0.007	0.174	-0.714	1.538	1.594	1.538	0.224	1.819	1.144
48	LIBERTY	1921.348	-2.277	-2.518	-2.518	-2.327	-2.321	-3.030	-2.136	-2.087	-2.136	-2.993	-0.539	-1.059
49	LINCOLN	962.953	-0.076	-0.434	-0.434	-0.135	0.016	-0.763	1.163	1.213	1.163	2.345	1.442	1.670
50	LONG	1442.469	-1.743	-1.927	-1.927	-1.781	-1.776	-2.319	-1.634	-1.597	-1.634	-2.290	-1.014	-1.372
51	MCDUFFIE	989.482	0.175	-0.289	-0.289	0.099	0.307	-0.148	1.864	1.926	1.864	3.203	2.149	2.070
52	MCINTOSH	1617.738	-1.743	-1.927	-1.927	-1.781	-1.776	-2.319	-1.634	-1.597	-1.634	-2.290	-1.014	-1.372
53	MACON	1470.504	0.061	-0.353	-0.353	-0.007	0.174	1.603	1.538	1.594	1.538	-0.419	1.819	1.144
54	MADISON	1077.057	2.230	3.571	3.571	3.006	3.006	2.914	-0.131	-0.057	-0.131	1.293	-0.622	-1.344
55	MONROE	1461.625	-1.228	-1.164	-1.164	-1.299	-1.180	1.325	-0.987	-0.925	-0.987	-0.282	-0.915	-0.891
56	MONTGOMERY	883.799	-2.025	-2.238	-2.238	-2.069	-2.064	-2.694	-1.899	-1.855	-1.899	-2.661	-1.178	-1.594
57	MORGAN	1320.375	-0.727	1.616	1.616	-0.802	-0.646	1.325	-0.987	-0.925	-0.987	1.370	-0.242	-0.891
58	NEWTON	1038.763	-0.227	2.080	2.080	-0.306	-1.180	1.325	-1.773	-1.712	-1.773	0.820	-0.915	-1.520
59	OCONEE	697.791	1.783	3.571	3.571	1.676	2.052	2.914	-0.833	-0.761	-0.833	1.785	-0.021	-0.783
60	OGLETHORPE	1658.266	-0.110	0.680	0.680	-0.196	0.023	1.226	-1.273	-1.207	-1.273	1.326	-0.442	-1.128
61	PEACH	550.870	0.175	-0.289	-0.289	0.099	0.307	1.447	1.864	1.926	1.864	-0.344	2.149	1.396
62	PULASKI	907.417	0.712	0.208	0.208	0.632	0.880	0.384	2.708	2.772	2.708	0.247	2.871	2.070
63	PUTNAM	1335.226	-0.727	-0.237	-0.237	-0.802	-0.646	1.325	0.585	0.650	0.585	2.472	1.103	0.365
64	RABUN	1447.293	3.173	2.574	2.574	3.088	3.482	2.454	2.184	1.213	2.184	0.200	-0.305	-0.778
65	RICHMOND	1216.988	0.494	0.145	0.145	0.439	0.611	-0.103	1.880	1.924	1.880	2.634	1.993	4.246
66	ROCKDALE	493.032	2.275	3.469	3.469	2.176	0.422	2.317	-1.773	-1.712	-1.773	0.269	-2.260	-2.148
67	SCREVEN	2395.927	0.401	0.117	0.117	0.356	0.496	-0.084	1.526	1.562	1.526	2.138	1.618	3.446
68	SPALDING	738.404	1.231	1.813	1.813	1.153	0.174	2.182	-2.136	-2.087	-2.136	0.224	-2.897	-1.793
69	STEPHENS	701.972	2.860	3.192	3.192	3.829	3.745	2.511	1.864	1.081	1.864	0.247	-0.739	-1.302

SOURCE_ID	COUNTY	Sqkm	3K_ PLGiZ	4K_ PLGiZ	5K_ PLGiZ	6K_ PLGiZ	7K_ PLGiZ	8K_ PLGiZ	9K_ PLGiZ	10K_ PLGiZ	11K_ PLGiZ	12K_ PLGiZ	13K_ PLGiZ	14K_ PLGiZ
70	TALIAFERRO	727.705	-0.727	-0.700	-0.700	-0.802	-0.646	0.334	0.585	0.650	0.585	2.472	1.103	0.365
71	TATTNALL	1756.423	-2.277	-2.518	-2.518	-2.327	-2.321	-3.030	-2.136	-2.087	-2.136	-2.993	-1.325	-1.059
72	TELFAIR	1594.128	-1.693	-1.977	-1.977	-1.747	-1.698	-2.451	-1.218	-1.166	-1.218	-2.350	-0.539	-1.059
73	TOOMBS	1336.985	-2.510	-2.776	-2.776	-2.565	-2.559	-3.340	-2.354	-2.300	-2.354	-3.299	-1.461	-1.976
74	TOWNS	661.578	2.731	2.216	2.216	2.658	2.998	2.113	1.880	0.751	1.880	0.172	-0.012	-0.435
75	TREUTLEN	734.348	-1.228	-1.627	-1.627	-1.299	-1.180	-2.144	-0.201	-0.137	-0.201	-1.383	0.430	-0.263
76	TWIGGS	1322.048	0.712	0.208	0.208	0.632	0.880	0.915	2.708	2.772	2.708	0.839	2.871	2.070
77	UPSON	1200.598	-1.375	-1.035	-1.035	-1.424	-1.370	0.524	-1.899	-1.855	-1.899	-1.231	-2.051	-1.594
78	WALTON	1235.045	2.717	4.605	4.605	2.608	2.536	3.092	-0.533	-0.466	-0.533	1.326	-1.075	-1.128
79	WARREN	1063.790	0.061	-0.353	-0.353	-0.007	0.174	0.444	1.538	1.594	1.538	2.799	1.819	1.144
80	WASHINGTON	2513.893	0.712	0.208	0.208	0.632	0.880	0.384	2.708	2.772	2.708	3.794	2.871	2.744
81	WAYNE	2309.337	-1.743	-1.927	-1.927	-1.781	-1.776	-2.319	-1.634	-1.597	-1.634	-2.290	-1.014	-1.372
82	WHEELER	1081.970	-2.510	-2.776	-2.776	-2.565	-2.559	-3.340	-2.354	-2.300	-2.354	-3.299	-1.461	-1.976
83	WILCOX	1373.049	-0.076	-0.434	-0.434	-0.135	0.016	-0.763	1.163	1.213	1.163	-0.516	1.442	0.854
84	WILKES	1773.311	-1.108	-0.353	-0.353	-1.167	-1.074	-0.135	-0.299	-0.246	-0.299	1.512	0.247	-0.324
85	WILKINSON	1653.570	0.574	0.168	0.168	0.510	0.709	-0.120	2.184	2.235	2.184	2.345	2.315	1.670

SOURCE_ID	COUNTY	Sqkm	Clovis_Pts_ PIDBA	MidPaleo_ Pts_PIDBA	Dalton_Pts_ PIDBA	Clovis_Sites_ GNAHRGIS	Dalton_Sites_ GNAHRGIS	EA_ Sites	MA_ Sites	LA_ Sites
0	APPLING	1832.2167	0	0	0	0	0	0	0	7
1	BALDWIN	984.16217	11	8	35	0	4	20	20	43
2	BANKS	886.94165	0	0	0	0	1	4	16	14
3	BARROW	612.67932	1	0	2	0	1	4	9	7
4	BEN HILL	908.04749	1	2	3	0	1	3	0	4
5	BIBB	934.26459	2	3	4	5	2	21	19	32
6	BLECKLEY	794.90314	1	2	3	0	0	7	2	10
7	BRANTLEY	1580.2396	0	0	0	0	0	0	3	2
8	BRYAN	1605.6823	1	0	0	0	1	8	6	117
9	BULLOCH	2498.2043	1	3	1	0	0	2	2	9
10	BURKE	3072.5127	49	33	55	5	4	32	24	51
11	BUTTS	696.05554	0	0	1	0	0	2	7	8
12	CANDLER	902.27051	1	1	2	0	0	0	1	0
13	CHATHAM	1727.2909	1	1	0	0	1	2	2	61
14	CLARKE	455.32214	1	0	1	0	0	5	13	9
15	CLAYTON	537.50751	0	0	0	0	0	4	16	15
16	COFFEE	2144.7637	6	3	4	2	9	26	7	52
17	COLUMBIA	1145.0402	10	2	11	0	1	16	27	40
18	CRAWFORD	1192.1139	4	2	1	0	0	3	2	1
19	DEKALB	1013.6012	0	0	0	0	0	9	28	76
20	DODGE	1815.3088	11	0	8	0	2	14	3	16
21	DOOLY	1432.8955	7	7	15	0	0	0	1	15
22	EFFINGHAM	1749.3734	1	0	1	0	0	7	2	27
23	ELBERT	1411.9246	5	3	8	1	6	53	114	69
24	EMANUEL	2513.8591	3	1	1	0	0	3	3	7
25	EVANS	674.14545	1	0	0	0	0	1	0	20
26	FRANKLIN	1010.2061	0	0	0	0	0	3	4	1
27	FULTON	1999.7705	0	0	0	0	3	17	34	32
28	GLASCOCK	533.46356	2	1	19	0	0	4	1	2
29	GLYNN	1568.6147	0	0	0	0	0	3	1	41
30	GREENE	1512.8422	10	5	35	2	22	131	208	199
31	GWINNETT	1640.9248	0	0	8	2	2	17	69	26
32	HABERSHAM	1065.3761	1	0	0	4	5	4	6	8
33	HALL	1626.2714	1	0	3	1	1	10	84	21
34	HANCOCK	1769.8749	2	1	10	1	1	8	25	25

SOURCE_ID	COUNTY	Sqkm	Clovis_Pts_ PIDBA	MidPaleo_ Pts_PIDBA	Dalton_Pts_ PIDBA	Clovis_Sites_ GNAHRGIS	Dalton_Sites_ GNAHRGIS	EA_ Sites	MA_ Sites	LA_ Sites
35	HART	972.52026	1	0	0	1	1	2	3	2
36	HENRY	1212.0132	0	0	1	0	0	23	33	35
37	HOUSTON	1380.6605	6	11	20	0	1	18	10	36
38	IRWIN	1292.9307	6	2	0	0	0	15	0	5
39	JACKSON	1294.0283	0	1	0	0	0	8	21	19
40	JASPER	1382.8107	0	1	2	0	0	14	19	22
41	JEFF DAVIS	1200.6492	0	0	0	0	0	5	1	9
42	JEFFERSON	1948.8542	2	2	8	1	1	21	15	21
43	JENKINS	1288.9401	6	2	10	0	0	1	2	12
44	JOHNSON	1118.8041	0	1	3	0	0	4	3	3
45	JONES	1454.4727	3	2	5	0	0	14	23	27
46	LAMAR	684.64734	0	0	0	0	0	2	9	6
47	LAURENS	2971.2939	7	0	9	0	2	6	4	18
48	LIBERTY	1921.3475	0	0	1	0	5	13	1	97
49	LINCOLN	962.95294	8	4	28	0	4	22	82	63
50	LONG	1442.4688	0	0	0	0	0	3	0	33
51	MCDUFFIE	989.48151	1	2	5	0	3	28	25	31
52	MCINTOSH	1617.738	0	0	0	0	2	2	1	112
53	MACON	1470.5044	2	1	3	2	2	4	2	11
54	MADISON	1077.0575	1	0	1	0	6	13	15	18
55	MONROE	1461.6246	2	0	4	0	0	8	14	39
56	MONTGOMERY	883.79871	0	1	3	0	0	0	0	9
57	MORGAN	1320.3748	0	0	7	0	3	42	77	49
58	NEWTON	1038.7633	1	0	1	0	0	11	23	21
59	OCONEE	697.79126	1	3	12	2	8	53	62	58
60	OGLETHORPE	1658.266	2	3	7	3	11	59	88	91
61	PEACH	550.87036	0	0	0	0	0	4	1	6
62	PULASKI	907.41675	3	5	0	1	3	13	13	24
63	PUTNAM	1335.2264	0	4	10	2	3	64	161	107
64	RABUN	1447.2928	0	1	0	0	0	6	11	13
65	RICHMOND	1216.9882	6	2	7	0	6	58	62	109
66	ROCKDALE	493.03174	0	0	0	0	0	4	10	26
67	SCREVEN	2395.9268	3	0	12	0	1	12	6	25
68	SPALDING	738.40381	0	0	0	0	0	5	15	13
69	STEPHENS	701.9718	0	0	0	0	1	7	12	8

SOURCE_ID	COUNTY	Sqkm	Clovis_Pts_ PIDBA	MidPaleo_ Pts_PIDBA	Dalton_Pts_ PIDBA	Clovis_Sites_ GNAHRGIS	Dalton_Sites_ GNAHRGIS	EA_ Sites	MA_ Sites	LA_ Sites
70	TALIAFERRO	727.70471	0	0	4	0	0	1	2	2
71	TATTNALL	1756.4232	1	1	0	0	0	4	1	5
72	TELFAIR	1594.1281	4	2	7	2	10	33	8	70
73	TOOMBS	1336.9854	0	0	1	0	0	0	1	3
74	TOWNS	661.57782	1	0	0	3	1	9	16	25
75	TREUTLEN	734.34814	0	0	1	0	0	0	0	4
76	TWIGGS	1322.048	0	1	20	1	1	12	5	11
77	UPSON	1200.5984	0	1	2	0	0	2	2	7
78	WALTON	1235.0447	1	1	2	0	1	11	14	20
79	WARREN	1063.7897	0	0	1	0	0	1	0	5
80	WASHINGTON	2513.8933	6	8	25	0	6	9	8	16
81	WAYNE	2309.3367	0	0	0	0	0	1	1	15
82	WHEELER	1081.9697	0	0	0	0	1	7	4	10
83	WILCOX	1373.0487	3	1	3	0	0	4	1	7
84	WILKES	1773.3108	1	3	8	0	3	12	23	31
85	WILKINSON	1653.5702	6	14	35	0	1	7	1	11

SOURCE_ID	COUNTY	Sqkm	Clovis_Den_ PIDBA	MidPaleo_Den_ PIDBA	Dalton_Den_ PIDBA	Clovis_Den_ GNAHRGIS	Dalton_Den_ GNAHRGIS	EA_ Density	MA_ Density	LA_ Density
0	APPLING	1832.2167	0	0	0	0	0	0	0	0.0052751
1	BALDWIN	984.16217	0.011177	0.0081287	0.0355632	0	0.005772	0.02886	0.02886	0.0620491
2	BANKS	886.94165	0	0	0	0	0.0016502	0.0066007	0.0264026	0.0231023
3	BARROW	612.67932	0.0016322	0	0.0032644	0	0.0023697	0.0094787	0.021327	0.0165877
4	BEN HILL	908.04749	0.0011013	0.0022025	0.0033038	0	0.0015198	0.0045593	0	0.006079
5	BIBB	934.26459	0.0021407	0.0032111	0.0042814	0.0075643	0.0030257	0.03177	0.0287443	0.0484115
6	BLECKLEY	794.90314	0.001258	0.002516	0.003774	0	0	0.0123457	0.0035273	0.0176367
7	BRANTLEY	1580.2396	0	0	0	0	0	0	0.0025907	0.0017271
8	BRYAN	1605.6823	0.0006228	0	0	0	0.0008643	0.0069144	0.0051858	0.101124
9	BULLOCH	2498.2043	0.0004003	0.0012009	0.0004003	0	0	0.0011211	0.0011211	0.0050448
10	BURKE	3072.5127	0.0159479	0.0107404	0.0179007	0.0023127	0.0018501	0.0148011	0.0111008	0.0235893
11	BUTTS	696.05554	0	0	0.0014367	0	0	0.0041068	0.0143737	0.0164271
12	CANDLER	902.27051	0.0011083	0.0011083	0.0022166	0	0	0	0.0015528	0
13	CHATHAM	1727.2909	0.0005789	0.0005789	0	0	0.0008039	0.0016077	0.0016077	0.0490354
14	CLARKE	455.32214	0.0021962	0	0.0021962	0	0	0.0159236	0.0414013	0.0286624
15	CLAYTON	537.50751	0	0	0	0	0	0.0106952	0.0427807	0.040107
16	COFFEE	2144.7637	0.0027975	0.0013988	0.001865	0.0012821	0.0057692	0.0166667	0.0044872	0.0333333
17	COLUMBIA	1145.0402	0.0087333	0.0017467	0.0096067	0	0.0012547	0.0200753	0.033877	0.0501882
18	CRAWFORD	1192.1139	0.0033554	0.0016777	0.0008388	0	0	0.0035461	0.0023641	0.001182
19	DEKALB	1013.6012	0	0	0	0	0	0.0128205	0.039886	0.108262
20	DODGE	1815.3088	0.0060596	0	0.004407	0	0.0015349	0.0107444	0.0023024	0.0122794
21	DOOLY	1432.8955	0.0048852	0.0048852	0.0104683	0	0	0	0.0009718	0.0145773
22	EFFINGHAM	1749.3734	0.0005716	0	0.0005716	0	0	0.0056	0.0016	0.0216
23	ELBERT	1411.9246	0.0035413	0.0021248	0.005666	0.0010309	0.0061856	0.0546392	0.117526	0.071134
24	EMANUEL	2513.8591	0.0011934	0.0003978	0.0003978	0	0	0.0016779	0.0016779	0.003915
25	EVANS	674.14545	0.0014834	0	0	0	0	0.0020661	0	0.0413223
26	FRANKLIN	1010.2061	0	0	0	0	0	0.0043478	0.0057971	0.0014493
27	FULTON	1999.7705	0	0	0	0	0.0021676	0.0122832	0.0245665	0.0231214
28	GLASCOCK	533.46356	0.0037491	0.0018745	0.0356163	0	0	0.0106952	0.0026738	0.0053476
29	GLYNN	1568.6147	0	0	0	0	0	0.002611	0.0008703	0.0356832
30	GREENE	1512.8422	0.0066101	0.003305	0.0231353	0.0019011	0.0209125	0.124525	0.197719	0.189163
31	GWINNETT	1640.9248	0	0	0.0048753	0.0017684	0.0017684	0.0150309	0.061008	0.0229885
32	HABERSHAM	1065.3761	0.0009386	0	0	0.0055325	0.0069156	0.0055325	0.0082988	0.011065
33	HALL	1626.2714	0.0006149	0	0.0018447	0.0008993	0.0008993	0.0089928	0.0755396	0.0188849
34	HANCOCK	1769.8749	0.00113	0.000565	0.0056501	0.0008065	0.0008065	0.0064516	0.0201613	0.0201613
35	HART	972.52026	0.0010283	0	0	0.001506	0.001506	0.003012	0.0045181	0.003012
36	HENRY	1212.0132	0	0	0.0008251	0	0	0.0272189	0.0390533	0.0414201

SOURCE_ID	COUNTY	Sqkm	Clovis_Den_ PIDBA	MidPaleo_Den_ PIDBA	Dalton_Den_ PIDBA	Clovis_Den_ GNAHRGIS	Dalton_Den_ GNAHRGIS	EA_ Density	MA_ Density	LA_ Density
37	HOUSTON	1380.6605	0.0043457	0.0079672	0.0144858	0	0.0010152	0.0182741	0.0101523	0.0365482
38	IRWIN	1292.9307	0.0046406	0.0015469	0	0	0	0.0159574	0	0.0053192
39	JACKSON	1294.0283	0	0.0007728	0	0	0	0.009009	0.0236486	0.0213964
40	JASPER	1382.8107	0	0.0007232	0.0014463	0	0	0.0144628	0.0196281	0.0227273
41	JEFF DAVIS	1200.6492	0	0	0	0	0	0.0057537	0.0011507	0.0103567
42	JEFFERSON	1948.8542	0.0010262	0.0010262	0.004105	0.0007289	0.0007289	0.0153061	0.0109329	0.0153061
43	JENKINS	1288.9401	0.004655	0.0015517	0.0077583	0	0	0.0010953	0.0021906	0.0131435
44	JOHNSON	1118.8041	0	0.0008938	0.0026814	0	0	0.0050378	0.0037783	0.0037783
45	JONES	1454.4727	0.0020626	0.0013751	0.0034377	0	0	0.0136719	0.0224609	0.0263672
46	LAMAR	684.64734	0	0	0	0	0	0.0041494	0.0186722	0.0124481
47	LAURENS	2971.2939	0.0023559	0	0.003029	0	0.0009438	0.0028315	0.0018877	0.0084946
48	LIBERTY	1921.3475	0	0	0.0005205	0	0.0035971	0.0093525	0.0007194	0.0697842
49	LINCOLN	962.95294	0.0083078	0.0041539	0.0290772	0	0.006006	0.033033	0.123123	0.0945946
50	LONG	1442.4688	0	0	0	0	0	0.0028708	0	0.0315789
51	MCDUFFIE	989.48151	0.0010106	0.0020213	0.0050532	0	0.0043478	0.0405797	0.0362319	0.0449275
52	MCINTOSH	1617.738	0	0	0	0	0.0016978	0.0016978	0.0008489	0.0950764
53	MACON	1470.5044	0.0013601	0.00068	0.0020401	0.0019029	0.0019029	0.0038059	0.0019029	0.0104662
54	MADISON	1077.0575	0.0009285	0	0.0009285	0	0.0081081	0.0175676	0.0202703	0.0243243
55	MONROE	1461.6246	0.0013683	0	0.0027367	0	0	0.007767	0.0135922	0.0378641
56	MONTGOMERY	883.79871	0	0.0011315	0.0033944	0	0	0	0	0.0141956
57	MORGAN	1320.3748	0	0	0.0053015	0	0.003268	0.0457516	0.083878	0.0533769
58	NEWTON	1038.7633	0.0009627	0	0.0009627	0	0	0.0152144	0.0318119	0.0290456
59	OCONEE	697.79126	0.0014331	0.0042993	0.0171971	0.0041494	0.0165975	0.109959	0.128631	0.120332
60	OGLETHORPE	1658.266	0.0012061	0.0018091	0.0042213	0.0026201	0.009607	0.0515284	0.0768559	0.079476
61	PEACH	550.87036	0	0	0	0	0	0.0102041	0.002551	0.0153061
62	PULASKI	907.41675	0.0033061	0.0055101	0	0.0015361	0.0046083	0.0199693	0.0199693	0.0368664
63	PUTNAM	1335.2264	0	0.0029957	0.0074894	0.0021413	0.003212	0.0685225	0.172377	0.114561
64	RABUN	1447.2928	0	0.0006909	0	0	0	0.0061475	0.0112705	0.0133197
65	RICHMOND	1216.9882	0.0049302	0.0016434	0.0057519	0	0.0070505	0.0681551	0.0728555	0.128085
66	ROCKDALE	493.03174	0	0	0	0	0	0.0116959	0.0292398	0.0760234
67	SCREVEN	2395.9268	0.0012521	0	0.0050085	0	0.0005889	0.0070671	0.0035336	0.0147232
68	SPALDING	738.40381	0	0	0	0	0	0.0096712	0.0290135	0.0251451
69	STEPHENS	701.9718	0	0	0	0	0.0020964	0.0146751	0.0251572	0.0167715
70	TALIAFERRO	727.70471	0	0	0.0054967	0	0	0.0019763	0.0039526	0.0039526
71	TATTNALL	1756.4232	0.0005693	0.0005693	0	0	0	0.0031646	0.0007911	0.0039557
72	TELFAIR	1594.1281	0.0025092	0.0012546	0.0043911	0.0017391	0.0086956	0.0286957	0.0069565	0.0608696
73	TOOMBS	1336.9854	0	0	0.000748	0	0	0	0.0010406	0.0031217

SOURCE_ID	COUNTY	Sqkm	Clovis_Den_ PIDBA	MidPaleo_Den_ PIDBA	Dalton_Den_ PIDBA	Clovis_Den_ GNAHRGIS	Dalton_Den_ GNAHRGIS	EA_ Density	MA_ Density	LA_ Density
74	TOWNS	661.57782	0.0015115	0	0	0.0067265	0.0022422	0.0201794	0.0358744	0.0560538
75	TREUTLEN	734.34814	0	0	0.0013618	0	0	0	0	0.0076336
76	TWIGGS	1322.048	0	0.0007564	0.015128	0.001065	0.001065	0.0127796	0.0053248	0.0117146
77	UPSON	1200.5984	0	0.0008329	0.0016658	0	0	0.0023585	0.0023585	0.0082547
78	WALTON	1235.0447	0.0008097	0.0008097	0.0016194	0	0.0011696	0.0128655	0.0163743	0.0233918
79	WARREN	1063.7897	0	0	0.00094	0	0	0.0013459	0	0.0067295
80	WASHINGTON	2513.8933	0.0023867	0.0031823	0.0099447	0	0.0033841	0.0050761	0.0045121	0.0090243
81	WAYNE	2309.3367	0	0	0	0	0	0.0005952	0.0005952	0.0089286
82	WHEELER	1081.9697	0	0	0	0	0.0012853	0.0089974	0.0051414	0.0128535
83	WILCOX	1373.0487	0.0021849	0.0007283	0.0021849	0	0	0.0040404	0.0010101	0.0070707
84	WILKES	1773.3108	0.0005639	0.0016918	0.0045113	0	0.002443	0.009772	0.0187296	0.0252443
85	WILKINSON	1653.5702	0.0036285	0.0084665	0.0211663	0	0.000854	0.0059778	0.000854	0.0093937

SOURCE_ID	COUNTY	Sqkm	Clovis_GiZ_ PIDBA	MidPaleo_GiZ_ PIDBA	Dalton_GiZ_ PIDBA	Clovis_GiZ_ GNAHRGIS	Dalton_GiZ_ GNAHRGIS	EA_ GiZ	MA_ GiZ	LA_ GiZ
0	APPLING	1832.2167	-0.97788	-0.8836862	-1.0409405	-0.694675	-0.96777	-0.980445	-1.05459	-1.29605
1	BALDWIN	984.16217	1.6532401	3.366322	3.2027447	0.0670848	0.146387	1.06493	1.6005599	0.961151
2	BANKS	886.94165	-1.361366	-1.4880632	-1.4820951	0.732731	0.716248	-0.686338	0.255143	-1.21894
3	BARROW	612.67932	-0.7428166	-0.5276556	0.0213828	0.841761	1.07188	1.43083	2.18505	0.318376
4	BEN HILL	908.04749	0.7126572	0.1873057	-0.5259138	-0.167883	0.380537	-0.14624	-1.15143	-0.720156
5	BIBB	934.26459	0.2262805	1.1840764	0.5493594	1.35469	-0.935994	-0.10799	-0.799716	-0.532404
6	BLECKLEY	794.90314	1.1475981	1.8769716	0.8347257	-0.210487	-0.277756	-0.239556	-1.0740401	-0.837671
7	BRANTLEY	1580.2396	-0.894987	-0.8466715	-0.8448501	-0.563813	-0.785463	-0.975185	-0.819704	-1.10145
8	BRYAN	1605.6823	-0.8392209	-0.8809962	-0.9996228	-0.694675	-0.077573	-0.733718	-0.966945	2.09779
9	BULLOCH	2498.2043	-0.6002538	-0.6482437	-0.9887358	-0.807018	-1.12428	-1.2135	-1.20205	-0.887983
10	BURKE	3072.5127	3.7928598	2.440098	1.2472785	0.310755	0.294232	0.960367	0.0700602	0.767316
11	BUTTS	696.05554	-1.3835783	-1.4973903	-1.2352295	-1.08767	-1.51526	-0.393073	0.054893	-0.445068
12	CANDLER	902.27051	-0.837576	-0.8416196	-1.2843224	-1.00067	-1.39406	-1.6069	-1.49306	-1.64508
13	CHATHAM	1727.2909	-0.8392209	-0.8809962	-0.9996228	-0.694675	-0.077573	-0.733718	-0.966945	2.09779
14	CLARKE	455.32214	-0.5192338	-0.187569	-0.0622653	0.828306	2.7790101	2.2639999	1.76889	1.02227
15	CLAYTON	537.50751	-1.5884445	-1.5026928	-1.4522851	-1.00067	-1.1301	-0.0919335	0.754489	1.48695
16	COFFEE	2144.7637	-0.1482291	-0.3696123	-0.6646032	0.0945234	0.402019	-0.243225	-0.772741	-0.420212
17	COLUMBIA	1145.0402	3.1094379	1.1228751	2.2137682	-0.807018	1.62436	2.46014	2.3866799	2.79918
18	CRAWFORD	1192.1139	-0.2896129	-0.2109923	-0.838327	1.87541	-0.79389	-0.586635	-0.97944	-0.862745
19	DEKALB	1013.6012	-1.5884445	-1.5026928	-1.17353	-0.463459	-0.914771	0.0144086	1.11702	1.46064
20	DODGE	1815.3088	1.2026151	0.5168774	-0.4825085	-0.0056803	0.527814	-0.206175	-1.15914	-0.597601
21	DOOLY	1432.8955	1.3738706	3.4362001	0.6578564	0.456841	-0.0155665	-0.415145	-0.808342	-0.437973
22	EFFINGHAM	1749.3734	-0.6355459	-0.4371056	-0.7509171	-0.563813	-0.785463	-0.769741	-0.828607	-0.771719
23	ELBERT	1411.9246	-0.1915308	-0.1275262	-0.406281	0.797747	2.4272399	1.34649	1.51652	0.571438
24	EMANUEL	2513.8591	-0.2450482	-0.4952525	-0.4629979	-0.907826	-1.26472	-1.43362	-1.30462	-1.74918
25	EVANS	674.14545	-0.600692	-0.5092743	-1.0282745	-0.807018	-1.12428	-1.27196	-1.21313	-1.1483901
26	FRANKLIN	1010.2061	-1.131206	-1.5026928	-1.4463739	1.13758	1.0750099	-0.739725	-0.538317	-1.3722301
27	FULTON	1999.7705	-1.1027143	-1.0431846	-1.0409405	-0.694675	-0.60129	-0.239948	0.601857	1.27704
28	GLASCOCK	533.46356	-0.1193424	0.2465583	2.0060232	-0.534253	-0.26558	-0.189754	-0.718841	-1.1066099
29	GLYNN	1568.6147	-0.894987	-0.8466715	-0.8448501	-0.563813	-0.436006	-0.850643	-0.847795	1.37535
30	GREENE	1512.8422	-0.1994427	0.8056158	2.0186894	2.2007	4.6567702	5.6353502	5.51717	4.0554299
31	GWINNETT	1640.9248	-1.0212526	-1.185412	-0.7528734	-0.322986	-0.5611	-0.265477	0.652232	1.15668
32	HABERSHAM	1065.3761	-1.2015086	-1.3632783	-1.4994602	2.72351	0.17732	-0.625693	-0.284998	-0.859367
33	HALL	1626.2714	-0.8517619	-1.0232612	-0.855898	-0.47653	-0.39965	-0.606396	0.753198	-0.710816
34	HANCOCK	1769.8749	1.6124531	1.7911742	4.4565773	0.121769	2.0102701	2.24067	2.44788	1.65556

SOURCE_ID	COUNTY	Sqkm	Clovis_GiZ_ PIDBA	MidPaleo_GiZ_ PIDBA	Dalton_GiZ_ PIDBA	Clovis_GiZ_ GNAHRGIS	Dalton_GiZ_ GNAHRGIS	EA_ GiZ	MA_ GiZ	LA_ GiZ
35	HART	972.52026	-0.4958347	-0.8965389	-0.949855	-0.0687869	1.10773	0.433294	0.719258	-0.577441
36	HENRY	1212.0132	-1.5849017	-1.6333342	-1.4580568	-1.08767	-1.51526	-0.229805	0.688434	1.27528
37	HOUSTON	1380.6605	0.5380467	2.76002	0.7628081	2.04533	-0.389514	-0.166056	-1.10105	-0.692737
38	IRWIN	1292.9307	0.6377318	0.4320983	-0.5255492	-0.563813	-0.47265	-0.307073	-0.880723	-1.08614
39	JACKSON	1294.0283	-0.7253422	-0.6798644	-0.2751275	0.341263	1.84565	1.36192	1.86086	0.330268
40	JASPER	1382.8107	-1.1106858	-0.4748619	-0.351675	-0.350151	-0.604989	1.44267	2.3406999	0.857734
41	JEFF DAVIS	1200.6492	-0.5287164	-0.7804248	-0.9709166	0.091361	0.82325	-0.30388	-1.19932	-0.497789
42	JEFFERSON	1948.8542	3.1338897	2.8945413	3.4641693	0.310755	-0.245865	-0.323236	-0.86011	-1.1049401
43	JENKINS	1288.9401	3.1221278	1.8855644	0.9394404	0.0428957	-0.764983	-0.83297	-1.00701	-1.07389
44	JOHNSON	1118.8041	-0.4205289	-0.3805142	-0.2763349	-0.907826	-0.690974	-1.2864799	-1.27185	-1.69107
45	JONES	1454.4727	1.056538	1.8132157	1.6426872	1.9478199	0.068375	1.50862	1.6736799	1.46134
46	LAMAR	684.64734	-1.2058163	-1.1803091	-0.9968696	-0.907826	-1.26472	-0.996396	-0.455805	-0.797283
47	LAURENS	2971.2939	0.2220298	-0.6142535	-0.4108819	-0.907826	-0.936113	-0.933613	-1.2762901	-1.46558
48	LIBERTY	1921.3475	-1.2344606	-1.2360984	-1.3279407	-0.907826	-0.34164	-1.11756	-1.31495	2.4761701
49	LINCOLN	962.95294	2.2752995	1.1346767	2.1279607	-0.807018	0.945632	1.05883	1.64476	1.2813801
50	LONG	1442.4688	-1.1027143	-1.0431846	-0.9996228	-0.694675	-0.359608	-0.873001	-1.06446	0.240391
51	MCDUFFIE	989.48151	1.8543791	0.4739538	3.4057612	-1.00067	0.0195242	0.370768	0.701443	0.165187
52	MCINTOSH	1617.738	-1.1027143	-1.0431846	-0.9996228	-0.694675	-0.072564	-0.849787	-1.04677	1.76917
53	MACON	1470.5044	0.9566512	1.9778405	0.3721732	-0.278469	-0.87786	-0.828404	-1.19677	-1.09027
54	MADISON	1077.0575	-0.6248519	-0.363592	-0.4343707	1.10374	2.68379	2.2962501	2.2455201	0.858879
55	MONROE	1461.6246	-0.4131075	-0.2992518	-0.8628904	1.05327	-1.17199	-0.674431	-0.616282	-0.832922
56	MONTGOMERY	883.79871	-1.2810453	-0.9357068	-0.8285711	-0.807018	-0.934935	-1.20846	-1.17589	-1.33315
57	MORGAN	1320.3748	-0.2823843	0.6474684	1.4146258	1.23088	3.6080599	5.3134599	5.16716	3.7323401
58	NEWTON	1038.7633	-1.4657727	-1.3451815	-1.0123378	-1.08767	-1.01182	0.50762	0.775	0.433955
59	OCONEE	697.79126	-0.0357259	-0.0294246	0.8815843	0.942988	4.5462899	4.3441601	3.8020101	2.7253399
60	OGLETHORPE	1658.266	0.4249244	0.5840015	1.4234859	1.4147201	5.1893501	4.6497302	4.1853099	3.0605099
61	PEACH	550.87036	0.1805844	1.3811401	0.6031824	2.19893	-0.540584	-0.171398	-0.984806	-0.836588
62	PULASKI	907.41675	1.892082	2.8570099	0.5200351	-0.534015	-0.522369	-0.46913	-1.13331	-0.820117
63	PUTNAM	1335.2264	1.3601978	1.5798453	2.7395399	0.284731	2.3387201	3.6672699	4.0551901	3.0027001
64	RABUN	1447.2928	-0.8129625	-1.0432364	-1.2092814	3.69818	0.533562	-0.307491	-0.155819	-0.456394
65	RICHMOND	1216.9882	5.3899317	2.915416	1.5993659	0.280791	0.749191	1.61215	0.768618	1.79151
66	ROCKDALE	493.03174	-1.4657727	-1.4811254	-1.1886188	-0.587168	-1.18195	0.0311751	1.0473	1.3299299
67	SCREVEN	2395.9268	0.6818373	-0.3174619	0.3890213	-0.563813	-0.664244	-0.721401	-0.77109	-0.746522
68	SPALDING	738.40381	-1.4410661	-1.3632706	-1.2195526	-0.907826	-1.26472	-0.396158	0.356899	-0.326994
69	STEPHENS	701.9718	-1.2778294	-1.3632783	-1.4994602	1.13758	0.0876806	-0.96631	-0.640293	-1.50649

SOURCE_ID	COUNTY	Sqkm	Clovis_GiZ_ PIDBA	MidPaleo_GiZ_ PIDBA	Dalton_GiZ_ PIDBA	Clovis_GiZ_ GNAHRGIS	Dalton_GiZ_ GNAHRGIS	EA_ GiZ	MA_ GiZ	LA_ GiZ
70	TALIAFERRO	727.70471	-0.1786306	0.1322518	0.9808116	0.420235	2.8090601	2.4460199	2.0343001	1.65292
71	TATTNALL	1756.4232	-0.8976137	-0.9947516	-1.1758033	-0.907826	-1.26472	-1.48936	-1.37635	-1.41442
72	TELFAIR	1594.1281	0.2214421	-0.6038654	-0.6070396	-0.332648	0.463389	-0.333321	-1.22627	-0.766747
73	TOOMBS	1336.9854	-1.3235064	-0.9358837	-1.0580096	-1.00067	-1.23754	-1.52491	-1.46652	-1.8354
74	TOWNS	661.57782	-0.5654847	-0.8496186	-1.0409405	4.4760499	0.580528	-0.348471	-0.212898	-0.265293
75	TREUTLEN	734.34814	-1.2043396	-1.1778312	-1.011235	-1.08767	-1.26236	-1.57697	-1.55624	-1.93504
76	TWIGGS	1322.048	0.2075994	3.1214032	1.8645875	1.6208301	-0.668319	0.046287	-0.983511	-0.648923
77	UPSON	1200.5984	-0.3786219	-0.5990762	-0.846747	-0.807018	-1.12428	-0.996673	-0.753642	-1.00927
78	WALTON	1235.0447	-0.8833044	-0.8531454	0.022571	0.406545	1.05826	2.0399699	2.2830601	1.22135
79	WARREN	1063.7897	-0.4284818	-0.3833932	1.9235567	-0.64111	-0.581426	-0.283681	-0.64072	-1.0499099
80	WASHINGTON	2513.8933	0.2940783	1.7273912	3.0268941	-0.534253	-0.69103	-0.803039	-1.07689	-1.57613
81	WAYNE	2309.3367	-1.1027143	-1.0431846	-1.0409405	-0.694675	-0.96777	-1.13064	-1.03502	-0.912429
82	WHEELER	1081.9697	-1.1921858	-1.021244	-0.933679	-0.472335	-0.178664	-0.904184	-1.40122	-1.01469
83	WILCOX	1373.0487	1.1359717	0.848462	-0.5248176	-0.242498	0.0045411	-0.480813	-0.941501	-0.971689
84	WILKES	1773.3108	0.9003668	0.784931	1.688032	0.299664	1.94892	1.65817	2.77828	1.5172499
85	WILKINSON	1653.5702	2.003377	3.8002315	4.448822	-0.415641	0.507166	-0.159662	-0.718498	-0.530607