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IDENTIFYING POTENTIAL HEIRS PROPERTIES IN THE SOUTHEASTERN UNITED STATES

A New GIS Methodology Utilizing Mass Appraisal Data

Scott Pippin, Shana Jones, and Cassandra Johnson Gaither

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Abstract

This report presents a methodology for identifying land parcels that have an increased probability of being heirs property. Heirs property is inherited land passed to successive generations intestate, without clear title, typically to family members. This land ownership type is widespread among rural, African-American populations and is also thought to be pervasive in Appalachia, among some Native American groups, and in southwest Texas communities called *colonias*. The lack of title severely limits property owners' ability to access credit, to sell natural resources, or to participate in land improvement programs offered by the Federal Government, resulting in land and wealth loss for affected families across the South.

While growing attention is focused on the heirs property phenomenon, fundamental data or information on heirs property extent in the South does not exist. Several estimations have been made in recent decades; however, most of these are either dated or specific to a particular county or group of counties. No systematic methodology for identifying heirs parcels at a regional scale has been proposed. We addressed this problem by using data from county-level taxing authorities, organized as computer-assisted mass appraisal (CAMA) data, to identify potential heirs parcels—that is, those that have a higher probability of being heirs property based on characteristics of the parcel. Data are presented for 10 counties in Georgia, one in South Carolina, and one in Texas.

Keywords: heirs property, land tenure, CAMA data, Black Belt.

EXECUTIVE SUMMARY

For many Americans, owning land or a home is their greatest source of wealth, serving as their largest source of funds for retirement and their most important bulwark against poverty. Heirs property is an unstable form of land ownership that limits the financial use of real property and causes problems for property owners, communities, and all levels of government. Heirs property is a widespread phenomenon that has always been extremely difficult to quantify, measure, or map. The lack of empirical data about heirs property ownership has stymied researchers trying to document the scope of the problem, the populations affected, and its economic impact.

This project is designed to begin addressing this empirical problem. It does so by building upon pioneering work conducted by researchers and public interest groups seeking to gather concrete data about heirs property ownership. The project first builds upon research concerning the demographic characteristics of heirs property owners in order to develop a method to incorporate corresponding demographic data into geospatial analyses at a regional scale. Specifically, we identified counties with percentages at the 90th percentile or higher for each of these factors—minority status, poverty, low per capita income, and low educational attainment. A total of 1,340 counties were examined in U.S. Department of Agriculture (USDA) Forest Service Southern Region, a 13-State region. Of these counties, 289 were identified as having at least one demographic indicator of heirs property at the 90th percentile or higher. Out of this group, 192 counties fell into contiguous groups and were mapped into geographically distinct "clusters". These clusters spanned a range of ethnic and geographically distinct groups, which included the border area in southwestern Texas; the Mississippi River corridor through Arkansas, Mississippi, and Louisiana; the Appalachia region in eastern Kentucky and northern Tennessee; "Black Belt" counties in Georgia and Alabama; and areas in the vicinity of some tribal communities in North Carolina.[1]

Once the regional heirs property demographic clusters were identified, the project then turned to identifying potential heirs properties at a local scale, on the county level. We use the

[1] For a map of recognized tribal communities in North Carolina, see the N.C. Commission of Indian Affairs' N.C. Tribal and Urban Communities Map, available at: www.doa.nc.gov/cia/documents/NCTribalMap.pdf. [Date accessed: January 2017].

terms "potential heirs property" to indicate parcels that may be heirs property, based on the methodology presented in this report. This phase of the project builds upon existing efforts to identify potential heirs properties using volunteers to evaluate tax parcel and land record data. This project extends that approach by using census data and computer-assisted mass appraisal (CAMA) data to automate and further refine the heirs property identification process. It also allows for a spatially oriented, geographic assessment of potential heirs properties identified. In this way, the project demonstrates a promising new research methodology that may be applied more broadly to conduct statistical and comparative analyses.

County-Level Results: Five-County Georgia Analysis

We used the CAMA data methodology to geospatially analyze five counties in Georgia that fell within the Black Belt regional heirs property cluster: Calhoun, Taliaferro, Clay, Dougherty, and Telfair. [Note: maps for each of these counties identifying potential heirs properties are included in appendix A.]

- On average, 19 percent of all parcels were identified as potential heirs property.
- The percentage of parcels indicating potential heirs properties ranged from 25 percent in Dougherty County to 12 percent in Calhoun County.
- The land area affected was, on average, 4 percent of each county's area.
- The identified parcels total 34,463 acres and have an assessed value of $765,808,551.
- The county with the highest percentage of minority population—Dougherty County at 71 percent, with the majority of this percentage (69 percent) African-American—also had the highest percentage of parcels with potential heirs properties at 25 percent. The county with the second highest percentage of parcels with potential heirs properties—Clay County at 21 percent—had a substantial minority population of 63 percent. Clay County's minority population is likewise predominantly African-American, at 59 percent.

Comparison of County-Level Results: Five-County Georgia Analysis

We applied our methodology to five counties in Georgia that did not fall within the regional cluster of potential heirs properties: Bibb, Athens-Clarke,[2] Evans, Jasper, and McIntosh. [Note: maps for each of these counties identifying potential heirs properties are included in appendix A.] This analysis produced several interesting findings:

- The average percentage of parcels in these comparison counties was 5 percentage points lower than those from the regionally identified group, with an average of 14 percent of parcels identified as potential heirs properties.
- Even though a lower percentage of potential heirs property parcels were identified in the comparison group of counties, the value of the properties was substantially higher, with a cumulative value of $1,383,142,810. This is likely due to higher levels of development in these counties and higher property values.
- While the average percentage of potential heirs properties drawn from this comparison group was 5 percent smaller than the first "cluster" group, 14 percent as an average of potential properties with title issues is nevertheless significant. The heirs property problem is often described as a rural problem, but it appears to be a problem on a similar scale in more urbanized areas—and the value of the potential heirs properties in these areas is much higher.

[2] Athens-Clarke County ranks in the 90th percentile for poverty, one of the four demographic indicators we used in our regional cluster analysis. Athens-Clarke County did not fall within a regional heirs property cluster, however, because it was not geographically contiguous with the counties meeting the heirs property indicators.

South Carolina and Texas County-Level Results

We also applied our methodology to two out-of-state counties—Cameron County in Texas and Anderson County in South Carolina. We applied our methodology to find, with a lesser degree of confidence because some of the data available for Georgia are not available in these counties, the following:

- 25 percent of the parcels in Cameron County, TX, valued at approximately $2.5 million, appear to be potential heirs properties.
- 9 percent of the parcels in Anderson County, SC, valued at approximately $821 million, appear to be potential heirs properties.

One of the premises of this project is that CAMA data are a useful resource for identifying potential heirs properties. Georgia has the most consistent and robust CAMA data available, with almost all of the counties utilizing the same type of CAMA data. However, because CAMA data can differ by county, we also conducted an assessment of the variability of tax and land records for the cluster areas. There are at least 85 different CAMA systems used in the 13-State region, and likely many more. These systems also vary widely, which presents significant obstacles to conducting a broad, region-wide analysis of potential heirs property. The development of larger-scale datasets with consistent variables at the State, regional, or national level would provide an invaluable resource for this type of research, as well as a wide array of other work related to landownership and valuation.

Even so, CAMA data remain a useful data source to support additional analyses, particularly if focused in Georgia and other States that have relatively comprehensive CAMA data coverage. A current extension of this project includes statistical modeling of factors assumed to predict heirs property, as well as the development of ground-truthing methods involving the examination of probate court records to validate the project's findings. Regarding factors hypothesized to predict heirs property, population patterns appear to play a potentially large role in indicating whether some counties will have a larger percentage of heirs properties than others, and thus a demographic analysis could be very useful. Historical factors such as African-American migration from rural to urban areas, mill closings, farm consolidation, and patterns of discrimination against minority landowners likely also influence the percentage of heirs properties in a county or region. Finally, this line of research would be enhanced by incorporating data on landcover, land use patterns, and/or floodplain elevations to better understand the characteristics of the locations of heirs properties in relation to the natural or built environment.

SECTION I: INTRODUCTION

Background: USDA Forest Service and Institute of Government Partnership

This project was funded by the Forest Service, U.S. Department of Agriculture (USDA), for the purpose of developing a geographical information system (GIS) methodology for assessing and identifying potential heirs properties (also referenced as "heirs' property"). The authors of this report worked closely with Dr. Cassandra Johnson Gaither, Research Social Scientist and Project Leader with the Forest Service's Southern Research Station. The Forest Service delivers programs focused on land stewardship and enrichment. One of its primary aims is to deliver programs that enhance the economic, social, and ecological systems undergirding rural communities. Understanding more fully the range of social drivers impacting private land management is crucial to this effort, such as land tenure and challenges to small-scale private land management. Heirs property has been identified as an impediment to more effective and efficient land management, not only for African-American landowners in the South but also for Whites in Central Appalachia. A key step in the better delivery of programs and services to landowners with heirs property is the identification of communities with relatively high concentrations of this type of land tenure.

This report describes the research conducted for this project and provides the following:

- A background and overview of heirs property issues and research context of this report.
- A threshold methodology to identify counties with a higher probability of having a significant number of heirs properties. The methodology is applied to the Forest Service Southern Region (R8) (fig. 1) in order to identify "cluster areas" of counties representing populations likely to own heirs properties. This methodology and its application are provided in full in Section II: Regional Assessment.

- The identification of heirs property indicators included in computer-assisted mass appraisal data (CAMA data) and the application of these indicators to counties identified by the threshold methodology. The CAMA data analysis is a geospatial assessment of parcel data. This methodology and its application to 10 Georgia counties, one Texas county, and one South Carolina county is found in Section III: County-Level Parcel Data Assessment. The maps for the Georgia counties analyzed are included in appendix A. The two maps developed for the two out-of-state counties are included within the body of the report.
- An assessment of the variability of tax and land records in Southern Region "cluster areas." This assessment is found in Section IV: Data Variability and Other Limitations.

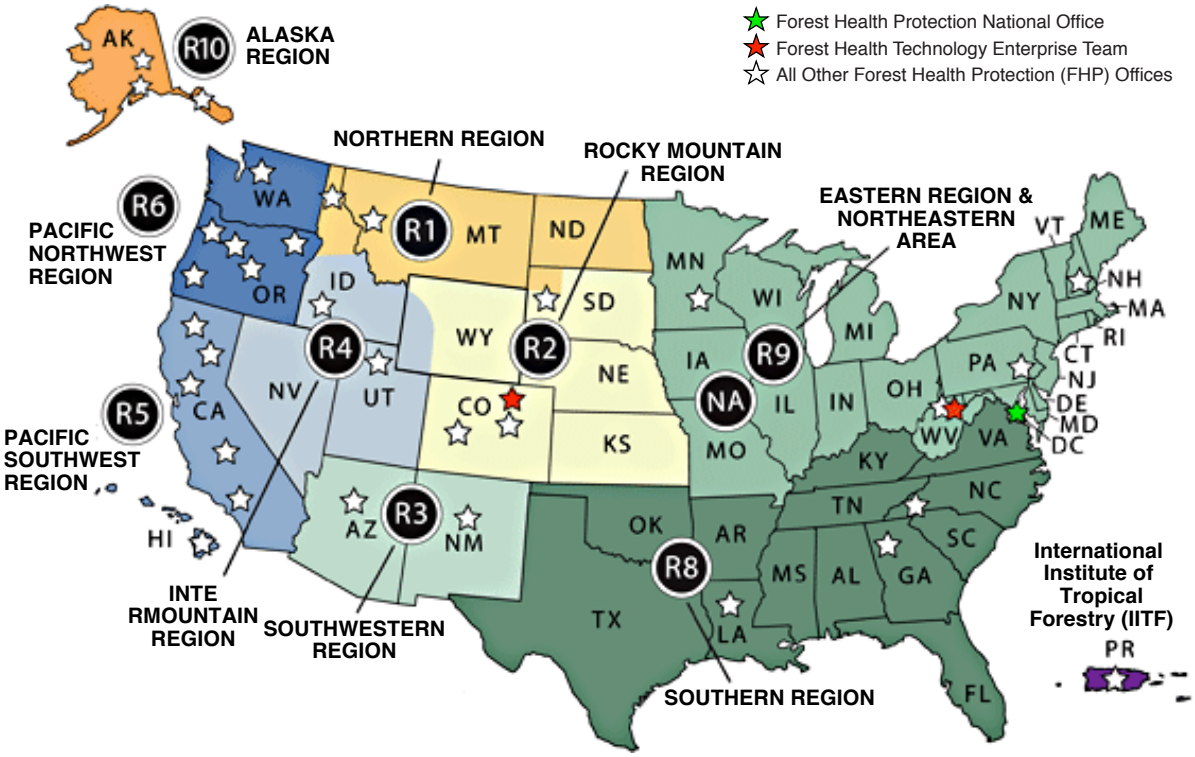

Figure 1—U.S. Forest Service Regions. This analysis focused on the 13 States in the Southern Region (R8 on the map).

Heirs Properties: An Overview

For many Americans, owning land or a home is their greatest source of wealth, serving as their largest source of funds for retirement and their most important bulwark against poverty.[3] All too often, however, even those who possess real property[4] find they are "locked out" of the potential wealth and benefits that the property could provide for one crucial reason: they cannot prove they own it outright; that is, they cannot show "good title."[5] "Heirs properties" refers to a specific yet widespread title problem that prevents many landowners from realizing the full benefits of owning real property.[6]

When a landowner is said to have "good title," it means that she can demonstrate that she legally owns the property and that no one else has a legal claim to it. Generally, legal evidence demonstrating her ownership of property will be recorded in a deed in the clerk's office of the county where the property is located. Having "good title" allows her to sell, lease, or mortgage the property, among other transactions. She can also leave her property to an heir or heirs in her will.

As the term "heirs property" suggests, title problems can arise when the property is transferred, usually following an owner's death, in a way that creates multiple co-owners of the property who have co-equal use of the entire property.[7] The law calls this form of ownership a "tenancy in common." In a tenancy in common ownership structure, each owner owns all of the property equally, with each having equal rights of possession of it and responsibility for it.[8] Absent some sort of management agreement, unanimous consent of all of the owners is required to make any decisions regarding the use or management of the property. Put another way, two or more persons "share and share alike" the same piece of real property.[9]

A tenancy in common may be created intentionally or unintentionally. An owner may decide, for example, to transfer her property through a deed, gift, or will in a way that creates a tenancy in common.[10] More commonly, an owner may inadvertently create a tenancy in common if she dies without a will. At that point, State law determines what happens to the property. In most States, when a landowner dies without a will (intestate), her interest in the property

[3] Charles Geisler, *Land and Poverty in the United States: Insights and Oversights*, 71 (1995).

[4] In legal parlance, "real property" generally refers to land and things permanently attached to the land, such as a house, and is distinguished from personal property, which consists of most other physical objects.

[5] Georgia Appleseed Center for Law & Justice, *Unlocking Heir Property Ownership: Assessing the Impact on Low and Mid-Income Georgians and Their Communities*, 10 (2013) [hereinafter Georgia Appleseed, *Unlocking Heir Property Ownership*].

[6] We use the term "heirs property" because that is the term used in the Uniform Partition of Heirs Property Act. See *infra* note 13. Some researchers, community organizers, and commentators use the terms "heir property" or "heirs' property."

[7] Thomas W. Mitchell, *Reforming Property Law to Address Devastating Land Loss*, 66 Alabama Law Review, 1, 9 (2014) [hereinafter Mitchell, *Reforming*].

[8] 2 Tiffany Real Property § 426 (3rd ed.) (explaining that tenancy in common is "characterized by unity of possession …. Each cotenant has a right to enter upon, explore and possess the entire premises, and to do so without the consent of his cotenants, though he may not do so to the exclusion of his cotenants to do likewise."). For a comprehensive history and analysis of partition actions as well as proposed reforms, see Mitchell, *Reforming*, *supra* note 7.

[9] 2 Tiffany Real Property § 427 (3rd ed.).

[10] *Id.*

is transferred to all of her living heirs based on "laws of intestacy" in the State in which the deceased lived, thus creating a tenancy in common. As generations pass and heirs proliferate, ownership becomes "less clear."[11] In this situation, the title is often referred to as "clouded."[12] Titles clouded in this way are frequently referred to as "heirs properties."[13]

Heirs Properties: Problems Associated With Unstable Ownership

Heirs properties present many problems for local governments, property owners and residents, and the larger community. In a tenancy in common situation, decisions regarding management or disposition of the property generally require unanimous agreement among the owners. This can keep the property from being used productively, such as being rented or farmed, or it can discourage owners from investing in maintenance and upkeep. More tragically, too often this situation has allowed long-time owners and residents to be dispossessed of their lands through legal maneuvers from non-family members, particularly where outside development pressures have made property values increase, such as in coastal areas.[14]

Heirs properties create difficult issues for both heirs and local governments alike. Heirs property ownership is highly unstable.[15] A cotenant may sell or convey her interest without the consent of her fellow cotenants.[16] Any cotenant may also request a court to divide the property among the co-owners in what is known as a partition action.[17] These rights are among the very few that do not require the consent of all co-heirs. Partition actions utilize "forced sale procedures that

[11] Mitchell, *Reforming*, *supra* note 7, at 29.

[12] Titles can be clouded in various ways. *Black's Law Dictionary* defines "cloud on title" as a "defect or potential defect in the owner's title to a piece of land arising from some claim or encumbrance, such as a lien, an easement, or a court order." *Black's Law Dictionary,* 249 (7th ed. 1999).

[13] Thomas W. Mitchell, *Destabilizing the Normalization of Rural Black Land Loss: A Critical Role for Legal Empiricism*, 2005 Wisconsin Law Review, 557, 583 (2005) [hereinafter Mitchell, *Destabilizing*]. The Uniform Partition of Heirs Property Act defines heirs property as "tenancy-in-common real property where there is no written agreement among the cotenants governing the partition of the land." Uniform Partition of Heirs Property Act § 2 (2010), available at www.uniformlaws.org/shared/docs/partition%20of%20heirs%20property/uphpa_final_10.pdf. [Date accessed: June 2017]. For a discussion of the creation of and significance of this act, see Mitchell, *Reforming*, *supra* note 7 at 3-4.

[14] See, e.g., Faith Rivers, *Resorting the Bundle of Rights: Preserving Heirs' Property in Coastal South Carolina*, paper contributed to Property Preservation Task Force Program: Preservation and Development of Tenancy in Common Property—Societal, Real Estate and Tax Considerations, San Diego, CA (2006), available at www.abanet.org/rppt/meetings_cle/2006/spring/rp/17propertypreservation.pdf; [Date accessed: January 2017]; Todd Lewan & Dolores Barclay, *Torn from the Land: Developers and Lawyers Use a Legal Maneuver to Strip Black Families of Land*, Associated Press (2001) [hereinafter Lewan & Barclay, *Torn from the Land*].

[15] Uniform Partition of Heirs Property Act, Prefatory Note (2010).

[16] *Id.*

[17] In most States, any cotenant of property held in common—no matter the size of her interest in the property or how long she has held it—may file a partition action to request that the court divide the property among the co-owners. 2 Tiffany Real Property § 473 (3rd ed.). Although there are several remedies courts may impose such as dividing the land "in-kind," courts often order the entire property to be sold at a partition sale, which could result in forcing co-owners off of the land without their consent. Mitchell, *Reforming*, *supra* note 7 at 11. For low-income co-tenants, a partition sale may be devastating on several fronts. Because of ineffective State notice requirements, they may not find out about the sale in the first place. *Id.* If they do have knowledge about the sale, they may lack the resources to outbid other bidders—even though the property is likely to be offered at less than market value. *Id.* at 30.

are notorious for yielding sales prices well below market value."[18] In the most egregious cases, the individual seeking the forced sale may be an unrelated party who purchased a fractional interest in order to force a sale so that she can develop the property.[19] The family member who sold the interest may not even understand that a partition sale could occur as a result.[20] Despite these possibilities, however, there is no empiricism to suggest that land loss among African Americans has been exacerbated by forced sales. While land loss has been significant in this population, most of the forced sales involving Black-owned land has been the result of foreclosures rather than partition sales.[21]

Other problems also arise as a result of heirs property ownership. Again, having multiple heirs may make agreement on the management and use of the property difficult.[22] The number of heirs responsible for paying taxes also can create problems. "Because it is so difficult to keep track of who should be paying taxes, property can be lost through tax sales."[23]

Lack of good title may also prevent owners from obtaining a mortgage because lending institutions require proof of a clean or marketable title.[24] Heirs property owners have difficulty using their property for collateral or obtaining insurance.[25] Leasing property is difficult because tenants may be unsure that an heirs property lessor has the authority to lease the land.[26] Even selling timber or crops from heirs property land can be a problem without clear title.[27] In some instances, loggers have taken advantage of heirs property owners, with the Louisiana Agriculture and Forestry Commissioner recently noting that such landowners "can easily get scammed out of money and ultimately lose their property."[28]

Heirs property owners are also more likely to find themselves denied access to Federal and State funding assistance. After Hurricanes Katrina and Rita, for example, approximately 20,000

[18] Uniform Partition of Heirs Property Act, Prefatory Note (2010).

[19] Georgia Appleseed, *Unlocking Heir Property Ownership*, *supra* note 5 at 8. See also Uniform Partition of Heirs Property Act, Prefatory Note (2010).

[20] *Id.*

[21] Mitchell, *Destabilizing*, *supra* note 13 at 609.

[22] Georgia Appleseed Center for Law and Justice, Heir Property in Georgia (February 6, 2015), available at https://gaappleseed.org/media/docs/unlocking-heir-property.pdf [hereinafter Georgia Appleseed, *Heir Property*]. [Date accessed: June 2017).

[23] Janice F. Dyer & Conner Bailey, *A Place to Call Home: Cultural Understandings of Heir Property among Rural African Americans*, 73(3) Rural Sociology, 317, 319 (2008) [hereinafter Dyer & Bailey, *A Place*].

[24] Heather K. Way, *Informal Homeownership in the United States and the Law*, 29 Saint Louis University Public Law Review, 113, 192 n. 247 (2009) [hereinafter Way, *Informal Homeownership*]. As one analysis of proposed land reforms post-Hurricane Katrina observes, heirs property often does not "confront the pressures and incentives of new construction and new mortgage financing which serve as triggers for re-examining title, and for correcting defects that would otherwise render title unmarketable and uninsurable." Frank S. Alexander, *Louisiana Land Reform in the Storms' Aftermath*, 53 Loyola Law Review, 727, 732 (2007).

[25] *Id.*

[26] Georgia Appleseed, *Heir Property*, *supra* note 22 at 12.

[27] *Id.*; Janice F. Dyer, *Statutory Impacts of Heir Properties: An Examination of Appellate and Macon County Court Cases*, paper presented at the 66th Annual Professional Agricultural Workers Conference, Tuskegee University (Dec. 2008) [hereinafter Dyer, *Statutory Impacts*].

[28] Louisiana Dept. of Agriculture and Forestry, *Texas Logger Accused of Theft* (June 19, 2015), available at www.ldaf.state.la.us/news/texas-logger-accused-of-timber-theft/. [Date last accessed: June 2017].

heirs property owners were denied Federal Emergency Management Agency (FEMA) or U.S. Department of Housing and Urban Development (HUD) assistance grants because they could not show clear title to their property.[29] Similar problems arose in Texas after Hurricanes Rita and Dolly.[30] Housing restoration, energy efficiency, and weatherization programs, as well as rural development grants and numerous other programs, all require property owners to demonstrate that they have good title.[31] In Virginia and Kentucky, planners and advocates have found it difficult to provide grants and loans to heirs property owners seeking to upgrade failing septic systems, leaving the owners exposed to a significant public health threat and local planners stymied in their efforts to improve water quality.[32]

From the local government perspective, title problems often lead to property abandonment, tax delinquency, and blight, as the property loses its productive use.[33] More broadly, absentee land ownership has been linked with the deterioration of rural communities.[34] When real estate cannot be used productively, it is, to quote international economist Hernando De Soto, "dead capital"[35] or what Georgia Appleseed refers to as "locked wealth" often owned by some of our poorest citizens.

Quantifying the Heirs Property Problem: the Purpose of this Report

Identifying individual heirs properties is time-consuming and difficult, even impossible at times. Deeds to heirs property remain in the deceased individual's name. Consequently, documenting the number of heirs properties through title searches is difficult because the title generally does not indicate whether the individual is deceased.[36] As the nonprofit organization

[29] Heir Property in Georgia, Attorney Training Manual, Georgia Appleseed (2010); Way, *Informal Homeownership*, *supra* note 24 at 118; Craig H. Baab, *Emergency Community Block Grant Funds in the Gulf Coast: Uses, Challenges and Lessons for the Future*, Alabama Appleseed Center for Law & Justice, Inc. (2008) [hereinafter Baab, *Emergency Community*].

[30] Way, *Informal Homeownership*, *supra* note 24 at 118-19 ("According to one recent analysis in Texas, approximately one out of five low-income households applying for hurricane recovery assistance had at least one title issue impeding the family's ability to access assistance. According to another analysis in a low-income area of the state, approximately 90% of the applicants had some type of problem with the title to their homes.").

[31] Dyer, *Statutory Impacts*, *supra* note 27.

[32] Brian R. Giaquinto & Stephanie Showalter Otts, *Failing Septic Systems and Heirs' Property: Financial Lending Challenges and Possible Solutions* (2012), National Sea Grant Law Center, University of Mississippi School of Law, available at nsglc.olemiss.edu/Advisory/Heir-Property-Final[updated].pdf. [Date accessed: June 2017]; James Deaton, *Land "in Heirs": Building A Hypothesis Concerning Tenancy in Common and the Persistence of Poverty in Central Appalachia*, 11 Journal of Appalachian Studies, 83, 86 (2005).

[33] See Frank S. Alexander, *Land Banks and Land Banking*, Center for Community Progress, 26 (2011); Craig H. Baab, *Heir Property: A Constraint for Planners, an Opportunity for Communities*, 63 Planning & Environmental Law, 3, American Planning Association (Nov. 2011).

[34] Susan E. Stokes & Christy Anderson Brekken, *The Eighth Circuit Grants Corporate Interests A New Weapon Against State Regulation* in South Dakota Farm Bureau v. Hazeltine, 49 South Dakota Law Review, 795, 798 (2004) (citing a report issued by the USDA National Commission on Small Farms); Dyer & Bailey, *A Place*, *supra* note 23 at 318.

[35] Way, *Informal Homeownership*, *supra* note 24 at 156.

[36] Dyer & Bailey, *A Place*, *supra* note 23 at 319. Our research reveals that some counties include designators such as "heirs of," "dec'd," and "heirs et al." on titles having multiple co-owners who have what is likely a tenancy in common arrangement. See also Janice F. Dyer et al., *Ownership Characteristics of Heir Property in a Black Belt County: A Quantitative Approach*, 24(2) Southern Rural Sociology, 192, 201 (2009) [hereinafter Dyer, *Ownership Characteristics*].

Georgia Appleseed has observed, "Short of contacting individuals living on the land, it is very difficult to identify heirs property with total accuracy."[37] Without a sense of the scope of the problem, it is difficult to estimate property values lost to heirs and communities, discern geographic patterns, or develop approaches and policies to assist individuals with clearing title.[38]

To improve understanding of the prevalence and value of heirs properties Georgia Appleseed developed a research methodology designed to "identify potential heirs property with a degree of reasonable certainty and estimate the acreage and fair market value of heirs property in Georgia." This was accomplished by using volunteers to review tax parcel and land record data, modeled on research conducted by Dr. Janice Dyer, a then Ph.D. student studying rural sociology at Auburn University.[39]

This project builds upon the groundbreaking work conducted by Georgia Appleseed and Dr. Dyer by using census data and computer-assisted mass appraisal (CAMA) data to automate and further refine heirs property identification. These types of spatially oriented geographic data provide a relatively simple means to rapidly assess the potential extent of the heirs property problem in a jurisdiction. In addition to increasing the efficiency of Georgia Appleseed's methodology, using a data source like CAMA allows for geographic information system (GIS) mapping and the integration of other data sources, which increases the accuracy of the modeling of potential heirs property. Most importantly, because CAMA data are used by many jurisdictions in the United States, this methodology may also be applied more broadly to conduct statistical and comparative analyses of the prevalence of heirs properties in different regions of the United States with diverse demographic characteristics, allowing researchers to empirically examine many of the assumptions that underlie the research and methods used to examine the heirs property phenomenon.

Although use of these data is widespread, and their use improves our ability to analyze and assess the impacts of heirs properties, the lack of uniformity of land parcel datasets such as CAMA does limit the application of these kinds of processes. Much CAMA and land parcel data are developed on a local level, creating a patchwork of valuable data that, unfortunately, is not integrated or standardized. Professor Thomas Mitchell, a leading property scholar in this area, has observed how difficult it is to conduct empirical research on property ownership because of the lack of uniform data about property owners in the United States.[40] The lack of robust data has led to speculation about property ownership and divestment, particularly concerning land

[37] Georgia Appleseed, *Unlocking Heir Property Ownership*, *supra* note 5; see also Dyer & Bailey, *A Place*, *supra* note 23 at 318.

[38] *Id.*; See also B.J. Deaton, *A Review and Assessment of the Heirs' Property Issue in the United States*, XLVI Journal of Economic Issues, 615, 628 (Sept. 2012)(observing that, "[t]here is still a great gap in knowledge concerning the prevalence and geographic pattern of heirs' property ….Without this information the macro-effects, if any, of heirs' property cannot be assessed.") [hereinafter Deaton, *Review and Assessment*]

[39] Georgia Appleseed, *Unlocking Heir Property Ownership*, *supra* note 5; Dyer, *Ownership Characteristics*, *supra* note 36 at 12; see also Dyer & Bailey, *A Place*, *supra* note 23 at 319; Dyer, *Statutory Impacts*, *supra* note 27.

[40] Mitchell, *Destabilizing*, *supra* note 13 at 576 (observing that "the very fact that there are data problems presents great opportunities for scholars, including legal scholars, to build new datasets that would greatly accelerate the development of scholarly knowledge regarding Black rural property ownership patterns. Such informed scholarship could, in turn, contribute to the development of much needed policies and legal reform measures.")

loss among African Americans.[41] As a 2007 National Research Council (NRC) report points out, a nationally integrated set of land parcel databases remains out of reach despite significant technological advances—even though NRC issued a report calling for such integration more than 30 years ago.[42] In 2015, the Coalition of Geospatial Organizations gave the United States a D+ for its poor investment in the development and maintenance of parcel data, noting that more than "3,200 counties and equivalent units of local government maintain 150 million non-Federal land parcels" in a piecemeal and nonstandard manner. The report goes on to assert that a comprehensive parcel data infrastructure could have improved Federal response to the 2007–2008 mortgage crisis as well as the Nation's response to Hurricane Katrina.[43] From zoning decisions to transportation planning to national disaster response, land parcel data underlies multiple areas of government and private decisionmaking. Yet good and consistent data about property ownership and parcel boundaries remain unavailable.

Section II of this report describes how we developed this methodology, first at a regional scale and then at the local county level. It explains how this methodology was applied in 10 counties in Georgia. The difficulties in performing this analysis on a larger scale are explored through an analysis of two counties outside of Georgia. We also attempt to show how the variability among local property data systems impacts this type of analysis and other forms of large-scale property research. Finally, based on our experiences with this project, we offer some reflections on future research involving this type of data-driven, heirs property assessment.

[41] *Id.*

[42] National Research Council, National Academy of Sciences, *Land Parcel Data: A Vision for the Future*, xi (2007) [hereinafter NRC, *Land Parcel Data*].

[43] *National Spatial Data Infrastructure (NSDI) Report Card*, Coalition of Geospatial Organizations, 16-17 (2015).

SECTION II:

REGIONAL ASSESSMENT

Building on Georgia Appleseed's work, our premise is that a variety of data sources exist that can be used to determine the relative scale of heirs property impacts at both a regional and local scale. To assess the extent of the heirs property problem, we first distilled what is currently known about heirs properties from case study research published in the academic literature, media, and nongovernmental reports. Through these data sources, we identified a series of socio-demographic indicators associated with potential heirs property and then selected variables from the geospatial census data to operationalize the indicators, first at the regional and then local scale. After identifying data sources related to the heirs property indicators, we developed a straightforward GIS methodology to identify and map the potential extent and severity of the heirs property problem in the targeted areas.

Demographic Indicators of Heirs Property

While good empirical data about heirs property owners are not available uniformly or consistently across counties,[44] both academic and public interest group researchers generally conclude that heirs property owners are likely to be lower income minorities (primarily African Americans) and Appalachian Whites, or others with lower income and less education than the general population.[45]

[44] Deaton, *Review and Assessment*, *supra* note 38 at 628; Mitchell, *Destabilizing*, *supra* note 13 at 576. ("Any scholar interested in conducting empirical research with respect to trends in Black rural property ownership confronts significant limitations as it relates to the available data. Further, the problems with the available data are significantly greater for researchers interested in studying more specific aspects of Black land loss, such as the leading causes of such land loss.")

[45] Much of the scholarship to date has focused on heirs property as a primarily African-American phenomenon often specifically as an outgrowth of Jim Crow-era segregation and disenfranchisement. See, e.g., Uniform Partition of Heirs Property Act, Prefatory note at 5 (2010)(citing scholarship on Black land loss); Dyer, *Ownership Characteristics*, *supra* note 36 at 192; Dyer & Bailey, *A Place*, *supra* note 23 at 319; Jess Gilbert et al., *The Loss and Persistence of Black-Owned Farms and Farmland: A Review of the Research Literature and its Implications*, 18(2) Southern Rural Sociology, 1-30 (2002) [hereinafter Gilbert, *Loss and Persistence*]. There is increasing evidence that the issue may transcend racial categories and may be more widespread than previously believed. See, e.g., Mitchell, *Reforming*, *supra* note 7 at 33 (describing how many middle-class White families, after Hurricane Katrina, discovered that they lacked good title, and how a significant number of White middle-class property owners in rural Maine live on what they call "heir-locked" property); Federal Reserve Bank of Dallas, Community Development, *Las Colonias in the 21st Century: Progress Along the Texas-Mexico Border*, 1-9 (April 2015); B. James Deaton, *Land "in Heirs": Building A Hypothesis Concerning Tenancy in Common and the Persistence of Poverty in Central Appalachia*, 11 Journal of Appalachian Studies, 83 (2005)[hereinafter, Deaton, *Land "in Heirs"*].

According to the U.S. Department of Agriculture, African-American farmland ownership peaked at 16 to 19 million acres in 1920,[46] with most of this ownership concentrated in the South.[47] In 1920, there were 926,000 African-Americans farmers, which constituted 14 percent of all farmers in the United States, and collectively they owned over 16 million acres—that number dropped to fewer than 20,000 farmers owning about 2 million acres by 1997.[48] This dramatic land loss is believed to be a function of both the migration of millions of African Americans from the rural South to industrial cities in the North during the first part of the 20th century and the lack of formal land transference within African-American communities. Again, when wills are not established or other means of formal land transfer are not implemented, real property is passed intergenerationally via State laws of intestacy, which effectively create heirships or tenancies in common. When the U.S. Department of Agriculture's Rural Business-Cooperative Service proposed to examine the heirs property issue, it cited this history, as well as the cultural importance of African-American land ownership, as an important factor in supporting the need for such examination.[49] At least one study has shown that a large majority of African-American rural landowners (approximately 80 percent) do not have wills.[50] Estimates of the minority–heirs property relationship range from "one-third of Black-owned land from South Carolina to Mississippi"[51] to 44 percent of Black-owned property in the rural South."[52]

While academic discussion of African-American land loss appears, understandably, a focus for scholars, other groups and minorities, including Appalachian Whites, Hispanics, and Native Americans, also appear to have high rates of unstable land ownership. In his work in Appalachia, an area that is predominantly White, James Deaton found heirs property rates ranging between 14 percent and 24 percent in one Kentucky county.[53] "Heir-locked" property is considered common in rural Maine, another predominately White region.[54]

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[46] Bruce J. Reynolds, U.S. Department of Agriculture, Rural Business-Cooperative Service; *Black Farmers in America, 1865-2000*, RBS Research Report 194, October 2002, available at: http://www.federationsoutherncoop.com/blkfarmhist.pdf. [Date accessed: June 2017].

[47] Mitchell, *Reforming*, *supra* note 7 at 563-65.

[48] Gilbert, *Loss and Persistence*, *supra* note 45 at 2.

[49] *Heir Property*, 72 Federal Register, 1190 (Jan. 10, 2007). The purpose of this rule was to gather information for an heirs property study that USDA began in 2005 "to follow-up to a more extensive study conducted in 1984 titled; The Impact of Heir Property on Black Rural Land Tenure in the Southeastern Region of the United States, conducted by the Emergency Land Fund Inc." *Id.* In 2008, the Rural Business-Cooperative Service issued a Notice of Funds Availability to fund approximately $230,000 for cooperative agreements to develop and implement pilot programs to address heirs property. *Notice of Funds Availability (NOFA): Cooperative Agreements for Heir Property*, 73 Federal Register, 74133 (Dec. 5, 2008). In 2009, $80,000 was to be allocated among approximately four awards for "initial cooperative agreements" and $150,000 for two awards for "subsequent cooperative agreements." *Id.*

[50] *Id.*; see also Dyer & Bailey, *A Place*, *supra* note 23 at 319.

[51] Scott Graber, *Cloud on the Title: A Blight Hits Black Farmers*, 226 The Nation, 269-272 (Mar. 11, 1978).

[52] Dyer & Bailey, *A Place*, *supra* note 23 at 31 (citing Emergency Land Fund, 1990).

[53] James Deaton, *Intestate Succession and Heir Property: Implications for Future Research on the Persistence of Poverty in Central Appalachia*, 927, 932 (2007).

[54] Mitchell, *Reforming*, *supra* note 7 at 33.

Hispanics also appear to be at risk. Colonias—residential neighborhoods and communities along the Texas border that often lack potable water, sewer systems, roads, and safe housing—are estimated to house approximately 500,000 people.[55] Many landowners living in colonias lack good title due to seller-financed, "rent-to-own" arrangements that have been described as "the poor man's mortgage" and result in unstable title.[56] A recent survey found that "89 percent of colonia homeowners reported that they did not have a will."[57] Thus, intergenerational transfer of property without a will likely exacerbates an already complicated title problem.

Native Americans are also disproportionately affected by heirs property issues and unstable land ownership.[58] U.S. Native American land policy has a profoundly complicated history and has led to increased fractionalization of tribal lands, among many other issues.[59] Research suggests that unstable land ownership is more common among Native Americans than any other group.[60]

[55] Federal Reserve Bank of Dallas, Community Development, *Las Colonias in the 21st Century: Progress along the Texas-Mexico Border*, 1-9 (April 2015). For a discussion of the history of this region and the Hispanic communities that were the intended beneficiaries of Spanish and Mexican grants, see Mitchell, *Reforming*, *supra* note 7 at 34-35.

[56] Heather Way & Lucy Wood, *Contracts for Deed: Charting Risks and New Paths for Advocacy*, 23 Journal of Affordable Housing and Community Development, 37 (2014).

[57] *Id.* (citing Peter Ward et al., *The Contract for Deed Prevalence Project: A Final Report to the Texas Department of Housing and Community Affairs* (TDHCA) (August 2012), available at www.tdhca.state.tx.us/housing-center/docs/CFD-Prevalence-Project.pdf. [Date last accessed: June 2017]).

[58] Deaton, *Review and Assessment*, *supra* note 38 at 616; Gilbert, *Loss and Persistence*, *supra* note 45 at 1.

[59] For an excellent overview and discussion of this history, see Jessica A. Shoemaker, *No Sticks in My Bundle: Rethinking the Indian Land Tenure Problem*, 63 Kansas Law Review, 383-84 (2015); see also Brian Sawers, *Tribal Land Corporations: Using Incorporation to Combat Fractionation*, 88 Nebraska Law Review, 385, 387 (2009).

[60] Way, *Informal Homeownership*, *supra* note 24 at 152-53; Jessica A. Shoemaker, *Like Snow in the Spring Time: Allotment, Fractionation, and the Indian Land*, 2003 Wisconsin Law Review, 729; U.S. General Accounting Office, *Profile of Land Ownership at Twelve Reservations*, Rep. GAO/RCED 92-96BR, 1-2 (1992).

Poverty, low per capita income, and low levels of educational attainment are also factors often cited in the literature as associated with an increased prevalence of heirs property.[61] James Deaton's work in Appalachia, for example, strongly connects the existence of heirs property with high poverty rates.[62] Low per capita income is similarly a common factor.[63] As Thomas Mitchell has explained, "the pattern of property transfer" among low-income individuals often occurs informally, without a will, leading to heirs property.[64] A primary contribution to heirs property classification appears to be that "a large percentage of real property owned by the poor likely passes through intestate succession."[65] A survey conducted by American Association of Retired Persons on the extent to which individuals have estate planning documents such as wills found that "where pockets of poverty and low education persist, the economic and social effects of the laws of intestacy are likely to be relatively widespread and intense."[66] The study found that individuals with a college education were much more likely to have a will than those with a high school education or less.[67]

While heirs property has long been characterized as a rural problem, Dyer's quantitative analysis, which we build upon in this study, suggests that this perception should be reexamined. She found that the ratio of heirs properties in incorporated towns was "higher than expected."[68] Similar conclusions have been reached by other researchers recently,[69] and the title problems that arose in New Orleans in the aftermath of Hurricane Katrina likewise complicate the assumption that the heirs property phenomenon is predominantly a rural issue.[70] We therefore did not include "rural" as a factor in our initial regional analysis of areas likely to contain high rates of heirs properties.

[61] Dyer, *Ownership Characteristics*, *supra* note 36 at 192.

[62] Deaton, *Land "in Heirs," supra* note 45 at 86.

[63] Dyer, *Ownership Characteristics*, *supra* note 36 at 192.

[64] Mitchell, *Reforming*, *supra* note 7 at 29. See, e.g., Dyer, *Ownership Characteristics*, *supra* note 36 at 192.

[65] Way, *Informal Homeownership*, *supra* note 24 at 152.

[66] *Id.* (citing AARP Research Group, *Where There is a Will: Legal Documents among the 50+ Population,* 1-2 (2000), available at http://assets.aarp.org/rgcenter/econ/will.pdf). [Date accessed: June 2017].

[67] *Id.*

[68] Dyer, *Ownership Characteristics*, *supra* note 36 at 192.

[69] Way, *Informal Homeownership*, *supra* note 24 at 117 (asserting that "informal homeownership …, is pervasive and systemic in low-income communities across many parts of the United States, both urban and rural.").

[70] Georgia Appleseed, *Heir Property In Georgia, Attorney Training Manual* (2010); Way, *Informal Homeownership*, *supra* note 24 at 118; Baab, *Emergency Community*, *supra* note 28; Frank Alexander, *Louisiana Land Reform in the Storms' Aftermath*, 53 Loyola Law Review, 727, 732 (2007).

Regional Data: Demographic Variables

Based on the academic literature discussed above, we isolated four demographic variables to help us identify communities that may have above-average numbers of heirs properties:

1. High percentage of population identified as a racial or ethnic minority
2. Low per capita income (overall community wealth)[71]
3. High poverty rate (percentage of people living below the poverty line)
4. High percentage of individuals over 25 years of age without a high school diploma

Once we defined this basic set of demographic variables associated with heirs property owners,[72] we operationalized the variables with indicators from U.S. Census Bureau data at the county and census-tract levels. These data are easily accessed using the social vulnerability index (SVI)[73] tool developed by the U.S. Department of Health and Human Services Agency for Toxic Substances and Disease Registry (ATSDR). The SVI uses U.S. Census Bureau data at the county and the census-tract level for 14 social factors associated with heightened social vulnerability. The four demographic variables we identified as likely to highlight communities that have high numbers of heirs properties are taken from four datasets among the 14 included in the SVI.

These variables, which are typical in social vulnerability assessments, may point to communities with an increased likelihood of heirs property ownership. "Social vulnerability describes the personal, cultural, or economic characteristics of a person or a population that influence how they will be affected by a disruptive event such as a natural disaster and that shape their ability to recover from the disruption."[74] Over the past decade, based on the pioneering work of geographer Susan Cutter,[75] the identification of areas of social vulnerability has risen to

[71] The U.S. Census Bureau defines per capita income as "the mean income computed for every man, woman, and child in a particular group including those living in group quarters." U.S. Census Bureau, *What Is the Difference between Per Capita and Personal Per Capita Income?* available at https://ask.census.gov/prweb/PRServletCustom/YACFBFye-rFIz_FoGtyvDRUGg1Uzu5Mn*/!STANDARD. [Date accessed: June 2017]. "Per capita income is derived by dividing the aggregate income of a particular group by the total population in that group." *Id.* The median household income in the United States is $53,482. U.S. Census Bureau, *2010-2014 American Community Survey 5-Year Estimates*, available at www.census.gov/programs-surveys/acs/. [Date accessed: June 2017].

[72] As one reviewer of this report observed, it is unclear when the incidence of these factors matter most for heirs property creation: for the original owner who created the heirs property situation or the current heirs property owners themselves. On the one hand, the owner listed on the deed had resources available to him or her to purchase property. On the other hand, the same owner often died intestate, thereby creating the heirs property issue and (perhaps) creating a situation whereby the wealth of the family declined. An interesting area of research could involve understanding better the trajectory of wealth creation and loss involving the original owner and subsequent heirs property owners.

[73] Agency for Toxic Substances & Disease Registry (ATSDR) Social Vulnerability Index (SVI) available at svi.cdc.gov/. [Date accessed: June 2017]. See also ATSDR SVI Documentation, available at svi.cdc.gov/Documents/Data/2010_SVI_Data/SVI2010Documentation.pdf. [Date accessed: June 2017].

[74] B. Wisner et al., *At risk: Natural hazards, people's vulnerability and disasters*, Routledge (2004).

[75] Susan L. Cutter, Bryan J. Boruff & W. Lynn Shirley, *Social Vulnerability to Environmental Hazards*, 84 Social Science Quarterly, 242, 254 (2003); see also Susan L. Cutter & Christina Finch, *Temporal and Spatial Changes in Social Vulnerability to Natural Hazards*, 105 Proceedings of the National Academy of Sciences, 2301, 2303 (2008).

prominence among academic researchers, government agencies, and nongovernmental organizations attempting to use spatial analysis such as GIS to identify populations at risk from natural hazards and disasters.[76] Thus, given the geospatial nature of our analysis, as well as the nature of the populations most at risk from unstable land ownership, we developed our study within the context of social vulnerability research; this provided a useful framework and set the stage for multiple uses of this work.[77] We maintain that it is no coincidence that factors associated with heirs property also appear in the broader discussion of social vulnerability, as it is likely that lacking good title to one's home or other real property is a significant contributor to the overall vulnerability of individuals and communities to withstand flooding emergencies, hurricanes, droughts, and even economic crises such as the Great Recession.

Using the SVI data presented a number of advantages over using census data directly. For instance, using the SVI dramatically simplified the acquisition and processing of the data. The data were readily available for download through the ATSDR Web site at both the county and census-tract scale, which made it easy to connect to the 13-State region examined in this project.

We started by downloading the data for the Forest Service Southern Region, which comprises 1,340 counties. For each of the four demographic indicators of potential heirs properties, we made a subjective decision to mark or "flag" the counties that fell in the top 10 percent of the distribution. These flagged counties were identified as having a heightened vulnerability for potential heirs property. The 134 counties with the highest poverty rate, percentage of persons over age 25 without a high school diploma, percentage of minorities, and the lowest per capita income were flagged. Those four characteristics were then overlaid on one another in ESRI's ArcMap GIS software, and the number of flags associated with each county was totaled. Each county received a score between 0 and 4, with 4 representing counties in the top 10 percent for each criterion and 0 representing those that were not in the top 10 percent for any criterion. Counties with the highest scores were identified as the most likely to contain higher numbers of heirs property.

[76] See, e.g., National Oceanic and Atmospheric Administration, *Digital Coast–Social Vulnerability Index*, available at coast.noaa.gov/dataregistry/search/collection/info/sovi; [Date accessed: January 2017]; Federal Emergency Management Administration, *HAZUS-MH Application: Social Vulnerability: New Orleans, Louisiana*, available at www.fema.gov/media-library/assets/documents/12797; [Date accessed: January 2017]; U.S. Housing and Urban Development, *HudExchange–Social Vulnerability Block Groups*, available at www.hudexchange.info/resource/3951/social-vulnerability-index-sovi-census-2000-block-groups; [Date accessed: January 2017]; OxFam America, *Vulnerability and Climate Change in the US Southeast*, available at adapt.oxfamamerica.org/; [Date accessed: January 2017]; Climate Central, *Surging Seas–Social Vulnerability*, available at sealevel.climatecentral.org/. [Date accessed: January 2017]. The academic literature citing Cutter's work on social vulnerability is vast. See, e.g., Robert R.M. Verchick, *Disaster Justice: The Geography of Human Capability*, 23 Duke Environmental Law & Policy Forum, 23, 49 (2012); Jochen Hinkel, *Indicators of Vulnerability and Adaptive Capacity: Towards a Clarification of the Science-Policy Interface*, 21(1) Global Environmental Change, 198-208 (2011); Sammy Zahran et al., *Social Vulnerability and the Natural and Built Environment: A Model of Flood Casualties in Texas*, 32 Disasters, 537-560 (2008); Candice A. Myers, Tim Slack & Joachim Singelmann, *Social Vulnerability and Migration in the Wake of Disaster: The Case of Hurricanes Katrina and Rita*, 29(6) Population and Environment, 271 (2008).

[77] For example, while it is beyond the scope of this report, utilizing social vulnerability indices as part of a mapping project has great potential in the heirs property context to reveal specific areas likely to experience increased hardship due to unstable land ownership and hurricane and flooding risks. The authors of this report have great interest in pursuing research in this area.

Regional Results: USDA Forest Service Southern Region

A total of 289 counties in the 13-State region was in the top 10 percent for at least one of the heirs property indicators (fig. 2), with the breakdown as follows:

- 30 counties: top 10% for all four variables
- 49 counties: top 10% for three variables
- 59 counties: top 10% for two variables
- 151 counties: top 10% for one variable

When mapped across the Forest Service Southern Region, as part of what we refer to as our "threshold analysis," these counties form relatively distinct clusters. These large, contiguous blocks of counties became the seven "heirs property cluster areas" from which we identified single counties for closer study. Figure 3 shows the seven heirs property clusters, which span a range of ethnic and geographically distinct groups including the border area in southwestern Texas; the Mississippi River corridor through Arkansas, Tennessee, Mississippi, and Louisiana; the Appalachia region in eastern Kentucky, northern Tennessee, and western Virginia; the "Black Belt" counties in Georgia, Alabama, and the Carolinas; and areas in the vicinity of some of the Native American reservation land in North Carolina.[78] Of the 289 counties identified by the SVI variables, 192 counties were included in these seven, spatially distinct clusters. The other 97 counties were not geographically continuous with these clusters. Identifying geographically distinct clusters was done to help develop connections among heirs property and the historical and sociological narratives that underlie this phenomenon.

The literature suggests that high concentrations of heirs properties can be traced to specific regions—such as the "Black Belt" in Georgia and Alabama—associated with distinct ethnographic histories of particular populations. The clusters of counties identified in this analysis fit well with some of the theories about heirs properties and how they develop, which is to be expected given that the variables used are derived from the literature. To determine whether these counties do, indeed, contain relatively high concentrations of heirs properties, we developed a method of local analysis, which is described in section III.

[78] For a map of recognized Native American communities in North Carolina, see the N.C. Commission of Indian Affairs N.C. Tribal and Urban Communities Map, available at: www.doa.nc.gov/cia/documents/NCTribalMap.pdf. [Date accessed: January 2017].

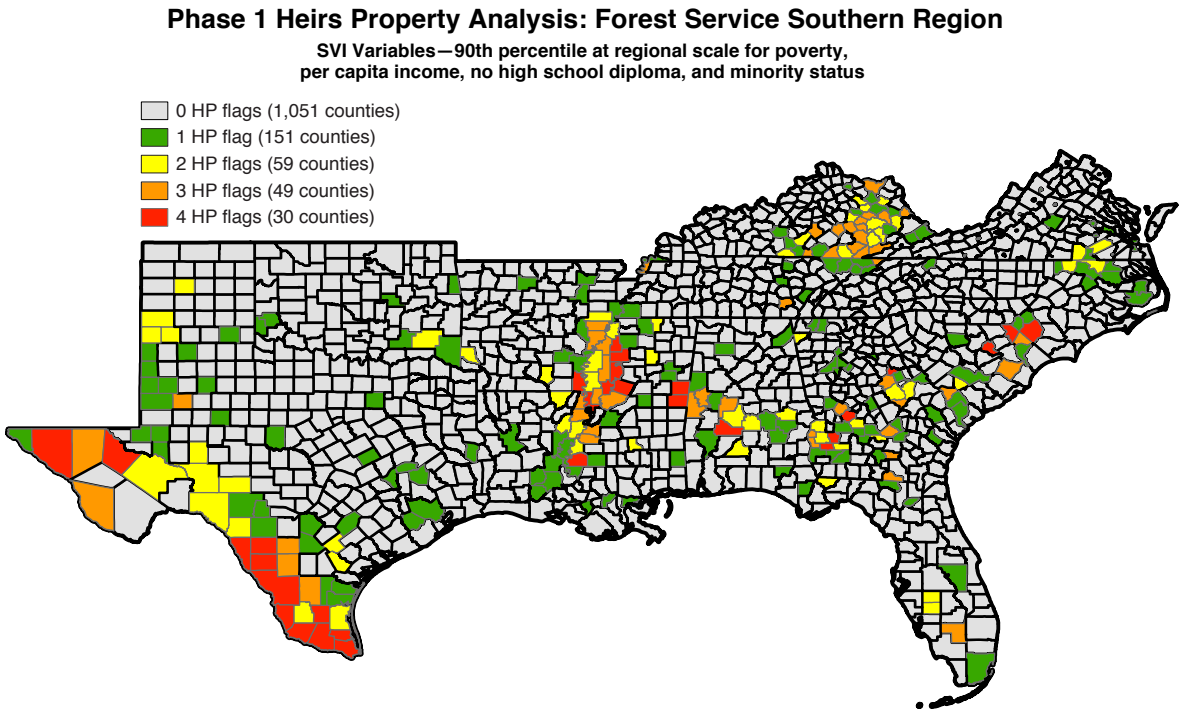

Figure 2—Results from the initial regional heirs property analysis. Using four demographic indicators, counties within the Southern Region were ranked on the likelihood that they contain heirs properties. Counties in red are believed to be the most likely to contain higher numbers of heirs properties.

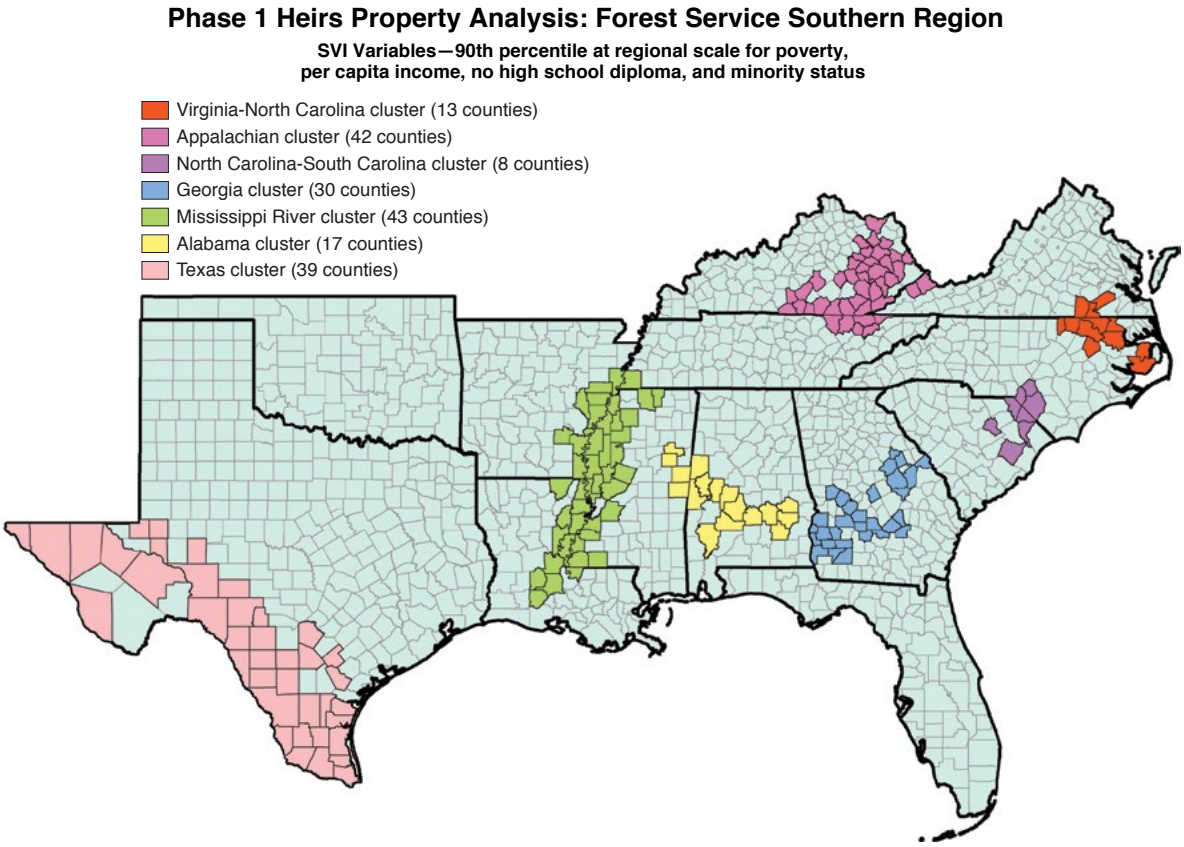

Figure 3—Regional heirs property clusters. Identifying the largely contiguous clusters of counties identified by the regional analysis provides the opportunity to discuss the phenomenon of heirs property in areas with relatively similar historical and sociological contexts.

We selected a county-level analysis of specific parcels because it allows us to both directly assess the severity of the heirs property problem in a particular jurisdiction[79] and make interjurisdictional comparisons to further determine the origin and nature of heirs property development and perpetuation. We acknowledge, however, that there may be limitations to conducting our local analysis at a county level. In some instances, an analysis using smaller units such as census tracts or blocks might illuminate different sub-areas meeting the demographic indicators that we apply as part of our threshold methodology at a more granular, intracounty level. This could explain, for example, why several coastal communities in Georgia and South Carolina that are well known for their heirs property issues are not identified under our methodology.[80] For example, coastal counties tend to have high concentrations of wealth, which may cause the county to not appear in this screening process even though sections of the county may well have met these indicators if we had used a block-level approach. Our future research will examine whether there is a more appropriate scale for conducting this analysis.

In short, this analysis is designed to compare counties across the region, both to assess likelihood of heirs properties in specific counties and to compare them. In this way, our methodology begins to address the data problems identified by researchers such as Mitchell, Dyer, Way, and Deaton, and allows a deeper examination of the demographic, legal, social, cultural, or other factors that facilitate the creation and perpetuation of heirs property ownership. To our knowledge, this is the first attempt to connect demographic indicators of heirs property ownership with corresponding census data in order to spatially analyze areas at the county level likely to have high concentrations of heirs properties.

[79] Importantly, this methodology attempts to quantify the likely severity of the heirs property condition in a jurisdiction by using existing sources of aggregate parcel-level data. Unless and until the owners associated with a property are contacted to determine if the individual named on the deed is or is not living, absolute verification of the property's status is generally not possible. Therefore, the methodology is not meant to identify specific properties as definitively heirs properties. Future research could validate the methodology through field work involving interviews and additional onsite data collection in order to refine the estimation process of the number of heirs properties and the associated acreage and value of the properties. Nonetheless, this process should provide insights into the magnitude of the heirs property problem in the identified communities. Moreover, given the personal and private nature of land and property ownership, we seek to emphasize that approximation of the likely magnitude of the problem may be an appropriate approach for research, policymaking, or outreach purposes.

[80] Several articles and reports discuss heirs property issues in coastal South Carolina, including the groundbreaking journalistic series, *Torn from the Land*. See, e.g., Lewan & Barclay, *Torn from the Land*, *supra* note 14. The Center for Heirs Property Preservation, located in Charleston, SC, is a prominent advocacy organization that provides legal services and assistance to heirs property owners in coastal South Carolina. For more information about the organization, see www.heirsproperty.org. Similarly, McIntosh County in Georgia has had significant research and attention paid to its heirs property issues as well. See, e.g., Faith Rivers, *The Public Trust Debate: Implications for Heirs Property along the Gullah Coast*, 15.1 Southeastern Environmental Law Journal, 148; Georgia Appleseed, *Unlocking Heir Property Ownership*, *supra* note 5; Gullah Geechee Culture Initiative, www.gullahgeecheeculture.org; Kim Severson, *Taxes Threaten an Island Culture in Georgia*, The New York Times (Sept. 25, 2012). McIntosh Appleseed is the predominant advocacy organization for heirs property owners in the county. McIntosh Appleseed, *About Us*, www.mcintoshseed.org/work2.html. [Date accessed: December 2016].

SECTION III:

COUNTY-LEVEL PARCEL DATA ASSESSMENT

Once we determined the sub-regional clusters, we identified parcel data for the demographic hotspots that could indicate the proportion of individual properties in a countywide jurisdiction with an increased probability of being heirs properties. To develop a county-level assessment process that could be used across the region, we relied heavily on the Georgia Appleseed methodology[81] discussed in section I. In addition, we sought to automate and simplify the methodology by using an aggregate dataset of tax parcel information known as computer-assisted mass appraisal (CAMA) data. CAMA data allow for automated access to the very indicators that Georgia Appleseed and other researchers have identified as useful for detecting potential heirs properties. It also allows for the parcels identified to be spatially oriented using GIS for map visualization. However, because parcel data are not compiled or managed uniformly in the United States, the kind of parcel-level data needed for this analysis is not widely available at a regional scale. In this section, we first provide an overview of CAMA data and explain why, despite their limitations, they are the most comprehensive source of parcel-level data for identifying heirs properties. We then identify the specific heirs property indicators we pulled from the CAMA data. Lastly, we apply our methodology and discuss the findings. We believe that the methodology described in this report provides the most accurate, large-scale assessment of the extent of the heirs property issue yet attempted.

[81] Georgia Appleseed, *Unlocking Heir Property Ownership*, *supra* note 5 at 1-10.

Computer-Assisted Mass Appraisal Data and GIS: A Comprehensive County-Level Data Source and Platform for Spatial Analysis

Although geographic information has increased substantially in recent years, resulting in what the National Geographic Society calls the Geospatial Revolution,[82] land parcel data remain disaggregated and nonstandard in the United States.[83] This is so despite the critical importance of such data to the local, State, and national economy. Information contained in deed records outlines the very rights, interests, and value of private property—and serves as the foundation for the Nation's financial, legal, and real estate systems.[84] Again, because land parcel data are created and managed at the local level, they can vary widely.[85] As a 2007 NRC report observed, "This fragmentation of land information and control has been a problem for this country because it has allowed for a widely varying range of availability and quality of land parcel data across the nation."[86] Moreover, data concerning land title are often not available in a digital format nor are they easily accessible,[87] requiring a trip to the "deed room" in a local county courthouse and title search experience.

In light of these parcel data management issues, we posit that local mass appraisal data have the potential to serve as a good source of land parcel data for many of the indicators associated with heirs property. The Appraisal Standards Board defines mass appraisal as "the process of valuing a universe of properties as of a given date using standard methodology, employing common data, and allowing for statistical testing."[88] The data used in the mass evaluation process are generally referred to as computer-assisted mass appraisal (CAMA) data.[89] Modeling using CAMA data often involves advanced statistical testing and analysis.[90] In addition, CAMA modeling may be integrated with GIS data.[91] Including geographic information allows the appraisal model to take into account spatial data—such as water frontage—that affect property value.[92] It also increases the accuracy of mass appraisals, as it allows appraisers to better visualize the properties analyzed as part of the CAMA process.[93] "Adding a spatial component to

[82] *The Geospatial Revolution*, National Geographic Education, available at: http://www.nationalgeographic.org/media/geospatial-revolution/. [Date accessed: December 2016].

[83] NRC, *Land Parcel Data*, *supra* note 42 at 9-10.

[84] *Id.* at 9.

[85] *Id.* at 10.

[86] *Id.* For an excellent report that illustrates, at the local level, issues related to poor land parcel data and vacant and abandoned housing, see *Improving Data and Information Systems to Tackle Vacant and Abandoned Property in Lafayette, LA*, Center for Community Progress (2014), available at www.communityprogress.net/improving-data-and-information-systems-to-tackle-vacant-and-abandoned-property-in-lafayette--la-pages-480.php. [Date accessed: June 2017].

[87] *Id.*

[88] Uniform Standards of Professional Appraisal Practice, U-3 (2014-15).

[89] *Id.* at 307-08.

[90] *Id.* at 311.

[91] David McIlhatton, Michael McCord, Peadar Davis, and Martin Haran. Ch. 15 *Geographic Information Systems and the Importance of Location: Integrating Property and Place for Better Informed Decision Making* at 340, in William J. McCluskey, Gary C. Cornia, & Lawrence C. Walters, A Primer on Property Tax: Administration and Policy (2013 Wiley-Blackwell).

[92] *Id.*

[93] *Id.* at 344-45.

data provides the user with an opportunity to gain greater insight into the data and see new patterns that might be less noticeable in a purely tabular or narrative representation of data," especially in a real estate context.[94]

Many local governments use CAMA data because they depend on taxes assessed on real property for revenue, which requires them to maintain a great deal of information about the condition of properties within their jurisdictions to accurately appraise the value for taxation purposes.[95] Preparing an appraisal requires market research and the assembly and analysis of information about the property, with its accuracy often depending upon the knowledge and experience of the appraiser.[96] Appraising individual parcels is an expensive and time-intensive process.[97] Developing a property tax system for an entire community usually involves appraising tens of thousands of parcels; consequently, the use of mass appraisal methodologies and standardized procedures for valuing multiple parcels has grown over the past 30-40 years, especially as computer processing capacity has increased.[98] Indeed, most jurisdictions today use fully automated mass appraisal processes to develop property tax assessments.[99]

CAMA data provide an effective building block for potential heirs property identification in several ways. First, these datasets contain specific characteristics of individual parcels of land, allowing for automated access to the indicators that Georgia Appleseed and others have identified as useful for detecting potential heirs properties. CAMA data can also be spatially oriented.[100] GIS allows the data to be connected to specific jurisdictional or regional boundaries to allow for flexible levels of analysis. Most importantly, because the information already exists in digital format, CAMA data can be integrated with other datasets, allowing for a convergence of data that increases accuracy and adds insight into how land and property use and change are occurring at the local, county, State, and regional levels.[101]

Many counties, particularly larger urban counties that adopted this practice early, have developed their own appraisal software. Counties also use outside vendors that rely on different companies with varied schema and formats. Local governments and associated vendors also

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[94] Mark Linné & John Cirincione, *Integrating Geographic Information and Valuation Modeling for Real Estate*.

[95] Riël Franzen & William J. McCluskey, Ch. 2. *Value-Based Approaches to Property Evaluation*, 59 in William J. McCluskey, Gary C. Cornia, & Lawrence C. Walters, A Primer on Property Tax: Administration and Policy (2013 Wiley-Blackwell).

[96] *Id.*

[97] William J. McCluskey, Peadar David, Michael McCord, David McIlhatton, and Martin Haran. Ch. 14. *Computer Assisted Mass Appraisal and the Property Tax* at 308 in William J. McCluskey, Gary C. Cornia, & Lawrence C. Walters, A Primer on Property Tax: Administration and Policy (2013 Wiley-Blackwell)[hereinafter McClusksy, *CAMA and the Property Tax*].

[98] *Id.* at 307-08. The International Association of Assessing Officers (IAOO) defines CAMA data as a "system of appraising property, usually only certain types of real property, that incorporates computer-supported statistical analyses such as multiple regression analysis and adaptive estimation procedure to assist the appraiser in estimating value." See also Fred B. Brown, *"Complete" Accrual Taxation*, 33 San Diego Law Review, 1559, 1619-22 (1996).

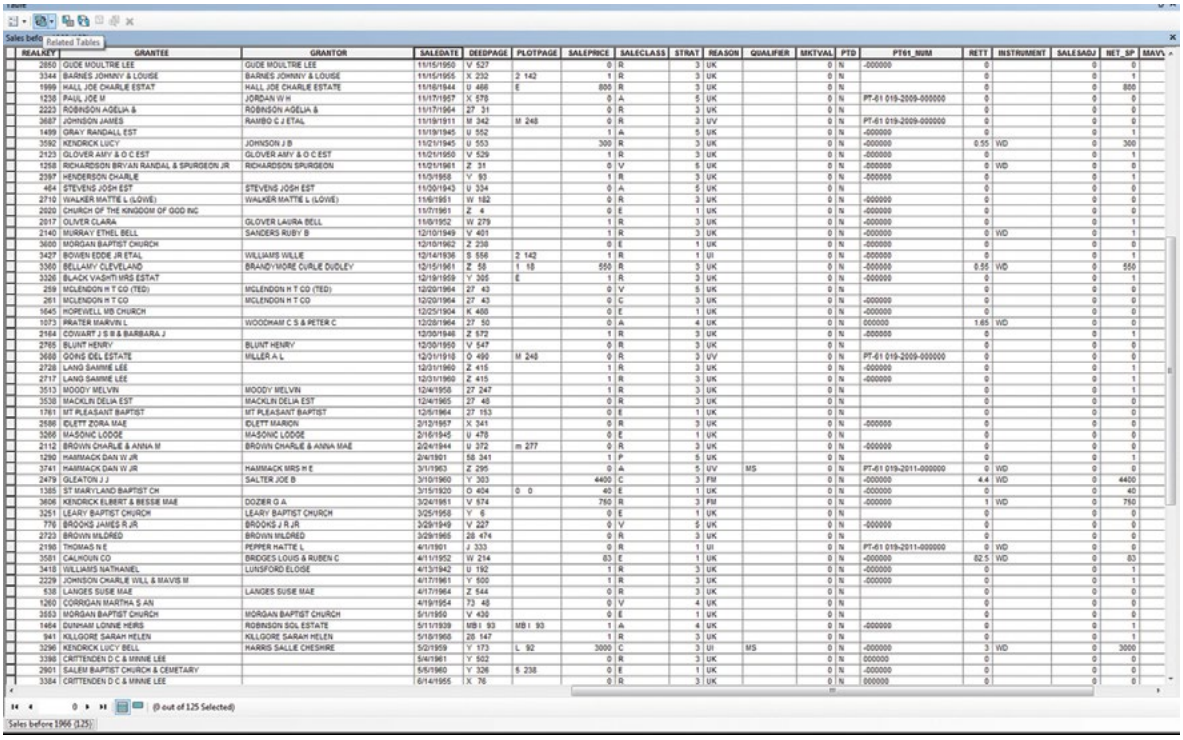
[99] See McClusksy, *CAMA and the Property Tax*, *supra* note 100, at 310; Leslie H. Miles, Jr., *Tax Savings*, American Bankruptcy Institute Journal, July/August 1996, 22 (1996).

[100] National Academy of Sciences, National Research Council, *GIS for Housing and Urban Development*, 5 (2003), available at https://www.nap.edu/read/10674/chapter/1. [Date accessed: June 2017].

[101] See, e.g., Keith W. Cunningham, *The Use of Lidar for Change Detection and Updating of the CAMA Database*, 3 Journal of Property Tax Assessment & Administration, 5 (2007), available at www.teamconsulting.cc/images/the_use_of_lidar_for_change_detection.pdf. [Date accessed: June 2017].

tend to treat their parcel data, or the scheme they use to organize the data, as proprietary information. They often restrict access to and usage of it, charge third parties to use it, or generally refuse to share the data. Despite these drawbacks, CAMA data hold great potential for assessing the prevalence and value of potential heirs properties. A more detailed discussion of the variability of CAMA data types is included in section IV of this report.

Figure 4 shows a screenshot of a portion of a CAMA data table. It includes fields labeled "grantee," an individual who is presumably the most recent owner; sale date; price; and other information.



REALKEY	GRANTEE	GRANTOR	SALEDATE	DEEDPAGE	PLOTPAGE	SALEPRICE	SALECLASS	STRAT	REASON	QUALIFIER	MKTVAL	PTD	PT61_NUM	RETT	INSTRUMENT	SALESADJ	NET_SP	MAVL
2850	GUDE MOULTRIE LEE	GUDE MOULTRIE LEE	11/15/1955	V 527		0	R	3	UK		0	N	-000000	0		0	0	
3344	BARNES JOHNNY & LOUISE	BARNES JOHNNY & LOUISE	11/15/1955	X 232	2 142	1	R	3	UK		0	N		0		0	1	
1999	HALL JOE CHARLIE ESTAT	HALL JOE CHARLIE ESTATE	11/16/1944	U 466	E	800	R	3	UK		0	N		0		0	800	
1238	PAUL JOE M	JORDAN W H	11/17/1957	X 578		0	A	5	UK		0	N	PT-61 019-2009-000000	0		0	0	
2223	ROBINSON AGELIA &	ROBINSON AGELIA &	11/17/1964	27 31		0	R	3	UK		0	N		0		0	0	
3687	JOHNSON JAMES	RAMBO C J ETAL	11/19/1911	M 342	M 248	0	R	3	UV		0	N	PT-61 019-2009-000000	0		0	0	
1499	GRAY RANDALL EST		11/19/1945	U 552		1	A	5	UK		0	N	-000000	0		0	1	
3592	KENDRICK LUCY	JOHNSON J B	11/21/1945	U 553		300	R	3	UK		0	N	-000000	0.55	WD	0	300	
2123	GLOVER AMY & O C EST	GLOVER AMY & O C EST	11/21/1950	V 529		1	R	3	UK		0	N	-000000	0		0	1	
1258	RICHARDSON BRYAN RANDAL & SPURGEON JR	RICHARDSON SPURGEON	11/21/1961	Z 31		0	V	5	UK		0	N	-000000	0	WD	0	0	
2397	HENDERSON CHARLIE		11/1/1958	Y 93		1	R	3	UK		0	N	-000000	0		0	1	
464	STEVENS JOSH EST	STEVENS JOSH EST	11/20/1943	U 334		0	A	5	UK		0	N		0		0	0	
2710	WALKER MATTIE L (LOWE)	WALKER MATTIE L (LOWE)	11/6/1951	W 182		0	R	3	UK		0	N	-000000	0		0	0	
2020	CHURCH OF THE KINGDOM OF GOD INC		11/7/1961	Z 4		0	E	1	UK		0	N	-000000	0		0	0	
2017	OLIVER CLARA	GLOVER LAURA BELL	11/8/1952	W 279		1	R	3	UK		0	N	-000000	0		0	1	
2140	MURRAY ETHEL BELL	SANDERS RUBY B	12/10/1949	V 401		1	R	3	UK		0	N	-000000	0	WD	0	1	
3600	MORGAN BAPTIST CHURCH		12/10/1962	Z 238		0	E	1	UK		0	N	-000000	0		0	0	
3427	BOWEN EDDIE JR ETAL	WILLIAMS WILLIE	12/14/1936	S 556	2 142	1	R	1	UI		0	N	-000000	0		0	1	
3360	BELLAMY CLEVELAND	BRANDYMORE CURLIE DUDLEY	12/15/1961	Z 58	1 18	550	R	3	UK		0	N	-000000	0.55	WD	0	550	
3328	BLACK VASHTI MRS ESTAT		12/19/1959	Y 305	E	1	R	3	UK		0	N	-000000	0		0	1	
259	MCLENDON H T CO (TED)	MCLENDON H T CO (TED)	12/20/1964	27 43		0	V	5	UK		0	N		0		0	0	
261	MCLENDON H T CO	MCLENDON H T CO	12/20/1964	27 43		0	C	3	UK		0	N	-000000	0		0	0	
1645	HOPEWELL MB CHURCH		12/25/1904	K 466		0	E	1	UK		0	N	-000000	0		0	0	
1073	PRATER MARVIN L	WOODHAM C S & PETER C	12/28/1964	27 50		0	A	4	UK		0	N	000000	1.65	WD	0	0	
2164	COWART J S III & BARBARA J		12/30/1946	Z 572		1	R	3	UK		0	N	-000000	0		0	1	
2765	BLUNT HENRY	BLUNT HENRY	12/30/1950	V 547		0	R	3	UK		0	N		0		0	0	
3660	GONS IDEL ESTATE	MILLER A L	12/31/1918	O 490	M 248	0	R	3	UV		0	N	PT-61 019-2009-000000	0		0	0	
2728	LANG SAMMIE LEE		12/31/1960	Z 415		1	R	3	UK		0	N	-000000	0		0	1	
2717	LANG SAMMIE LEE		12/31/1960	Z 415		1	R	3	UK		0	N	-000000	0		0	1	
3513	MOODY MELVIN	MOODY MELVIN	12/4/1958	27 247		1	R	3	UK		0	N		0		0	1	
3538	MACKLIN DELIA EST	MACKLIN DELIA EST	12/4/1965	27 48		0	R	3	UK		0	N		0		0	0	
1781	MT PLEASANT BAPTIST	MT PLEASANT BAPTIST	12/5/1964	27 153		0	E	1	UK		0	N		0		0	0	
2686	IDLETT ZORA MAE	IDLETT MARION	2/12/1957	X 341		0	R	3	UK		0	N	-000000	0		0	0	
3266	MASONIC LODGE	MASONIC LODGE	2/16/1945	U 478		0	E	1	UK		0	N		0		0	0	
2112	BROWN CHARLIE & ANNA M	BROWN CHARLIE & ANNA MAE	2/24/1944	U 372	m 277	0	R	3	UK		0	N	-000000	0		0	0	
1290	HAMMACK DAN W JR		2/4/1901	58 341		1	P	5	UK		0	N		0		0	1	
3741	HAMMACK DAN W JR	HAMMACK MRS H E	3/1/1963	Z 295		0	A	5	UV	MS	0	N	PT-61 019-2011-000000	0	WD	0	0	
2479	GLEATON J J	SALTER JOE B	3/10/1960	Y 303		4400	C	3	FM		0	N	-000000	4.4	WD	0	4400	
1385	ST MARYLAND BAPTIST CH		3/15/1920	O 404	0 0	40	E	1	UK		0	N	-000000	0		0	40	
3606	KENDRICK ELBERT & BESSIE MAE	DOZIER G A	3/24/1951	V 574		750	R	3	FM		0	N	-000000	1	WD	0	750	
3251	LEARY BAPTIST CHURCH	LEARY BAPTIST CHURCH	3/25/1958	Y 6		0	E	1	UK		0	N		0		0	0	
776	BROOKS JAMES R JR	BROOKS J R JR	3/29/1949	V 227		0	V	5	UK		0	N	-000000	0		0	0	
2723	BROWN MILDRED	BROWN MILDRED	3/29/1965	28 474		0	R	3	UK		0	N		0		0	0	
2196	THOMAS N E	PEPPER HATTIE L	4/1/1901	J 333		0	R	1	UI		0	N	PT-61 019-2011-000000	0	WD	0	0	
3581	CALHOUN CO	BRIDGES LOUIS & RUBEN C	4/11/1952	W 214		83	E	1	UK		0	N	-000000	62.5	WD	0	83	
3418	WILLIAMS NATHANIEL	LUNSFORD ELOISE	4/13/1942	U 192		1	R	3	UK		0	N	-000000	0		0	1	
2229	JOHNSON CHARLIE WILL & MAVIS M		4/17/1961	Y 500		1	R	3	UK		0	N	-000000	0		0	1	
538	LANGES SUSIE MAE	LANGES SUSIE MAE	4/17/1964	Z 544		0	R	3	UK		0	N		0		0	0	
1260	CORRIGAN MARTHA S AN		4/19/1954	73 48		0	V	4	UK		0	N		0		0	0	
3553	MORGAN BAPTIST CHURCH	MORGAN BAPTIST CHURCH	5/1/1950	V 430		0	E	1	UK		0	N		0		0	0	
1464	DUNHAM LONNIE HEIRS	ROBINSON SOL ESTATE	5/11/1939	MB I 93	MB I 93	1	A	4	UK		0	N	-000000	0		0	1	
941	KILLGORE SARAH HELEN	KILLGORE SARAH HELEN	5/13/1968	28 147		1	R	3	UK		0	N		0		0	1	
3296	KENDRICK LUCY BELL	HARRIS SALLIE CHESHIRE	5/2/1959	Y 173	L 92	3000	C	3	UI	MS	0	N	-000000	3	WD	0	3000	
3398	CRITTENDEN D C & MINNIE LEE		5/4/1961	Y 502		0	R	3	UK		0	N	000000	0		0	0	
2901	SALEM BAPTIST CHURCH & CEMETARY		5/5/1960	Y 326	5 238	0	E	1	UK		0	N	-000000	0		0	0	
3384	CRITTENDEN D C & MINNIE LEE		6/14/1955	X 76		0	R	3	UK		0	N	000000	0		0	0	

Figure 4—Example of a CAMA (computer-assisted mass appraisal) data table displayed in the ArcMap software program.

Assessing Heirs Property at the County Level Using CAMA Data

This section discusses how we used CAMA data to assess heirs property extent within a county. We first describe the indicators included in CAMA data that we used to identify parcels that have characteristics of heirs property. We then describe the type of CAMA data we relied upon to conduct the assessment.

Heirs Property Indicators

Developing indicators of heirs property at the parcel level was challenging for a reason we had not anticipated and which only became apparent after we conducted our review of the academic literature concerning heirs properties: namely, heirs property ownership has generally been discussed as a characteristic of owners rather than the properties. In other words, researchers primarily have focused on the characteristics of the people who find themselves owning heirs property—i.e., minority, poor, low income, low educational attainment—instead of the general property characteristics of the heirs property itself.[102] Therefore, the indicators we selected are factors that are intended to screen out properties that are unlikely to be heirs property—properties that can be eliminated because we are confident that they have "good title" based on the parcel data available. Properties that remain are those most likely to be heirs property, which we refer to as "potential heirs property."

We identified three major indicators of heirs property from digital parcel records that screen out properties with good title:

> **Owned by "natural people"**—Only property owned by actual people can pass through intestate succession. In other words, heirs property is owned by real people; therefore, we eliminated all parcels titled to a business, government, school, church, or other organization.[103]
>
> **Parcels with no preferential tax status**—Land use policy such as the conservation of agricultural, historic, timber, or environmentally sensitive land is often promoted through preferential taxation.[104] Under these programs, property is taxed at a reduced value, such as with a homestead tax exemption, or valued according to its actual use rather than its "highest and best use," which often requires the adoption of certain best management practices.[105] In

[102] While it seems like an obvious point, land parcel data generally do not include demographic information. This insight also reinforced the potential of our CAMA approach, given that it is a dataset that can be combined readily with demographic datasets. Understanding the characteristics of the heirs properties themselves—their average size, housing type, average value, environmental makeup, etc.—has great potential for future study and research.

[103] Although it is possible that organizations such as churches or businesses may have title issues or even be located on heirs property, for the purposes of this analysis, we are excluding such parcels to focus on developing an assessment that captures the likelihood of individual property owners having heirs properties.

[104] Janet E. Milne, *Timber Taxes: A Critique of the Northern Forest Lands Council's Tax Recommendations*, 19 Vermont Law Review, 423, 475 (1995); Jane Malme, Lincoln Inst. of Land Pol'y, Preferential Property Tax Treatment of Land (1993) (discussing the various laws that provide preferential property tax treatment of land and the policies behind these laws).

[105] *Id.*

Georgia, for example, a Conservation Use Valuation[106] and an Agricultural Preferential Assessment[107] are available to qualifying property owners.[108] Because qualification for preferential tax status requires a landowner to apply to the local board of tax assessors and dedicate the land to a qualifying use, parcels with preferential tax status are less likely to be heirs properties. We therefore eliminated all parcels indicating preferential tax status.

Parcels with older transfer date—The longer it has been since a property has changed hands, the likelier it is that the property is an heirs property. Put another way, an individual listed as the most recent owner on a parcel whose most recent transfer date is 1930 is unlikely to still be living today. Heirs properties cannot be transferred readily due to the cloud on their title, and most transfers of the property would require a resolution of the title problem. For the purposes of this analysis, we expect that parcels that have not been transferred in more than 30 years have a substantially greater likelihood of being heirs properties. We therefore eliminated all parcels that have been transferred within the past 30 years. Thirty years as a cutoff date is a subjective demarcation based on expert knowledge from legal professionals working with heirs property. A longer or somewhat shorter period could have been selected.

Several additional property characteristics in the CAMA data may identify potential heirs property more directly, but some require the owners or taxing authorities to know that the property is an heirs property. For example, using indicators such as "estate of" or "heirs of" as a screening tool would miss the properties for which the owner or taxing authority is not aware of the ownership status or the cloud on title. Subsequent to the analysis presented in this publication, we also became aware that properties that have a financial caretaker indicated on tax records, such as "care of Person X," is a strong indicator of heirs status. The following characteristics—what we term "positive factors"—support the conclusion that the parcels identified in the initial screening are potential heirs properties, but they were not directly used in the screening analysis.

"Estate of" or "heirs of" in owner name—In some instances, the tax assessor or county clerk indicates that a property may have a large number of co-owners in a potential heirs property situation by including the terms "estate of" or "heirs of" in the field that ordinarily contains the owner name.

[106] Official Code of Georgia Annotated § 48-51.

[107] O.C.G.A. § 48-5-7.1. Georgia also provides a preferential assessment for "rehabilitated historic property," O.C.G.A. § 48-5-7.2, "landmark historic property," O.C.G.A. § 48-5-7.3, and brownfield property O.C.G.A, § 48-5-7.6.

[108] Bob Izlar et al., *Property Tax Incentives for the Georgia Landowner*, Center for Forest Business, Warnell School of Forestry & Natural Resources, University of Georgia (2012), available at www.ugacfb.com/wp-content/uploads/2012/11/Property-Tax-Incentives-GA-Landowner.pdf. [Date accessed: June 2017].

"Et al." or "etc." in the owner name—Again, if the tax assessor or county clerk identifies a large number of names in the ownership information, it appears to indicate that the property has a number of owners based on an heirs property situation.

Presence of multiple mobile homes on the property—Janice Dyer's work suggests that high rates of mobile (and vacant) homes are indicative of heirs property.[109] A tax assessment expert at the Institute of Government likewise supports the conclusion that the presence of mobile homes—often clustered around an older home—is a strong indicator of heirs property based on his experience.[110] Professor Dyer has argued that this arrangement, while it has negative implications for title transfer, may have a positive side in that it reflects a "communal land tenure system" that "create[s] small communities of kin."[111] This factor also may stem from the fact that bank financing may not be available due to the lack of good title to the land, and mobile homes can often be financed without any collateral beyond the home itself. Thus, the presence of multiple mobile homes on a parcel is another indicator for properties identified as potential heirs properties during the initial screening.

Out-of-state mailing address—Following Janice Dyer's work,[112] one of the factors used by Georgia Appleseed is tax assessor data indicating that the purported owner of a property receives tax notices at an out-of-state mailing address.[113] Many heirs property owners continue to pay taxes on the property even though they may not live on it.[114] Two different mailing addresses increase the likelihood of an absentee owner of the property, particularly in jurisdictions that do not have a large number of second homes. In addition, when taking African-American migration patterns into account, research suggests that heirs property owners are often descendants of the originally titled landowner that have moved away from the family home.[115] Thus, many heirs properties are likely to be maintained by nonresident landowners.

When we included these "positive factors" as part of our mapping of potential heirs properties, we found what appears to be a relationship between the properties identified as potential heirs

[109] Dyer, *Statutory Impacts*, *supra* note 27 at 4.

[110] When we used Google Earth to view some of the parcels our methodology identified as having a higher probability of being heirs properties, we saw several instances of this very arrangement. Professor Dyer likewise cites a trailer-home inspector who says he has seen "up to seven or eight families living on one piece of heirs property." Dyer & Bailey, *A Place*, *supra* note 23 at 320.

[111] *Id.*

[112] Dyer, *Ownership Characteristics*, *supra* note 36 at 202.

[113] Georgia Appleseed, *Unlocking Heir Property Ownership*, *supra* note 5 at 1-10.

[114] *Id.*

[115] Mitchell, *Destabilizing*, *supra* note 13 at 564 [citing Reynolds Farley & Walter R. Allen, Nat'l Comm. for Research on the 1980 Census, *The Color Line and the Quality of Life in America*, 112-13 & 113 tbl.5.1 (1987)]; Georgia Appleseed, *Unlocking Heir Property Ownership*, *supra* note 5 at 1-10.

properties using the three major indicators discussed above (owned by natural people, parcels with no preferential tax status, and parcels with older transfer date) and these secondary positive factors ("estate of" or "heirs of" in owner name, "et al. or etc." in owner name, presence of multiple mobile homes on the property, and out-of-state mailing address), though no statistical analyses were done.

Finally, note that we did not take the "low value" of a property into account as part of our screening analysis, although it has been used in other studies.[116] We concluded that using low value as an identifying factor would be problematic for our methodology for several reasons. First, when assessing a property's value, many tax assessors are not aware of the property's ownership status. Thus, the conclusion that a property was assessed a low value because it has title issues is not supported by general tax assessment practice, especially in the context of computerized mass appraisal. Second, another concern is related to assigning the appropriate threshold level of "low value" for a property without taking parcel size into account. A one-acre parcel appraised at $10,000 may seem low in value, but what about a 40-acre parcel valued at $80,000? Similarly, given our research, we suspect that the heirs property issue is both rural and urban in nature; consequently, discerning appropriate low value thresholds for counties with both rural and urban communities is problematic. Although the value of a property in comparison to similar properties could be a factor, more research would be required, in our view, to develop an appropriate low value threshold. Such a threshold would also likely have to be very community-specific, as a low value property in one community may be of average value in another. As we gather better data about the characteristics of heirs properties, an area of future research could be mechanisms to determine how a property's value could be a positive factor or indicator of a potential title issue.

[116] Georgia Appleseed's tax base research methodology uses "low value of land" as an indicator of heirs property. Georgia Appleseed, it should be noted, took a much more "hands on" approach, relying on volunteers who were real estate attorneys to determine the fair market value of the land acreage. See Georgia Appleseed, *Unlocking Heir Property Ownership*, *supra* note 5 at 16. Such an approach may be effective because it relies on local knowledge and real estate expertise, but the labor required to conduct such a parcel-by-parcel analysis is significant.

Sources of CAMA Data for this Project and Analysis

For this project, we used three sources of CAMA data:

1. Georgia CAMA data maintained by the University of Georgia (UGA) Carl Vinson Institute of Government's Office of Information Technology Outreach Services
2. CAMA data from Anderson County, SC
3. CAMA data from Cameron County, TX

Georgia CAMA Data—The UGA Carl Vinson Institute of Government's Office of Information Technology Outreach Services (ITOS) is a national leader in GIS and other geographically based data applications. Among other things, ITOS provides many essential functions in developing and maintaining datasets and programs for local governments and State agencies throughout Georgia.[117] In addition to its invaluable expertise in developing this concept and methodology, ITOS also maintains a compilation of most of the CAMA data for Georgia counties.[118]

Most of the CAMA data used by Georgia counties is maintained in the WinGAP format.[119] WinGAP is utilized in approximately 140 of Georgia's 159 counties, and it is used to appraise more than 3 million parcels annually. The WinGAP format consists of 196 databases or tables, with additional tables added as the system is updated over time. Each of these tables contains data about specific attributes of a given parcel of real property, or taxable personal property, tied together by number-coded reference columns. The WinGAP CAMA data potentially contain tens of thousands of data points about a given property.

Using the heirs property indicators identified above, we developed a WinGAP-based method to assess the potential number of heirs property parcels at the county level. We identified the columns containing data representing the indicators—owned by "natural people," parcels with no preferential tax status, and parcels with older transfer date—and assessed the number of parcels in each county examined that met these threshold criteria. This methodology does not seek to positively identify heirs properties but rather a subset of parcels within a county or other geographic unit that have a stronger potential of being heirs property based on the property use, the length of time since ownership of the property was last transferred, and whether the tax status of the property indicates that someone demonstrated or claimed good title to the property. This exercise provides what is likely a more accurate comprehensive picture of the concentrations of heirs property in the identified jurisdiction or geography than what has been produced previously, which allows us to better grasp the extent of the heirs property

[117] For more information about ITOS's projects and capabilities, see www.cviog.uga.edu/itos.

[118] As we discuss in section IV, it is rare to have access to such an extensive collection of local parcel data without subscribing to a very costly commercial data service. The fact that this type of data is not readily available in other States is the primary reason this analysis is focused so intensively on Georgia counties.

[119] For more information about WinGAP, see http://wingap.com/. The 2011 WinGAP Basic Data Entry Class Manual is available at www.wingap.com/downloads/misc/WinGAP_BDE_Class_Manual.pdf. [Date accessed: January 2017].

phenomenon. In addition, this methodology is uniform and replicable, allowing one to compare numbers of heirs properties across jurisdictions, and it provides a basis for testing assumptions about heirs properties.

CAMA Data from South Carolina and Texas Counties—To assess its regional applicability, we selected two counties outside of Georgia in which to implement this county-level methodology. CAMA data are almost universally developed and maintained by local governments, resulting in scores of different CAMA systems being used in the 1,340 counties that make up the 13-State region covered by this project. Due to the availability of WinGAP data and its broad use across Georgia,[120] we used it as the base format when we developed our method of heirs property analysis. However, the methodology is applicable for any CAMA system. We applied the methodology in South Carolina and Texas to assess how difficult it would be to use this process and transition between CAMA systems.

The primary limitation in selecting counties for this portion of the project was identifying local governments willing to share their data. Because communities often make significant investments to develop these data and they provide a myriad of benefits to various users such as property developers, local governments frequently try to recoup some of that investment by charging large fees for access to these and other GIS data they maintain. In other instances, counties enter into exclusive agreements with private vendors to develop these data, sometimes limiting how the county can share the data. In still other cases, local officials are suspicious of sharing these data with unknown parties and refuse to make it available. For these reasons, it took much longer than expected to acquire the data we needed for this phase of the project, as we reached out to numerous communities across the region.

Eventually, we identified two counties that would share their CAMA data: Anderson County, SC, and Cameron County, TX. Both of these counties are significantly larger than the Georgia counties examined. Anderson County has a population of almost 200,000, and Cameron County has more than 400,000 people.

Georgia County-Level Results

This section presents the results from our analysis of 10 Georgia counties, as well as findings related to the demographic characteristics of these counties. Five of the Georgia counties were from the Black Belt cluster that our model predicted would likely have large numbers of heirs properties based on the demographics of the respective county population; specifically, we chose Calhoun, Taliaferro, Clay, Dougherty, and Telfair Counties (fig. 5). The other five counties analyzed were not included in a regional heirs property cluster; these counties—Bibb, Athens-Clarke, Evans, Jasper, and McIntosh—served as a comparison set.

[120] Due to its widespread use across Georgia, WinGAP is likely the most widely deployed CAMA system in the Southern United States, even though it is not used outside of Georgia.

Figure 5—Georgia counties assessed. Ten counties were analyzed for likely concentrations of heirs property using the county-level CAMA (computer-assisted mass appraisal) data. Five of the counties were identified in the regional analysis, and five of them were not.

Georgia Counties: Heirs Property Assessment

Of the counties identified by the regional process, most were among Georgia's smallest and most rural counties. By far, the largest of the five selected from the regional cluster was Dougherty County, which is Georgia's 27th most populous county with a population of 92,407 and 37,849 parcels. None of the other counties rank in the top 100 of Georgia's 159 counties in terms of population size. The cluster also includes the Georgia county with the smallest population, Taliaferro County, which has 1,693 residents and 2,261 parcels.

Four Georgia counties identified in Georgia's 30-county portion of the Black Belt cluster were in the 90th percentile for all four of the demographic factors for potential heirs property ownership. Our original goal was to analyze these four counties as well as an additional similar county using our CAMA data approach. However, only two of these four counties—Calhoun and Taliaferro—had CAMA data at the time of this study. Therefore, we analyzed those two counties and revised our process to select three other counties within the Black Belt cluster to study. Table 1 describes the five counties examined and our rationale for selection.

Table 1—Georgia counties selected for parcel analysis and rationale for selection

County	Rationale
Calhoun	Meets all four demographic indicators for likely having high rates of heirs properties and located in Georgia's 30-county cluster region. CAMA data were available.
Clay	Meets three of the four demographic indicators for likely having high rates of heirs properties. CAMA data were available. Clay County is contiguous to Calhoun County.
Dougherty	Meets two of the four demographic indicators for likely having high rates of heirs properties. CAMA data were available. Dougherty County is contiguous to Calhoun County. Dougherty County also includes the city of Albany, which has a population of almost 100,000. This provided a nonrural study area. Dougherty County is the only nonrural county that appeared in Georgia's 30-county cluster.
Taliaferro	Meets all four demographic indicators for likely having high rates of heirs properties and located in Georgia's 30-county cluster region. CAMA data were available.
Telfair	Meets three of the four demographic indicators for likely having high rates of heirs properties. CAMA data were available.

Our analysis of heirs property indicators within the CAMA data for these five counties produced several interesting results:

- Many heirs properties are likely to be maintained by nonresident landowners. The percentage of parcels indicating potential heirs properties ranged from 25 percent in Dougherty County to 12 percent in Calhoun County.
- The average percentage of potential heirs property among the five counties is 19 percent.
- The land area affected was, on average, 4 percent of each county's area, suggesting that most of the identified parcels are quite small.
- The parcels identified total 34,463 acres and have an assessed value of $765,808,551. Most of that value is in Dougherty County, accounting for almost $650 million alone. The amount of land wealth represented by these estimates illustrates the substantial economic impact of heirs property issues both to the local communities and in broader State and regional contexts.

Appendix A contains maps identifying potential heirs properties in each of these counties.

To begin to examine whether this cluster designation could be connected to higher rates of potential heirs property, we next compared these five counties to five other counties not included within the Black Belt regional heirs properties cluster. Although this comparative analysis was not in our original scope of work, we concluded during the course of the project that using a comparison group of counties outside of this regional cluster could raise interesting questions that could inform future research. We selected the following five comparison counties: Bibb County, Athens-Clarke County, Evans County, Jasper County, and McIntosh County. Like our five Black Belt cluster counties, the comparison group represents a mix of rural and more urban counties, though they tend to be larger than the original group (table 2).

Table 2—Georgia counties selected for parcel analysis in the comparison group

County	Rationale
Athens-Clarke	Ranks in the 90th percentile for poverty, one of the four demographic indicators we used in our regional cluster analysis. Athens-Clarke County did not fall within a regional heirs property cluster, however, because it was not geographically contiguous with counties meeting the heirs property indicators in the same way other counties were. CAMA data were available.
Bibb	Similar in size to Dougherty County. Includes the city of Macon, which has a population of approximately 150,000, and is thus comparable to the city of Albany, which is located in Dougherty County. CAMA data were available.
Evans	Represents a small and rural county. CAMA data were available.
Jasper	Represents a small and rural county. CAMA data were available.
McIntosh	A coastal county in Georgia that is home to the Gullah Geechee community, which includes descendants of African slaves who have preserved many aspects of their African heritage. In comparison to most Georgia counties, McIntosh County has received significant attention from academic researchers, the media, and nongovernmental organizations for having heirs property and tax assessment issues.[a]

[a] See, e.g., Faith Rivers, *The Public Trust Debate: Implications for Heirs Property along the Gullah Coast*, 15.1 Southeastern Environmental Law Journal, 148; Georgia Appleseed, *Unlocking Heir Property Ownership, supra* note 5; Gullah Geechee Culture Initiative, www.gullahgeecheeculture.org; McIntosh Appleseed, About Us, www.mcintoshseed.org/work2.html; Kim Severson, *Taxes Threaten an Island Culture in Georgia,* The New York Tim=es (Sept. 25, 2012).

The average percentage of parcels identified in these comparison counties was five percentage points lower than those from the regionally identified cluster group, with 14 percent of parcels identified as potential heirs properties (table 3). Interestingly, however, based on the counties' property appraisals, the value of the properties in the comparison group was substantially higher than those from the original cluster group, with a cumulative value of $1,383,142,810. This is likely due to higher levels of development in these counties, particularly Bibb County ($523,207,628) and Athens-Clarke County ($565,129,450), and these property values are more in line with those of Dougherty County, the most developed county from the original regional cluster. In other words, we find that the counties with higher populations also have more parcels and higher property values.

These results suggest several possible avenues for future study. First, while the average number of potential heirs properties drawn from this comparison group was 5 percent smaller than from the first cluster group, the average of potential properties with title issues (14 percent) is nevertheless substantial. A future area of research would be to examine whether the averages differ significantly in statistical terms. In addition, the heirs property issue, while often described as a rural problem, appears to affect urbanized areas in a similar fashion—and the value of potential heirs parcels in these areas is much higher. Population trends—both declining and changing demographics—appear to be possible indicators of heirs property, as well.

More interestingly, the percentage of land acreage impacted in many of these counties in our comparison group was actually higher than in the original regional cluster that we identified based on demographic indicators (table 3). While the average percentage of land at risk of unstable title was only 5 percent (1 percent higher than the original five-county study area),

Table 3—Results of county-level heirs property analysis

County	Population	Total parcel count	Potential heirs property parcels	Percent parcels potential heirs property	Value[a]	Acreage	County acreage	Percent county acreage
HEIRS PROPERTY CLUSTER COUNTIES								
Calhoun	6,463	3,383	398	12%	$13,309,474	2,078	178,734	1%
Clay	3,102	3,105	651	21%	$33,637,362	5,618	137,718	4%
Dougherty	92,407	37,849	9,386	25%	$648,643,199	10,192	195,214	5%
Taliaferro	1,693	2,261	375	17%	$2,363,320	2,941	121,276	2%
Telfair	16,518	8,562	1,716	20%	$67,855,196	13,634	274,591	5%
TOTAL					$765,808,551	34,463	907,533	4%
COMPARISON COUNTIES								
Athens-Clarke	120,938	41,872	4,630	11%	$565,129,450	4,458	60,157	7%
Bibb	153,905	68,861	7,466	11%	$523,207,628	9,374	137,988	7%
Evans	10,898	6,528	1,059	16%	$57,351,608	7,715	101,040	8%
Jasper	13,432	10,034	1,316	13%	$64,317,222	3,275	257,542	1%
McIntosh	14,214	12,858	2,433	19%	$173,136,902	13,298	242,560	5%
TOTAL					$1,383,142,810	38,120	799,287	5%
10-COUNTY TOTAL					$2,148,951,361			

[a] Value is based on the tax appraised value reported in the CAMA data.

three counties had what appear to be high percentages of total acreage impacted: Bibb and Clark Counties at 7 percent each, and Evans County at 8 percent.

These acreage totals are higher than for *any* of the five counties in the original Black Belt group, none of which showed more than 5 percent of total acreage affected. This difference presents a question for future analyses that use larger numbers of counties. One possibility is that property owners in counties with greater wealth have larger parcels of land. Another possibility is that the quality of the CAMA data (related to parcel shape files) is more accurate in the more developed counties, as they face more development pressure that forces the county to maintain better shape file data. Maps for each of these comparison counties identifying potential heirs are included in appendix A.

In table 3, the "potential heirs property parcels" column reflects the number of parcels that were left for each county after we applied the heirs property indicators and screened out properties unlikely to be heirs property. The value of the parcels was calculated by summing the assessed value recorded in CAMA data for each parcel. Thus, the value reflects the total value of property affected and captures the potential "locked wealth" within the county. This analysis does

not attempt to calculate the impact that heirs property has on neighboring property value, nor does it reflect fair market value, which may be higher than the tax assessed value.

This methodology was based on the one used by Georgia Appleseed in its assessment, but our results differ rather significantly in some areas for a variety of reasons.[121] One primary reason for this difference is that the Georgia Appleseed methodology used volunteer attorneys to compare current tax parcel records with deed records in these counties. Properties whose recorded deed name did not match the tax record were marked likely heirs properties. We did not refer to the deed record, which led to our methodology returning much higher numbers in some instances. We did not refer to the deed record for two reasons. First, those records are not available in a format that allows for easy data processing, and one primary goal of this project was to develop a methodology that could be executed with relatively little time and labor. Second, and more importantly, the online deed records used in the Georgia Appleseed process only go back to the early 1990s and do not contain any title information prior to that date. Our process, in contrast, focuses on parcels that have remained in the same name for an extended period of time, which allows for a consistent assessment that extends beyond the early 1990s. For Georgia CAMA data, it also appears that names contained on deeds and those in CAMA records are the same; thus, reference to deeds for the purpose of ascertaining name congruence may not be necessary. Georgia Appleseed did not use CAMA data.

Georgia Counties: Demographic Comparisons

As discussed in Section II, we used four demographic indicators as an initial step in the heirs property screening process—poverty, per capita income, low level of education, and minority percentage. We weighed each of these demographic indicators equally because the extant academic research we used to develop the indicators did not definitively privilege one demographic indicator over the others when describing common characteristics of heirs property owners. For our county-level assessment, we then looked at counties that fell within these regional clusters using indicators about the characteristics of the property itself drawn from CAMA data. We next provide specific demographics of each of the 10 counties we analyzed, as the findings reveal several intriguing possibilities for future study.

[121] Our method, in many ways, automates the "Round 1" phase of Georgia Appleseed's tax data assessment work to estimate the number of heirs properties, which was conducted by volunteers reviewing online tax parcel cards and comparing them to online deed records. See Georgia Appleseed, *Unlocking Heirs Property Ownership supra* note 5 at 6. Of the five counties Georgia Appleseed researchers analyzed, we analyzed three—Dougherty, Evans, and McIntosh. Our results identified higher numbers of potential heirs properties than Georgia Appleseed's "Round 1" findings as follows. In McIntosh County, out of 14,214 parcels, we identified 2,433 potential heirs properties. Georgia Appleseed identified 1,531 out of 12,825. In Evans County, where CAMA data showed 6,528 parcels in the county, we identified 1,059 potential heirs properties. Georgia Appleseed identified 285 likely heirs properties. In Dougherty County, out of 37,849 parcels in the CAMA data, we identified 9,386 as potential heirs properties. Georgia Appleseed researchers estimated 34,000 parcels for Dougherty County and identified 790 parcels as potential heirs properties. We suspect that the difference relates in large part to the fact that our assessment included parcels that would not appear in the online deed records used by Georgia Appleseed as part of their methodology. Validating our approach with field work was not a part of this project but is an opportunity for future research.

Table 4—Demographic comparisons of county-level assessment

Demographic indicators of characteristics of heirs property owners						
County	Population	Percent poverty	Per capita income	Percent low education	Percent minority	Percent parcels potential heirs property
HEIRS PROPERTY CLUSTER COUNTIES						
Calhoun	6,463	28.82%[a]	$12,452[a]	31.71%[a]	66.39%[a]	12%
Clay	3,102	34.20%[a]	$13,353[a]	24.93%	62.68%[a]	21%
Dougherty	92,407	28.90%[a]	$19,210	19.33%	71.12%[a]	25%
Taliaferro	1,693	34.42%[a]	$13,955[a]	41.59%[a]	63.60%[a]	17%
Telfair	16,518	31.31%[a]	$13,420[a]	31.11%[a]	48.92%	20%
COMPARISON COUNTIES						
Athens-Clarke	120,938	33.48%[a]	$19,839	15.73%	42.87%	11%
Bibb	153,905	22.39%	$21,436	18.76%	57.89%	11%
Evans	10,898	21.24%	$19,072	26.67%	43.38%	16%
Jasper	13,432	19.10%	$20,263	21.89%	27.37%	13%
McIntosh	14,214	16.62%	$20,964	21.73%	39.19%	19%

[a] Indicates demographics that are above the 90th percentile (top 10 percent).

Table 4 lists each of the Georgia counties we assessed, their populations, the demographic characteristics drawn from the four indicators of likely heirs property owners, and the percentage of parcels potential heirs property using our CAMA data methodology.

Table 4 reveals some initial observations about the demographic comparisons of the counties in our study area.

- The county with the highest minority population percentage—Dougherty County at 71.12 percent—also had the highest percentage of parcels with potential heirs properties at 25 percent. Dougherty County also has the highest population count and is the most urban of the cluster counties. It is not clear whether its status as an urban center or its high African-American population is a stronger driver of potential heirs property prevalence.

We observe, however, that Bibb County (a high population county) also has a relatively high minority population at 57.89 percent; yet the percentage of parcels with a higher chance of being heirs properties is a relatively low 11 percent. While there is not an obvious explanation for the difference, we note that Bibb County did not fall within the regional cluster area. In addition, its other demographic indicators—poverty, per capita income, and low educational attainment—are comparatively much better than the counties included in the heirs property cluster. These findings suggest that the impact of a large minority population on the likelihood

of heirs property parcels is mitigated by lower poverty rates, higher per capita income, and higher levels of educational attainment.

- The county with the highest per capita income in the cluster group, Dougherty County at $19,210, had the highest percentage of potential heirs property parcels at 25 percent. Similarly, in the comparison group, the county with the second-highest per capita income, McIntosh County at $20,964, had the highest percentage of potential heirs properties at 19 percent. These findings suggest that per capita income may not be as strong of an indicator of heirs property as minority status or that the percentile threshold for per capita income should be different.
- Two of the counties with the highest percentages of parcels of potential heirs properties—Dougherty and Clay at 25 and 21 percent, respectively—did not meet the 90th percentile for low educational attainment. A county meeting the 90th percentile threshold for low educational attainment, Calhoun County, had a comparatively low percentage of potential heirs property parcels. These results suggest that low educational attainment may be a less important indicator.
- Although comparison counties with larger populations, Bibb and Athens-Clarke, had the lowest percentage of parcels with potential heirs properties at 11 percent each, Dougherty County, the county with the largest population in the cluster group, had the highest number of such parcels at 25 percent. We are unclear what this may suggest, but future research examining the relationship between county size and population change (growth, decline, or shifts) could reveal demographic trends that impact potential heirs property rates. Certainly, given the links in the academic literature between absentee land ownership and the deterioration of rural communities,[122] incorporating population data and trends with CAMA data analysis and demographic indicators has great research potential.

We stress that these initial observations about how the demographic indicators of heirs property owners compare with the percentage of potential heirs property parcels are simply that, initial observations. In our view, however, they reveal a need for additional comparative datasets and for empirical examination of the positive indicators of heirs status. For instance, in cases where heirs status of parcels is indicated a priori by tax authorities (i.e., when heirs status is indicated in the tax records), we could model heirs status as a function of date since last sale, whether owner resides in State, whether there is a financial caretaker (that is, "care of Person X"), and

[122] Susan E. Stokes & Christy Anderson Brekken, *The Eighth Circuit Grants Corporate Interests a New Weapon Against State Regulation* in South Dakota Farm Bureau v. Hazeltine, 49 South Dakota Law Review, 795, 798 (2004)(citing a report issued by the USDA National Commission on Small Farms); Dyer & Bailey, *A Place*, *supra* note 23.

presence of multiple mobile homes.[123] As stated, in such instances the number of actual heirs parcels may be understated, but this allows for a critique of factors associated with the property that are assumed to predict heirs property existence. The State of Georgia, because it has the most consistent and comprehensive set of statewide CAMA data, is uniquely positioned to generate a large set of comparative county-wide data that could further understanding about how the characteristics of heirs property owners correlate with characteristics of heirs property parcels—a comparison that, to our knowledge, has not been undertaken.

Other Counties: Cameron County, Texas, and Anderson County, South Carolina

We next present findings from applying our methodology to two counties outside of Georgia: Cameron County in Texas and Anderson County in South Carolina (fig. 6). The CAMA systems utilized in these two counties differ considerably from the WinGAP system used in Georgia.[124] For Anderson County, we have only a single data table with nine columns that include the owner's name and the last sale year but does not contain any information about preferred tax status or land use. We nevertheless analyzed the county based on these two variables:

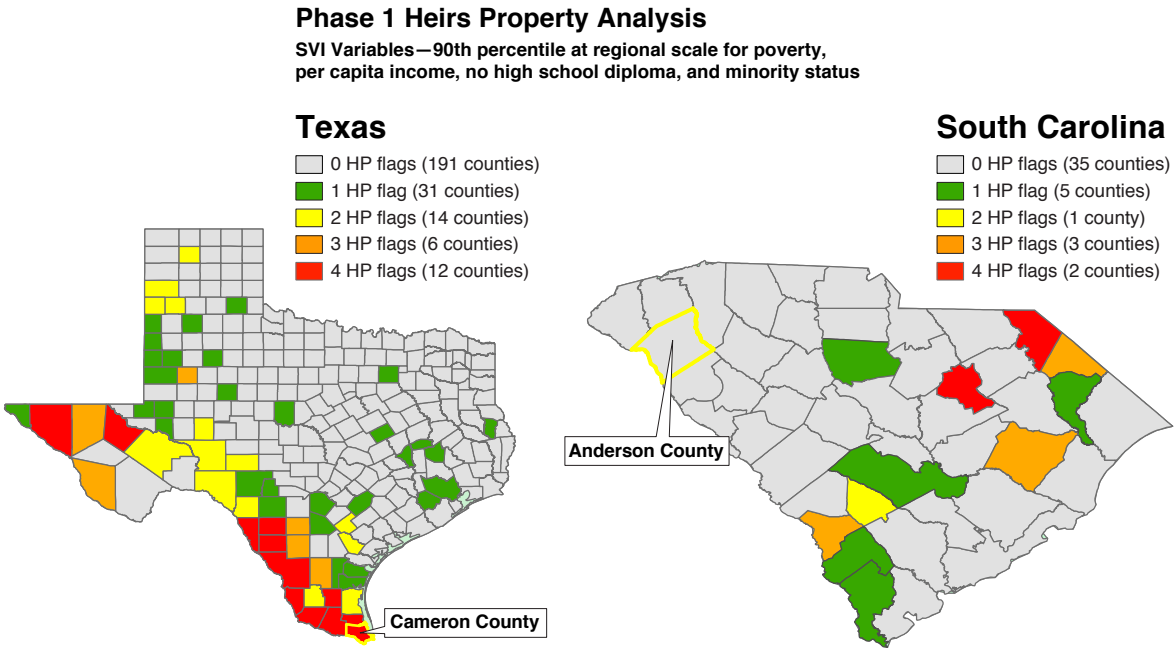


Figure 6—Counties outside of Georgia assessed. Two counties outside of Georgia were assessed using their local CAMA data. These processes were somewhat limited due to differences in their data compared to that which were available in Georgia.

[123] Cassandra Johnson Gaither & Stanley J. Zarnoch, *Unearthing 'Dead Capital': Heirs' Property Prediction in Two U.S. Southern Counties*, 67 Land Use Policy 367–377 (2017).

[124] The differences in the data format may be partially due to these counties using CAMA data differently than Georgia counties. Many counties in other States maintain only digitized tax rolls that primarily track ownership information rather than more fully developed property characteristics. It is also possible that these counties did not provide all of the property characteristic they have available, but we conducted the analysis with the data provided. Either possibility supports the value of developing more uniform and comprehensive land parcel data.

the owner's name and last sale year. Cameron County's CAMA data, on the other hand, is more expansive. The data are contained in a single table with 44 columns representing separate data points. As with Anderson County, data concerning land use or any preferential tax status are not included. Therefore, these county analyses are not directly comparable to the Georgia county analyses.

The results summarized in table 5 show percentages of potential heirs properties that are in line with the results from the analysis of the Georgia counties. Table 6 shows the percentages of potential heirs property with the demographic and socioeconomic variables used in the regional analysis. Cameron County was identified in the regional analysis as being in the 90th percentile for all four indicators. The county-level analysis indicates that 25 percent of the parcels in Cameron County are potential heirs property, which is similar to the counties identified in the Georgia analysis. This percentage of parcels identified is the same as in Dougherty County, the other relatively urban county identified in the regional analysis and analyzed at the county level, but the values of property in Cameron County far exceed any of the other counties examined. Anderson County was not identified in the regional analysis, and it showed the percentage of potential heirs property of all the counties analyzed.

Due to the limited scope of the data in Cameron County's parcel database, none of the additional factors that could more definitively identify heirs property could be used. However, Cameron County's data have a feature not present in the WinGAP data or in any other CAMA data examined: Cameron County's data table has a data field called "deed_typ," which refers

Table 5—Counties analyzed outside of Georgia

County	Population	Number of parcels	Potential heirs properties	Percent parcels potential heirs properties	Value
Anderson County, South Carolina	192,810	108,414	9,529	9%	$821,040,314
Cameron County, Texas	420,392	171,889	42,178	25%	$2,540,734,679

Table 6—Demographic indicators and characteristics of heirs property owners

County	Percent poverty	Per capita income	Percent low education	Percent minority	Percent parcels potential heirs properties
Anderson County, South Carolina	15.79%	$22,117	19.37%	21.25%	9%
Cameron County, Texas	34.74%	$12,452	31.71%	66.39%	25%

to the type of deed on record or that conveyed title to the property or the "deed type." Of the numerous legal instruments listed, four types of documents could help determine whether a property is an heirs property: a will, death certificate, affidavit of heirship, and affidavit of death and heirship. Of the identified potential heirs properties, 1,147 parcels listed one of these four documents as the type of instrument conveying title (fig. 7). No legal research was conducted to determine the impact that any of these instruments may have on the title of the associated property, but it seems highly possible that they would be associated with the likelihood of a particular parcel being an heirs property. We mention this fact primarily to indicate how other types of data not discussed in this report could be used to help identify potential heirs property.

Even though only two of the screening criteria were used in Anderson County, SC, it showed the lowest percentage of potential heirs property of any county examined as part of this project. Less than 9 percent of the parcels in the county were identified as potential heirs properties, but the high land values make the value of property impact appear very significant. This finding fits with the expectations from the regional analysis. Anderson County was not in the 90th percentile for any of the identified indicators, and in fact it showed the lowest vulnerability for three of the four demographic indicators selected. Like Cameron County, this analysis was limited by the number of data points recorded for Anderson County's parcels. Only the most recent sale and owner's name were used as screening factors. Unlike Cameron County, Anderson County did not include any different or novel data that might provide insight into the status of these parcels.

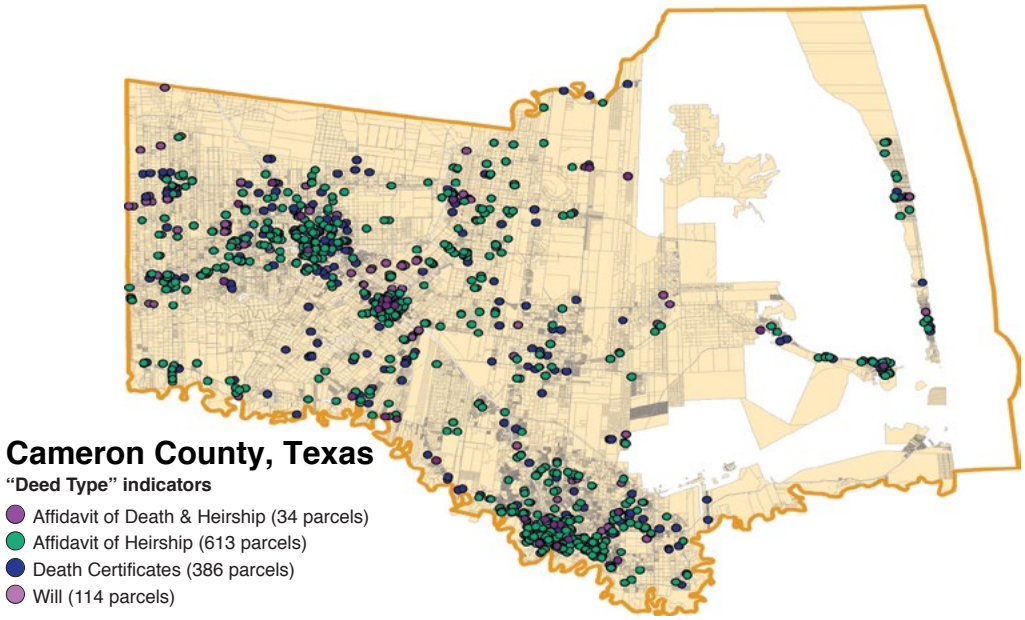


Figure 7—Cameron County "Deed Type" indicators. The CAMA (computer-assisted mass appraisal) data from Cameron County, TX, listed several deed types that seem to be indicative of potential heirs property.

SECTION IV:

DATA VARIABILITY AND OTHER LIMITATIONS

Due to the lack of centralization in parcel data management, it was very difficult to obtain complete lists of CAMA data vendors for every State in the USDA Forest Service 13-State Southern Region. We have relatively complete data for Georgia and were able to collect similar data for Florida, North Carolina, Oklahoma, and Tennessee, States having State agencies that track where CAMA systems are used. Figures 8–12 provide maps for these States showing their counties' current CAMA systems. We determined that there are at least 85 different CAMA systems in use in the 13-State region analyzed here.

We emphasize that these maps and the accompanying data on CAMA variability represent only a current snapshot of this situation. Every year, a number of these counties will change systems, CAMA vendors will merge or buy out competitors, and new systems will be developed, all of which further complicate efforts to determine how many different systems are in use.

Determining the number of systems currently in use in Louisiana, Mississippi, and Kentucky was particularly challenging because these States have no identifiable centralized collection of these data, and local officials were not forthcoming with information. Nonetheless, in the remaining States examined, anecdotal evidence suggests that a few major CAMA data sources seem to be more prominent. The use of select CAMA data vendors in particular States might be due to familiarity with the tax code, which can be rather complex in some States, such as South Carolina.

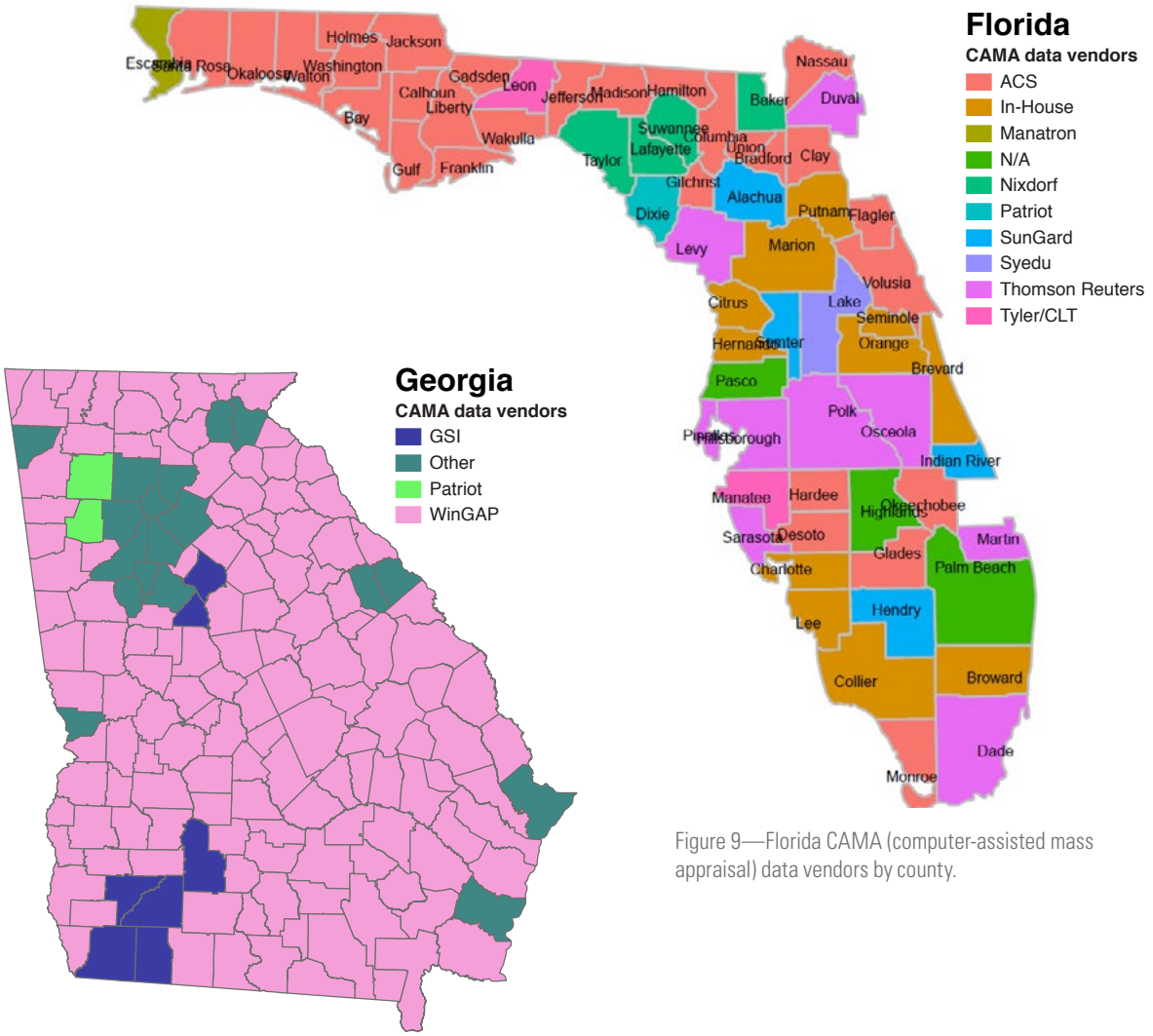


Figure 9—Florida CAMA (computer-assisted mass appraisal) data vendors by county.

Figure 8—Georgia CAMA (computer-assisted mass appraisal) data vendors by county.

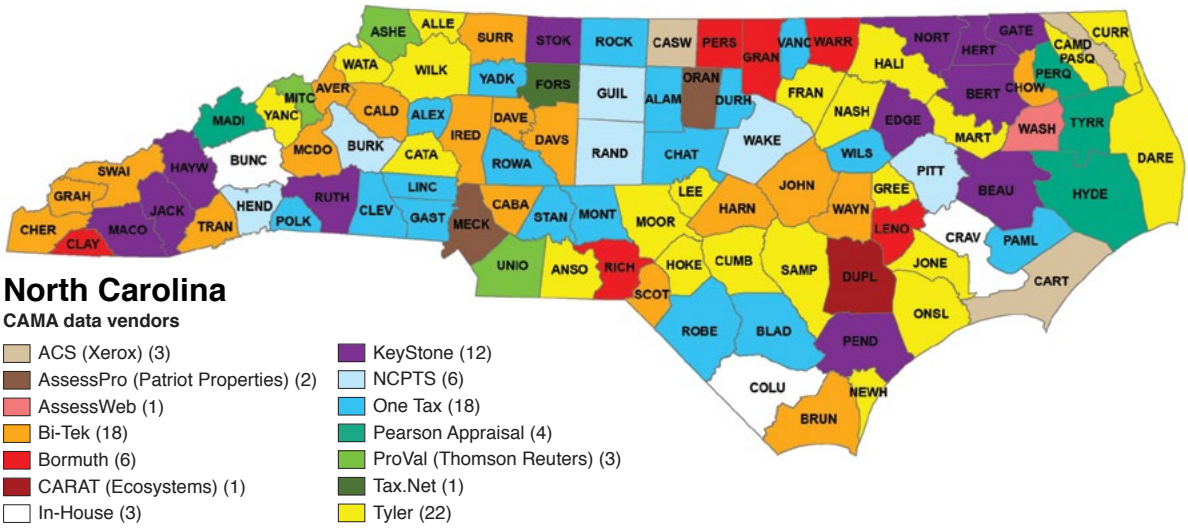


Figure 10—North Carolina CAMA (computer-assisted mass appraisal) data vendors by county.

Source: North Carolina Department of Revenue, 2014

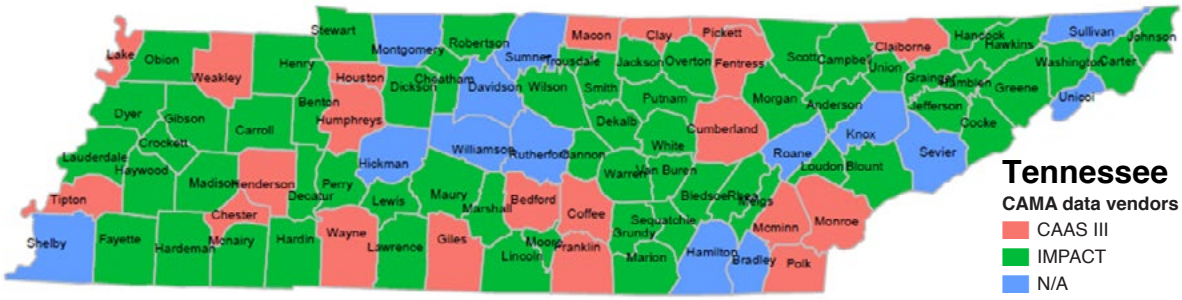


Figure 11—Tennessee CAMA (computer-assisted mass appraisal) data vendors by county.

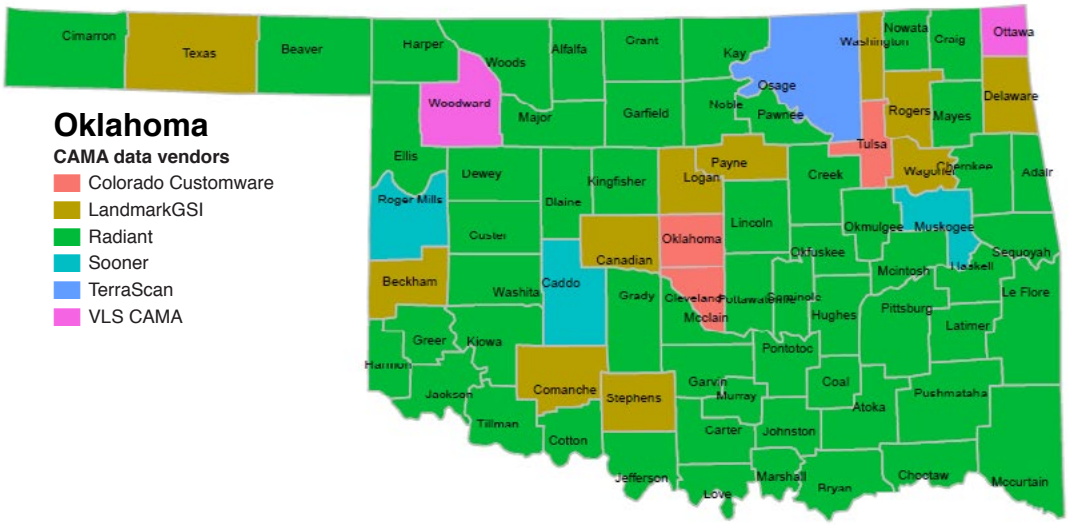


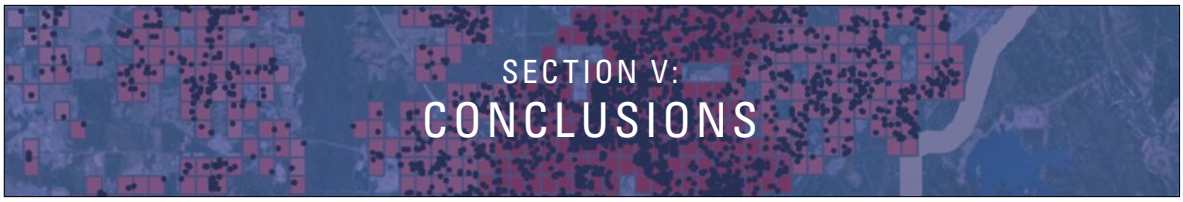
Figure 12—Oklahoma CAMA (computer-assisted mass appraisal) data vendors by county.

In an effort to enable research and planning for parcels throughout the entire State, Georgia is developing a "CAMA data translator" for the localities that have opted out of the WinGAP system. This translator will convert information from non-WinGAP CAMA data companies throughout the Southeast to the WinGAP format. Also, it should be theoretically possible to use this data translator to create a consistent data format for analysis purposes for other localities outside of Georgia. Over the long term, it might also be viable to develop translators for data from other major CAMA data vendors. However, extension of the translator's capabilities to the multitude of smaller systems used throughout the Southeast would likely be too time and resource intensive.

Table 7 lists the CAMA systems that could be identified in the States studied, and the preceding maps indicate the systems used by county where that information was available.

Table 7—CAMA systems identified in the 13-State Southern Region

Oklahoma	South Carolina	Tennessee	Texas	Virginia
Colorado Customware	Colorado Custom Software	CAAS III	CAD Dallas	ACS (Xerox)
Landmark GSI	"Joint venture"	Impact	CAD Harris	BAI
Radiant	Patriot		CAD Potter-Randall	Bright
Sooner	QS1		Capitol Appraisal Group	Cama
TerraScan	Thomson Reuters		Easy Access	CAMRA
VLS CAMA			Morgan Ad Valorem Services	CLT
			Prichard & Abbot	DataSynch CAMA
			Southwest DATA	DEVNET INC.
			Thomson Reuters	EGTS
			True Automation	Equity
			Tyler Technology	GRM ProVal
				Keystone
				Legacy
				Mainframe
				MUNIS
				Pearson Appraisal
				Stonewall Technologies
				SunGardHTE, Inc.
				Vision



SECTION V: CONCLUSIONS

This project addresses some of the difficulties in empirically assessing data to determine the scope and severity of the heirs problem in the Southern United States. By connecting demographic indicators selected through a review of the academic literature on heirs property, we identified geographic clusters of communities that are likely to have populations owning higher than average concentrations of heirs property. We then measured the relative concentrations of heirs property in these communities by analyzing characteristics of the properties within the counties contained in local parcel datasets used in computer-assisted mass appraisals (CAMA data).

Analyses of the CAMA data indicate that those counties highlighted in the regional demographic analysis have higher concentrations of potential heirs properties when compared to a selection of counties that were not identified, at least within the sample of Georgia counties examined. There is some indication that the demographic variable most closely related to the concentration of heirs property may be the proportion of the population that identifies as a minority. However, a much more comprehensive analysis of counties needs to be conducted to draw any reliable conclusions about the relative significance of any particular demographic variables or property characteristics.

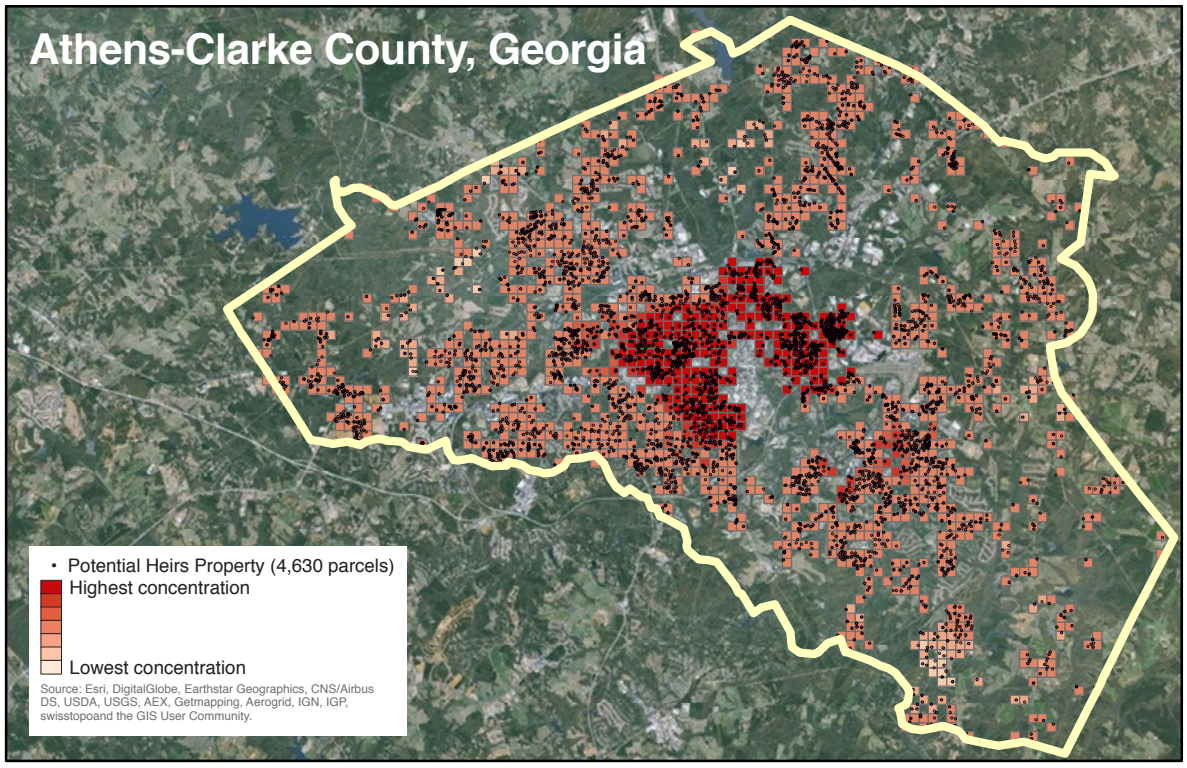
The findings from this project suggest that heirs property is a significant problem in many southern communities, potentially making up as much as a quarter of all parcels in the most vulnerable counties. If this is indeed the case, heirs property problems would affect thousands of properties across the South, potentially impacting the lives of tens of thousands of Americans. This is the first attempt to assess the significance of the heirs property problem at this large scale using GIS data, and a great deal of work remains to be done to verify and refine these methods. Nonetheless, these findings suggest that heirs property is a significant contributor to persistent poverty and economic stagnation in many communities and possibly among certain populations.

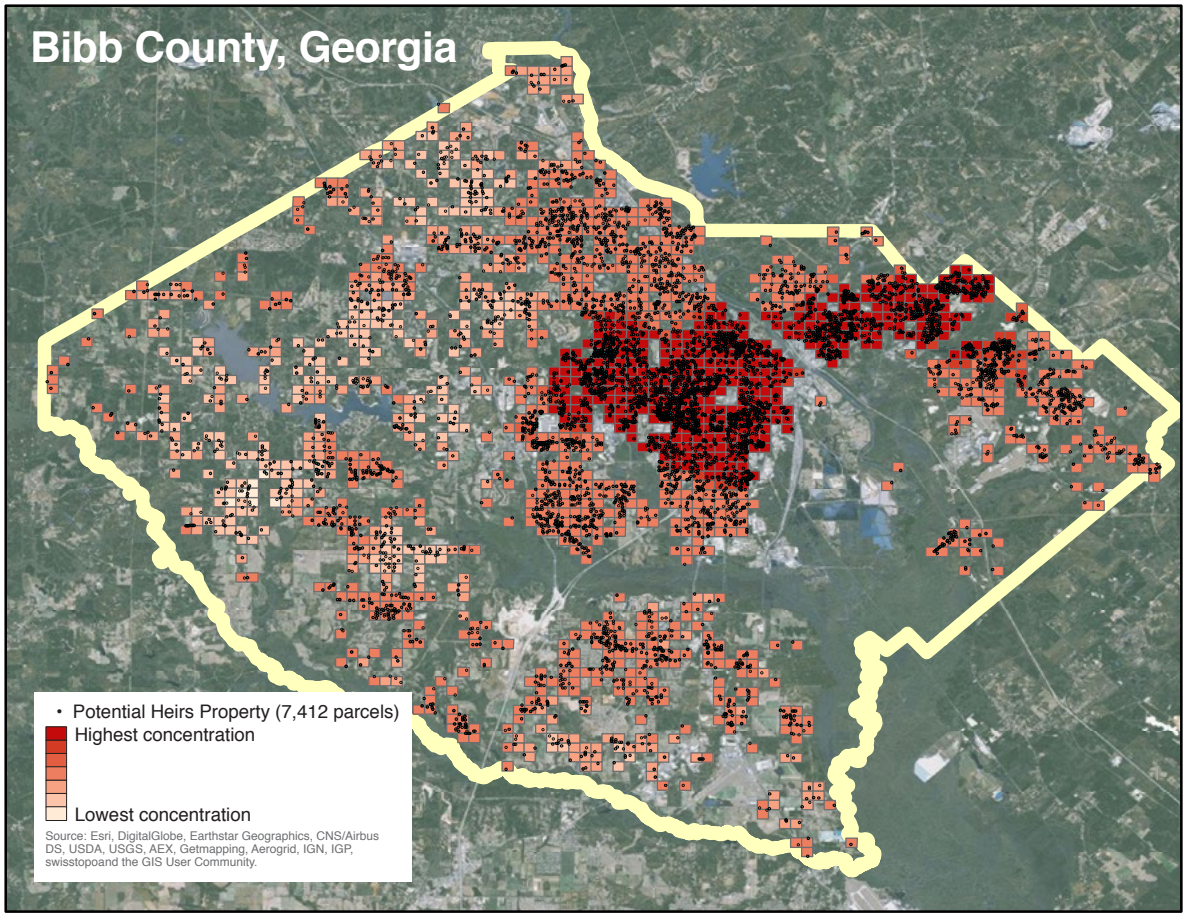
There are opportunities to further develop and refine this type of empirical data and analysis. By looking at heirs property using geospatially referenced data, it becomes possible to connect these data to other data sources as well as to more easily develop new data that can be used to

assess the extent of this problem and analyze efforts to address it. It may also be possible to integrate this type of heirs property analysis with other programs to leverage those resources to help resolve this issue where possible and better address the issues of affordable housing, natural resource conservation, and minority land loss, among others. Potential data sources that could be used include housing data from the U.S. Department of Housing and Urban Development (HUD), claims data from the Federal Emergency Management Administration (FEMA), applications for assistance from the U.S. Department of Agriculture (USDA), data from the Environmental Protection Agency (EPA), mortgage data, and other types of data collected by Federal and State agencies.

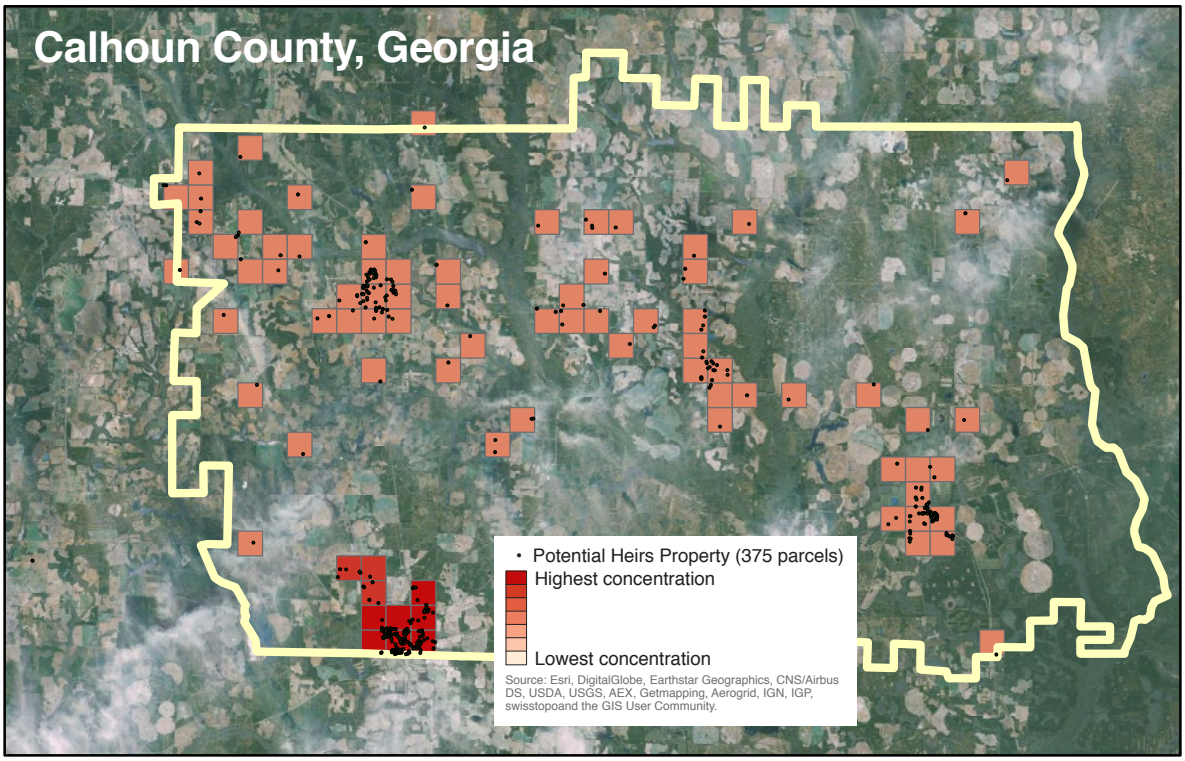
Another opportunity to expand on this type of research that would help address issues with heirs properties, as well as provide other benefits for communities and researchers, is to improve data on land ownership and parcel characteristics. Access to more uniform national, regional, or even State parcel data would make this type of analysis much more robust and enable projects that could further research and provide data needed to plan for a variety of community needs.

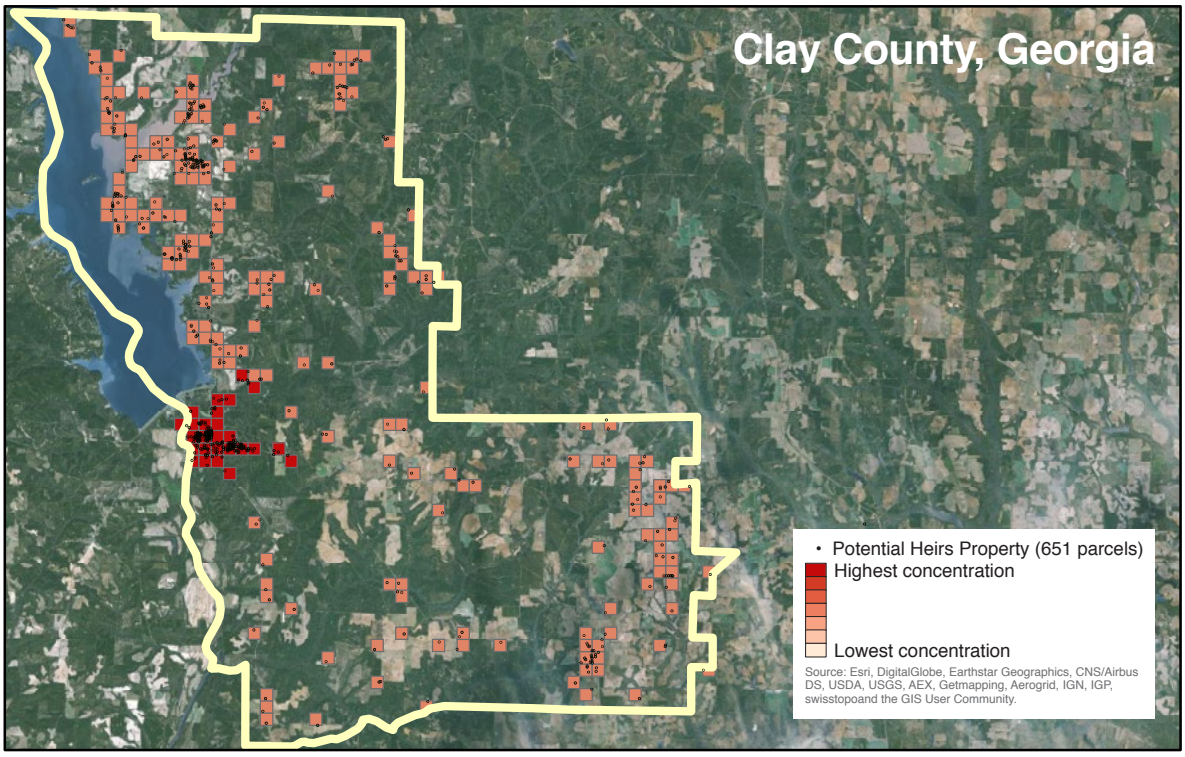
Concentration of Potential Heirs Property





Concentration of Potential Heirs Property





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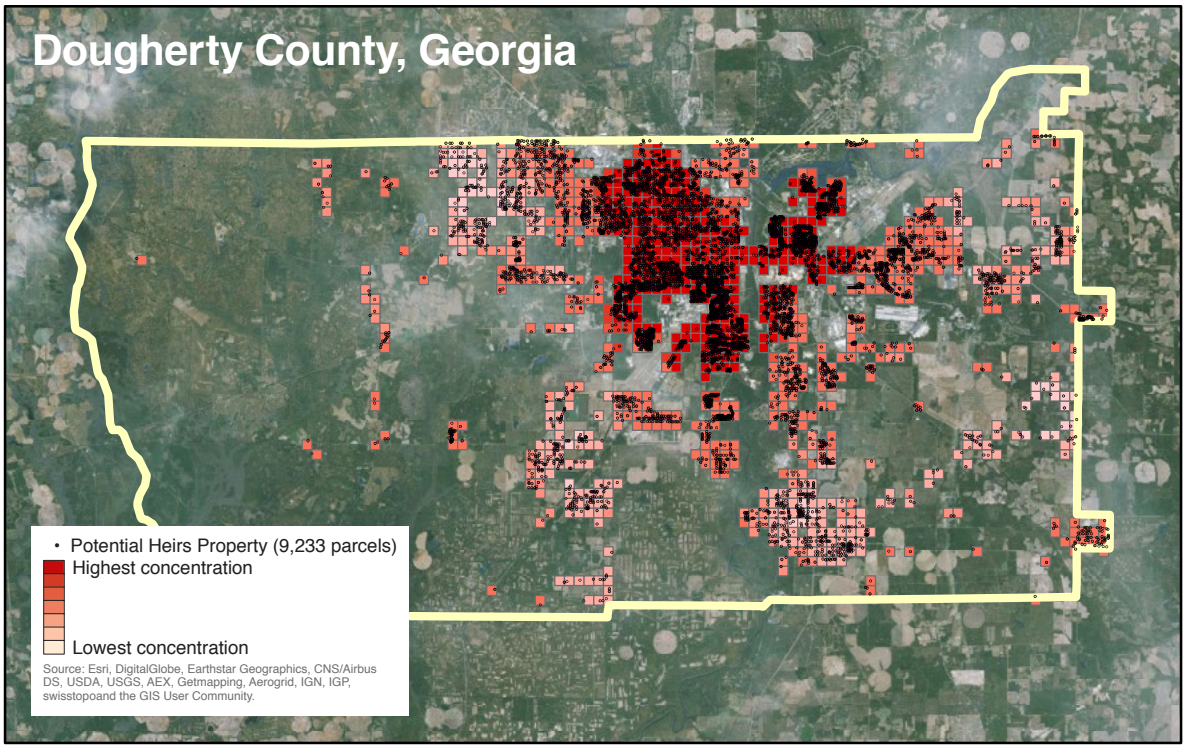
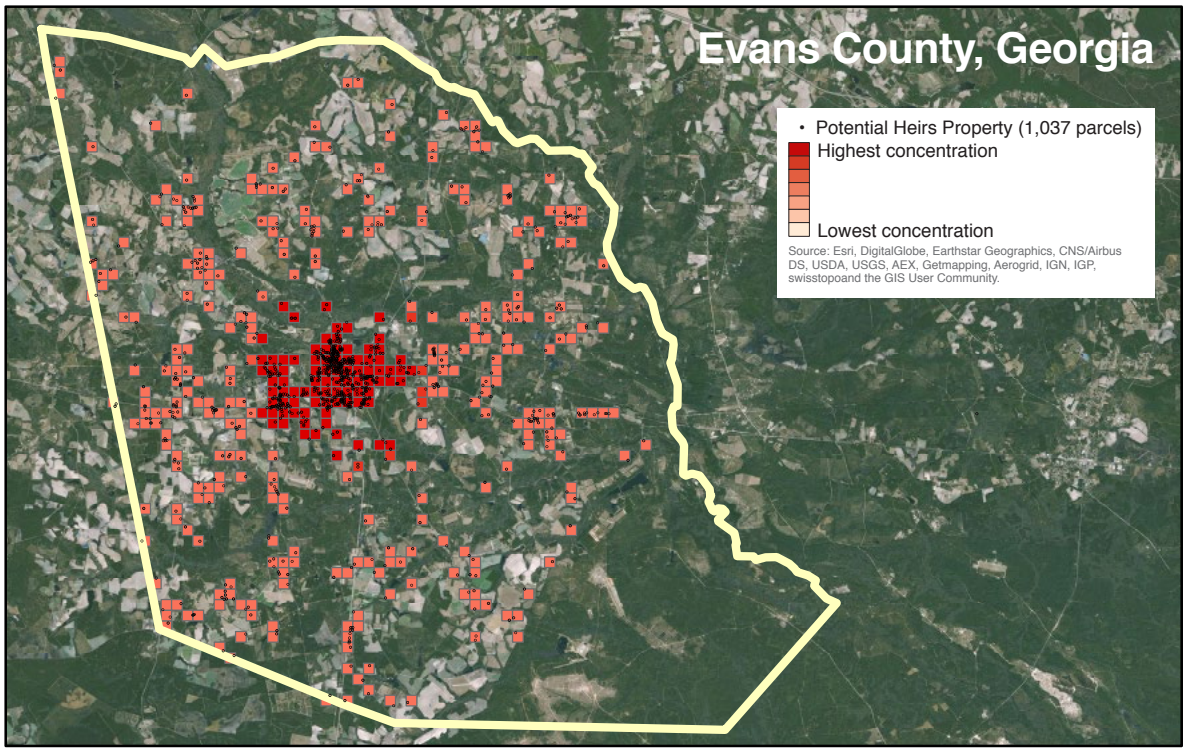
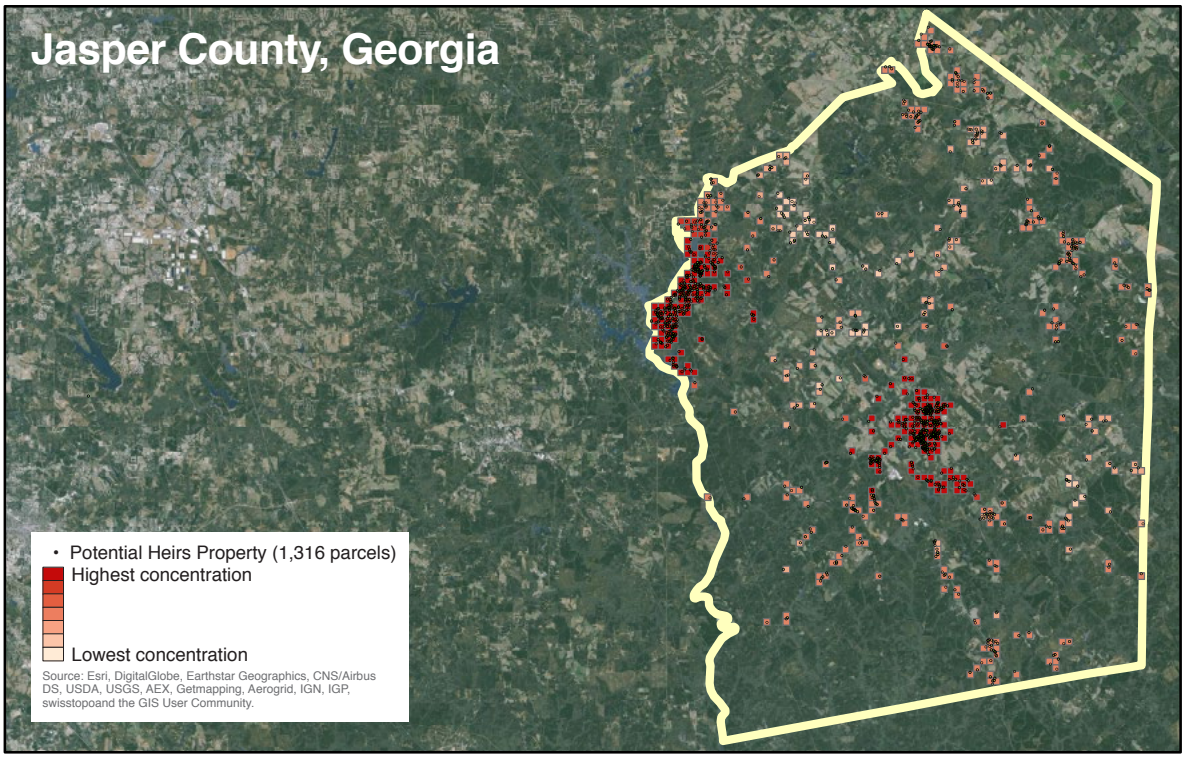
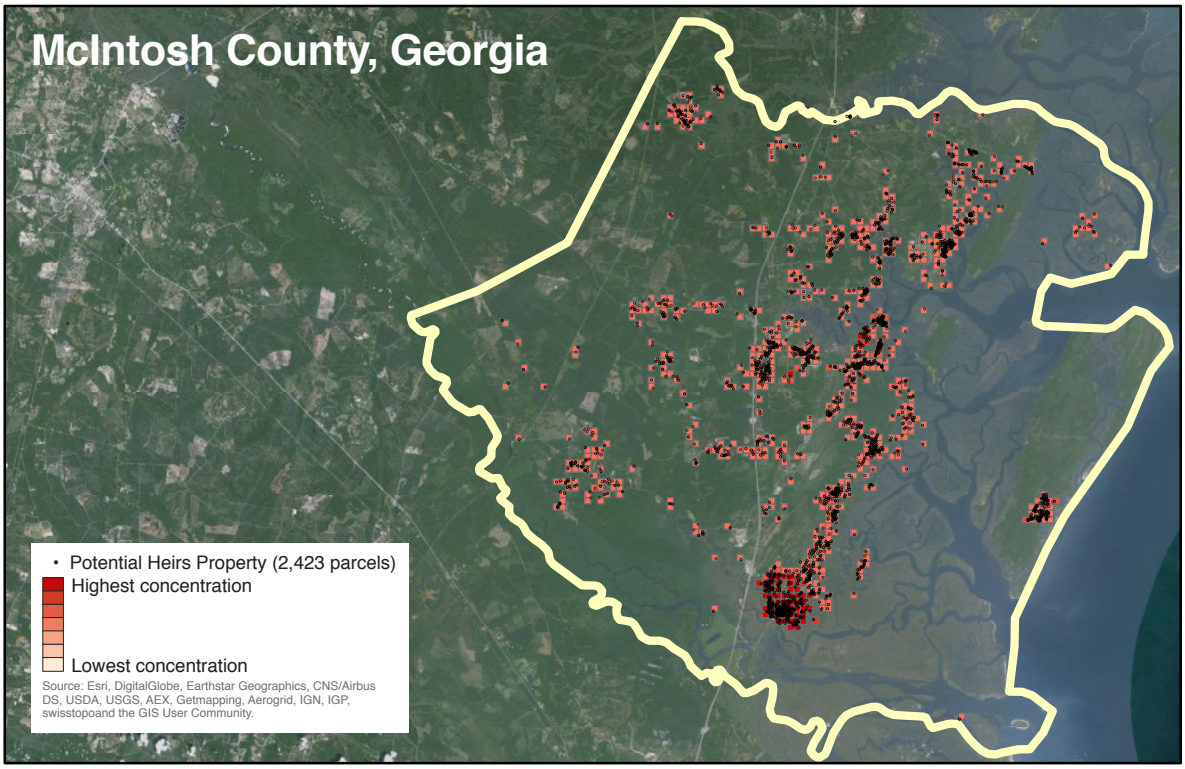




Concentration of Potential Heirs Property





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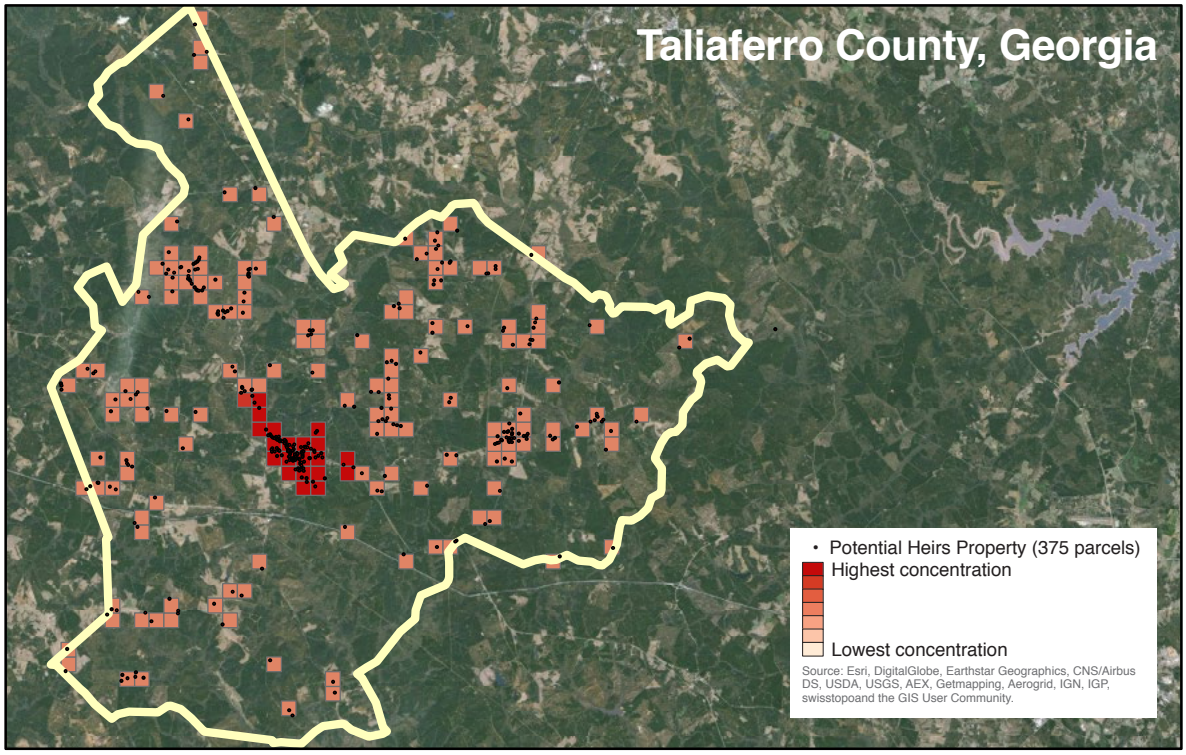
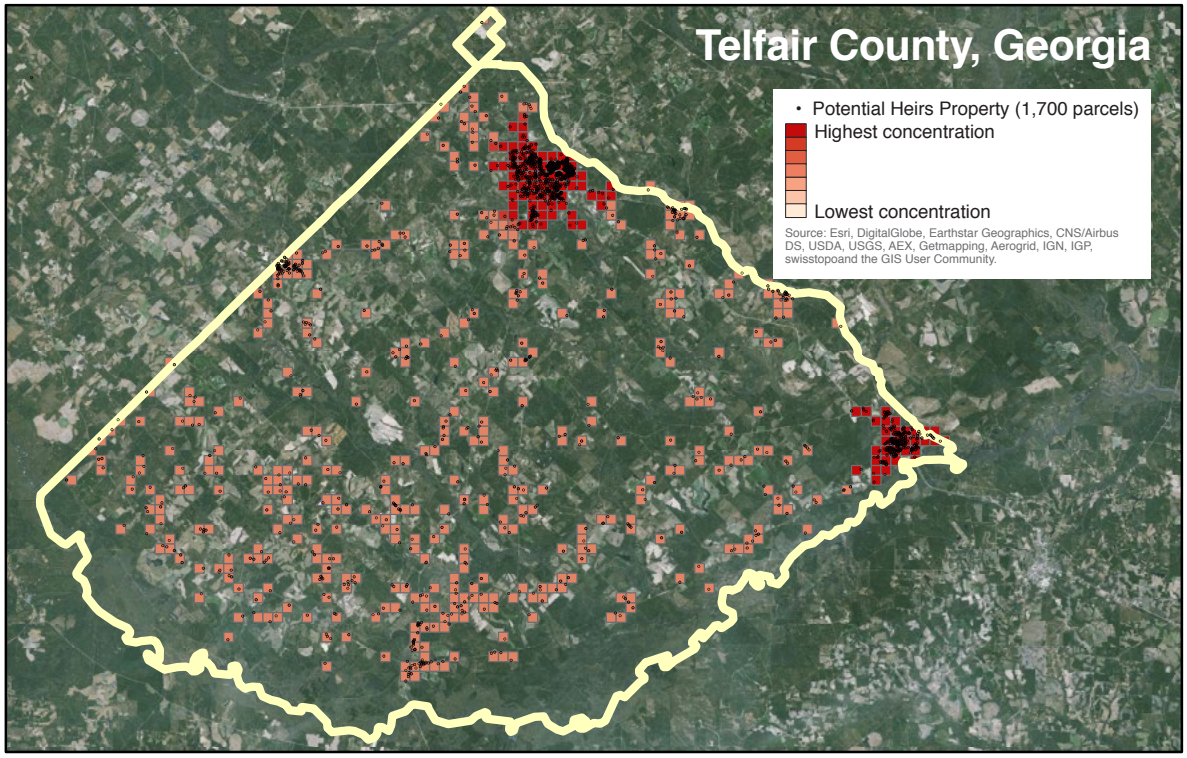
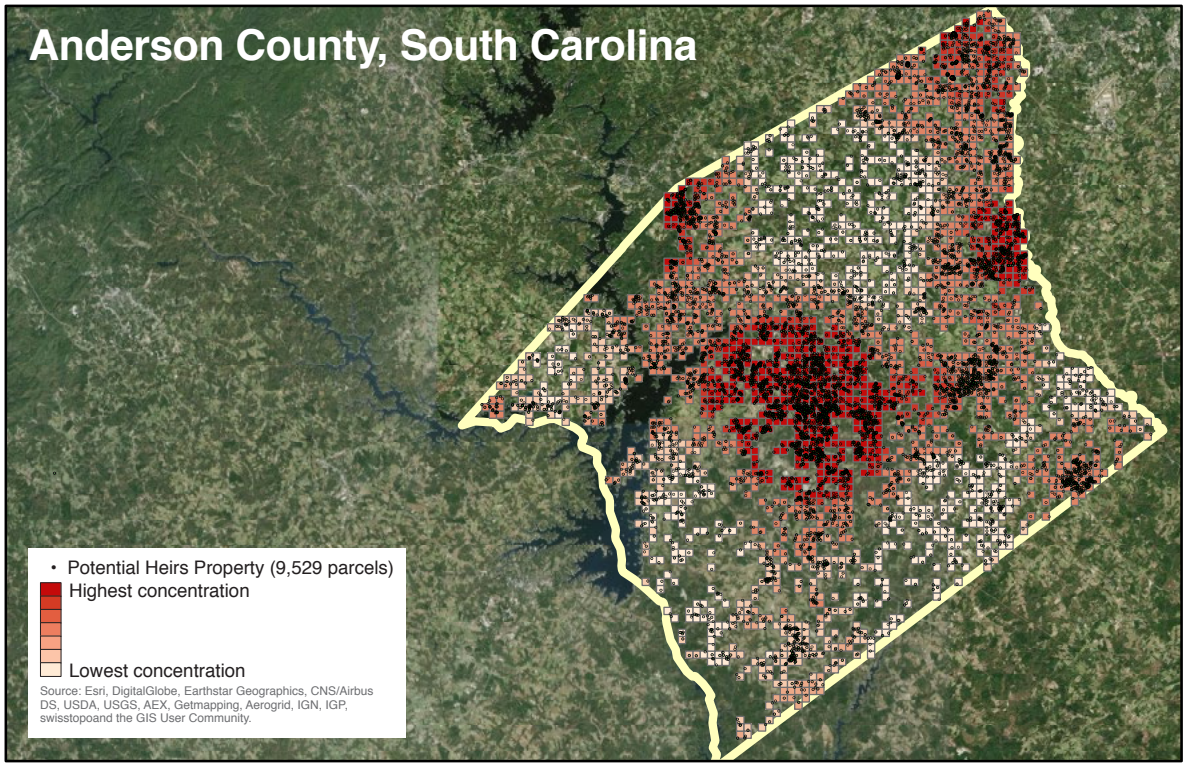
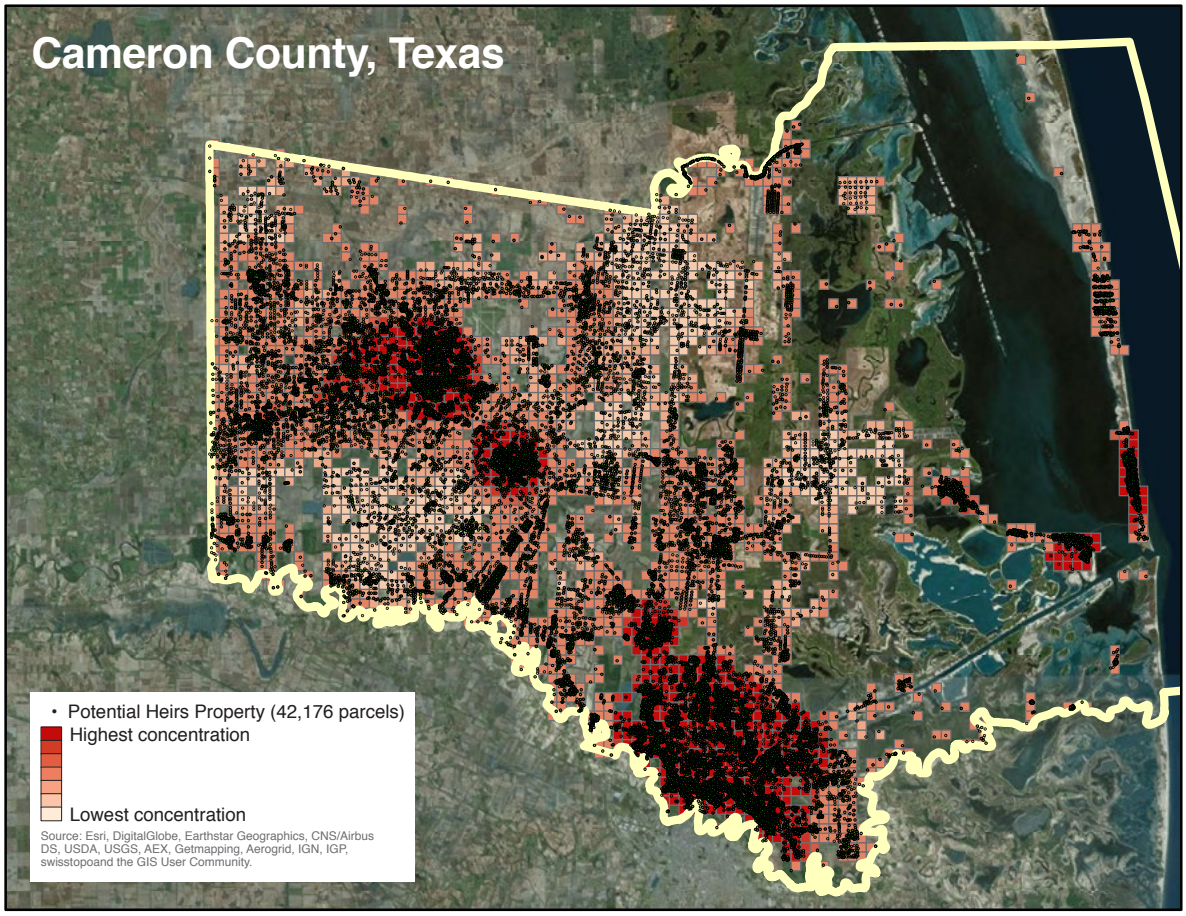




Concentration of Potential Heirs Property





This report focused on utilizing existing sources of geospatial data to attempt a large-scale assessment of the extent of heirs properties in communities in the Southern United States. Our assessment utilized demographic data from the U.S. Census Bureau and parcel-level data developed by local tax officials. This exercise demonstrated the applicability of these types of data for heirs property assessments, but a specific goal of this project is to spur additional investigations into using these types of data. Additional work is needed to fully realize the possibilities of using this data.

Two issues are of particular importance in advancing the use of this data, and the focus of our continued efforts in this field. First, we do not currently have a means for validating the accuracy of the estimates and projections made by the methodology outlined in the report or for any methodology. Therefore, while the work presented here offers new insights into the relative prevalence of heirs properties in the Southern United States, and it is based on the existing literature and professional judgments of participating researchers and consulting experts, we cannot say that this method is the best or most accurate of the numerous possible variations. A significant next phase of this research should examine this methodology, possibly using case study analyses of communities with known rates of heirs property issues to develop an error rate for this process. A set of communities with known heirs property rates would provide opportunities to test this methodology and variations thereof to determine which demographic and parcel level variables best approximate the likelihood for the existence of heirs property.

After the completion of the initial drafts of this report, we conducted a preliminary assessment of the validity of our methodology based on designations of heirs property in the CAMA data for Bibb County, GA (fig. C.1). In the owner's name data field, Bibb County would note known heirs property. There are 847 parcels in Bibb County's data with a notation of "HEIRS OF" in the owner name field. This is only about 1.1 percent of the 68,831 parcels in Bibb County. However, we think it is highly unlikely that these represent all of the heirs properties in the county as these records were not the result of any concerted effort to identify heirs property, and there is nothing requiring the county to collect or record such information. This small number of known heirs properties, along with the uncertainty concerning the true total number of heirs properties, makes it difficult to draw strong conclusions from this analysis. Nonetheless, despite the fact that this is likely only a small subset of heirs properties in Bibb County, these known heirs property parcels offer an opportunity to test whether our methodology misses known heirs properties.

Of those 847 identified heirs properties, 580 were in that group of parcels we called potential heirs properties and 267 were not. This means that the methodology discussed in this report identified a little more than 68 percent of the known heirs property. All 267 parcels not included in our identified potential heirs properties were not included because they had been sold within the last 30 years. If that phase of the analysis had looked at 20 years instead of 30 years, it would have caught 137 of those 267, which would mean 717 of the 847 known heirs properties, or a little more than 84 percent, would have been included. The remaining 130 had even more recent sale dates. More work needs to be done to narrow the number of potential heirs properties

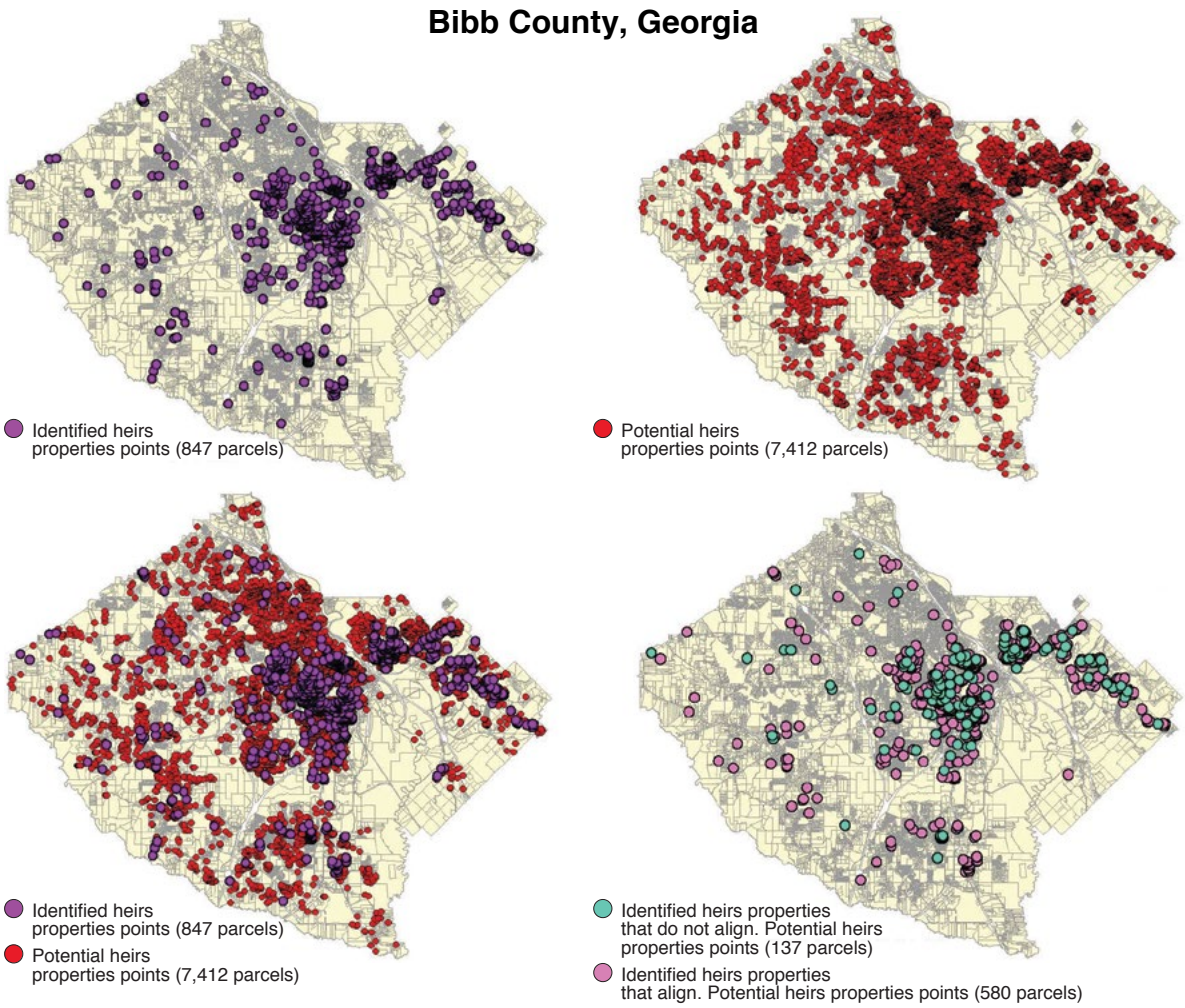


Figure C.1—Comparison of parcels identified as heirs property in the CAMA data with potential heirs property derived by the methods described in this report.

down to a number that more accurately represents the true number in a community. To put it another way, while the implications of this analysis are limited, the validation does indicate at least that most of the heirs properties will be in the parcels identified by this methodology as potential heirs property, especially if we were to expand the date of last sale criteria. See note 123 Johnson Gaither and Zarnoch, 2017, for a more thorough critique of this method.

There remains a lot of work and investigation into quantifying heirs property. One possible means to improve this method is to use the date of last sale as one of the "positive factors" (discussed in section III of the report) instead of as one of the vetting criteria. A more reliable means of verifying the results of these investigations will be needed before truly reliable statements can be made comparing different methodologies and variations thereof.

The second pressing issue concerns the appropriate scale for the demographic analysis. This topic deserves particular attention due to the fact that the regional demographic analysis produced some unexpected results. In order to identify counties believed to have the highest concentrations of heirs property, we highlighted counties based on those in the top 10 percent

for four vulnerability characteristics identified from the review of relevant literature concerning heirs property. Within this set, we then examined parcel-level data at the county level. Because we relied on data produced at the individual county scale in the parcel-level analysis, we compared the demographics of entire counties in this first phase. The results were surprising as several areas analyzed in the existing heirs property literature, and that are known to have high concentrations of heirs property, did not show up in this project's county-level analysis. For example, the portions of the South Carolina low country examined by Georgia Appleseed and The Center for Heirs Property, as well as researchers such as Faith Rivers, Kim Sevenson, and many others, did not appear as counties that are thought to have high proportions of heirs properties (fig. C.2).

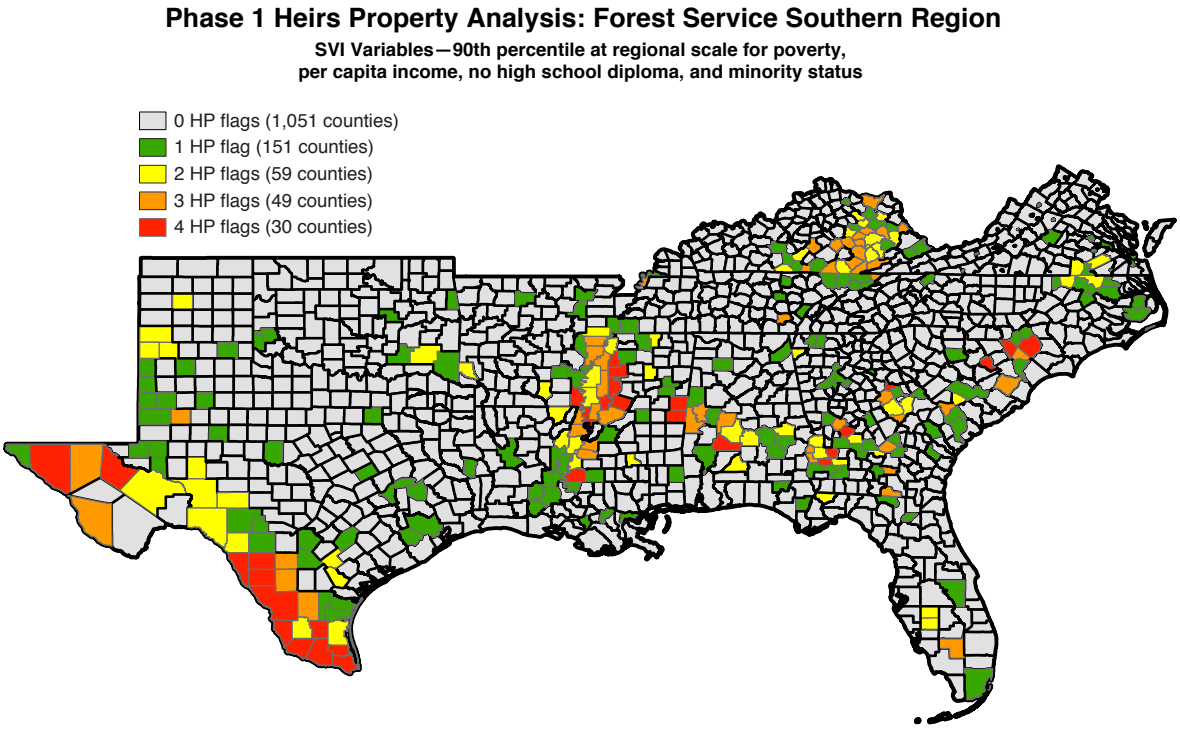


Figure C.2—Initial regional heirs property analysis (county-level scale).

The fact that these and other areas known to heirs property researchers did not rise to the county-level threshold we set does not mean that heirs property is not a significant problem for communities in these areas, nor does it mean that heirs property is likely a bigger problem elsewhere. The reasons such places do not appear in the analysis conducted here likely stem both from limitations in the goals of the study itself and from the design of the methodology. First, this project's goal was to explore the possibility of using existing geospatial data to analyze the extent of the heirs property issue in the Southern United States. In contrast, much of the previous work on heirs property was conducted in communities where heirs property was known to be an issue. We suspect, for example, that heirs property is generally most recognized as a problem in places experiencing significant development pressures or other changes that are forcing the displacement of heirs property owners. This is what has been occurring in coastal areas such as the South Carolina low country as prices for coastal real estate climb. It is likely true that these may be areas where heirs property is the most pressing issue for residents and property owners precisely because they are losing—or at risk of losing—their land. This sort of displacement is one of the most injurious possibilities for heirs property owners, and therefore it frequently—and rightly—is the basis for the research attention, advocacy, and resources that are focused on addressing the underlying heirs property issues. We hypothesize that our analysis highlighted areas with "hidden" heirs property issues. We suggest it may be reasonable to assume that heirs property may be more prevalent in areas without the same kind of development pressure found in urban and coastal areas. Indeed, these areas may lack economic incentives to resolve these title issues (either through legitimate or illegitimate means), thus not bringing the heirs property issue to the foreground in the way developing areas may and obscuring them from outside attention. This project seeks to evaluate the prevalence of heirs property within a county, not the significance of the harm caused by the phenomenon. Put another way, comparatively smaller numbers of heirs property owners in developing areas with higher property values may well be more at risk of losing their property than heirs property owners in areas with lower property values. We postulate that the fact that our methodology focused on the poorest counties resulted in a good snapshot capturing the likely prevalence of heirs properties throughout the South. Future research is needed to refine how best to identify heirs property owners most at risk of experiencing displacement as these property owners are the ones most likely to be severely negatively impacted.

In addition, it is possible that using the demographic data to assess the relative concentrations of heirs property at different scales will yield results that could be more useful or valuable for particular purposes. The map in figure C.2 shows the county-level demographic analysis discussed in the report. The map shown in figure C.3 shows the same type of analysis using the same four demographic variables with sub-county areas based on U.S. Census tracts. The call-out box in figure C.3 highlights Charleston County, SC, in order to illustrate how different the results of this analysis can be at a different scale. Note the presence of multiple tracts identified in Charleston County and in the surrounding region while none of those counties are highlighted in the county-level analysis. Therefore, it may be the case that after further analysis and verification of this methodology, doing this type of high-level analysis would be more appropriate

at a different scale than the county-level analysis employed in this project. However, as discussed above, we did not fully verify the methodology proposed, so we currently lack an adequate means to compare it to other methods to ensure the maps generated represent the most accurate picture possible. Future research is needed to verify the methodology employed in this study, as well as identify the most appropriate scales (e.g., county, census tract, etc.) for specific project purposes. These topics are just two issues that should be addressed in future research on applying geospatial datasets to the analysis of the heirs property phenomenon. We highlight these two scales (figs. C.2 and C.3) in this appendix as they are important to understanding the attached report and to help avoid misinterpretation of this project.

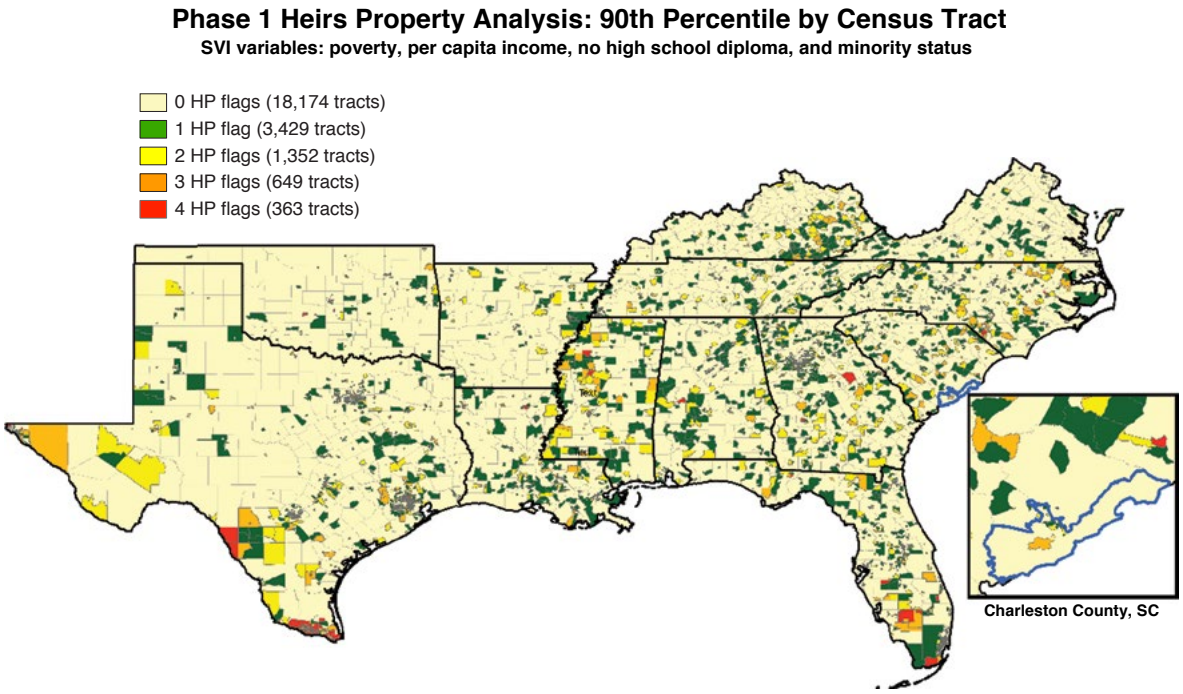


Figure C.3—Initial regional heirs property analysis (census-tract scale).

Pippin, Scott; Jones, Shana; and Johnson Gaither, Cassandra. 2017. Identifying potential heirs properties in the Southeastern United States: a new GIS methodology utilizing mass appraisal data. e-Gen. Tech. Rep. SRS-225. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 58 p.

Abstract: This report presents a methodology for identifying land parcels that have an increased probability of being heirs property. Heirs property is inherited land passed to successive generations intestate, without clear title, typically to family members. This land ownership type is widespread among rural, African-American populations and is also thought to be pervasive in Appalachia, among some Native American groups, and in southwest Texas communities called *colonias*. The lack of title severely limits property owners' ability to access credit, to sell natural resources, or to participate in land improvement programs offered by the Federal Government, resulting in land and wealth loss for affected families across the South.

While growing attention is focused on the heirs property phenomenon, fundamental data or information on heirs property extent in the South does not exist. Several estimations have been made in recent decades; however, most of these are either dated or specific to a particular county or group of counties. No systematic methodology for identifying heirs parcels at a regional scale has been proposed. We addressed this problem by using data from county-level taxing authorities, organized as computer-assisted mass appraisal (CAMA) data, to identify potential heirs parcels—that is, those that have a higher probability of being heirs property based on characteristics of the parcel. Data are presented for 10 counties in Georgia, one in South Carolina, and one in Texas.

Keywords: heirs property, land tenure, CAMA data, Black Belt.