

Aiken 2040 Visioning Session FINAL REPORT

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Table of Contents

1	Overview of Aiken 2040
1	Aiken County Low-Density Residential Lands
2	Development of Localized Conservation Values
3	Aiken and Lexington Counties
3	General Recommendations for Aiken County
5	County Policy Recommendations
7	State Policy Recommendations
8	References
9	Attachment A. Historic Conversion of Agricultural Land
10	Attachment B. Projected Conversion of Agricultural
11	Attachment C. Projected Low-Density Residential Land Use
12	Attachment D. Distance to Farmland 1992
13	Attachment E. Distance to Farmland 2040
14	Attachment F. Localized Values Index
15	Attachment G. Aiken & Lexington County Projected Conversion of Agricultural
16	Attachment H. Aiken County Projected Conversion of Agricultural Land
17	Attachment I. Aiken County, South Carolina: Productivity, Versatility, and Resilience

Overview of Aiken 2040

According to American Farmland Trust's (AFT) Farms Under Threat: The State of the States report (Freedgood et al., 2020), South Carolina is at very high risk for farmland loss, with over 280,000 acres of farmland converted to non-agricultural uses between 2001 and 2016, giving the Palmetto State the eighth highest "threat score" in the nation. Over this same period, Aiken County converted nearly 5,000 farmland acres to non-agricultural uses (see Attachment A). When projected through 2040 under business as usual trends, Aiken County is estimated to convert an additional 25,000 farmland acres to non-agricultural uses (see Attachment B).

Given this sizeable farmland loss for both the state and county, the Aiken Land Conservancy partnered with AFT to use geospatial mapping and land cover analysis to identify how Aiken County's farmland would fare under future development scenarios, discuss tradeoffs among these factors, and develop potential policy recommendations for reaching the most optimal path for balancing development with agricultural conservation.

Aiken County Low-Density Residential Lands

Aiken County has led nearby counties in the rate of conversion from agricultural use to low-density residential use (LDR; defined as lands where the average housing density is above the level where agriculture is typically viable). From 2001 to 2016, Aiken County converted over 18,000 acres to LDR, with another 29,000 acres estimated to be converted to LDR by 2040 (see Attachment C).

LDR can take many different forms like residential-only (i.e., not agriculturally productive) or other residential mixed uses such as livestock grazing or smallholder farming. Even if LDR lands remain in active agriculture, the operations on those lands are likely too small to be viably farmed on a full-time or commercial basis.

Aiken County's LDR lands are nationally unique. A manual assessment of the county's LDR parcels suggested that nearly 60% of Aiken County LDR lands are used as residential horse farms. This suggests that while LDR can often detract from the agricultural identity of an area, LDR in Aiken County is also contributing to the agricultural identity of the region through equine use.

It is important to note, however, that LDR lands are more likely to be converted to Urban and Highly Developed (UHD) land use (defined as lands that are highly impervious, typically due to buildings and roads). As a result, high conversion of farmland to LDR accelerates farmland loss overall, as both LDR and UHD take land out of agricultural production due to development. In other words, LDR lands attract more development due to a variety of factors such as increased population density and utility improvements. Aiken County led the region in the conversion of LDR lands to UHD, meaning that LDR development creates the opportunity for continued farmland loss and urban intensification in rural areas around the county.

Both LDR and UHD increase landscape fragmentation, which is characterized by land use types that are less contiguous and are more interspersed. Fragmentation of agricultural landscapes with

other types of land uses can have substantial negative impacts, such as impeding the infrastructure necessary to facilitate agricultural production (e.g., disrupting proximity to agricultural inputs and markets for product dissemination). Aiken County is particularly prone to fragmentation and farmland loss due to expansive LDR and UHD development under business-as-usual scenarios, as evidenced by distance to farmland analyses from 1992 to 2040 (see Attachments D and E).

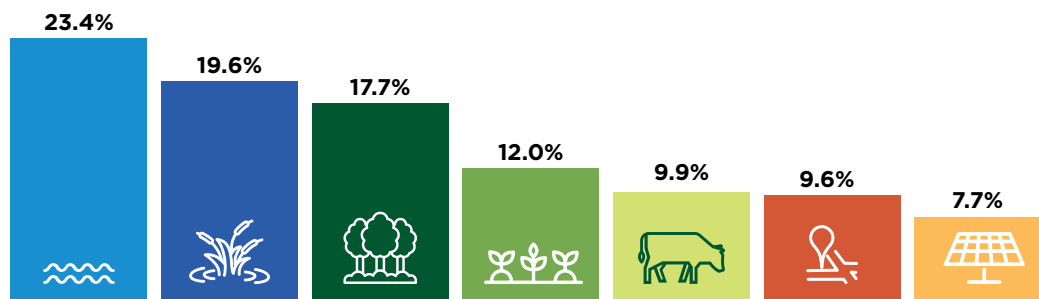
Development of Localized Conservation Values

During a November 2024 in-person meeting in Aiken, AFT administered an anonymous survey asking 26 attendees of invested stakeholders to place their land-based conservation priorities on a scale from low to high. Survey scores were then analyzed using a multi-criteria decision-making method (Analytic Hierarchy Process; AHP) to determine the relative priority of each survey item, averaged across all surveys. Each survey item corresponded to a land cover type (i.e., conservation priority). AFT then developed a Localized Values (LV) map to visualize the priorities of the attendees by assigning priority weights to the corresponding land cover data (see Attachment F).

Based on the results, attendees indicated a high preference for prioritizing holistic agroecosystems. In other words, attendees shared a balanced interest in land protection spanning both agricultural and environmental systems. Protecting wetlands and waterways accounted for 43% of local priority where protecting agricultural lands accounted for another nearly 40%. Together, protecting water resources and farmlands captured nearly 83% of local priority. Lands close to already developed areas or lands suitable for solar were of lowest conservation priority (Table 1). These results are commensurate with the group discussion that took place during the November meeting.

TABLE 1. WEIGHTED CONSERVATION PRIORITIES AS INDICATED BY MEETING ATTENDEES.

ITEM	WEIGHT	DATA SOURCE
Waterways	23.4%	Riparian Buffers (Stokes and Smidt, 2022)
Wetlands	19.6%	National Wetland Inventory (USFWS, 2023)
Forests	17.7%	2016 Land Cover (American Farmland Trust, 2020)
Croplands	12.0%	2016 Land Cover (American Farmland Trust, 2020)
Pastures	9.9%	2016 Land Cover (American Farmland Trust, 2020)
Lands Close to Developed Areas	9.6%	Future Scenarios of Development (AFT, 2022)
Lands Suitable for Solar	7.7%	Solar Suitability (AFT, 2022)



Aiken and Lexington Counties

The Aiken 2040 project was completed following a similar effort in adjacent Lexington County (see Palmetto 2040 report; Smidt et al., 2024). It is important to note that Aiken County is impacted by land use and land cover change in Lexington County, as these counties share infrastructure (e.g., major roadways) and connect major metropolitan areas (e.g., Augusta and Columbia) among many other commonalities. As development moves to the southwest across Lexington County, it increasingly encroaches on Aiken County. This movement pattern contrasts the eastward trend seen from Aiken, leaving the eastern portion (now largely undeveloped by comparison) of Aiken County increasingly pressured from both directions when viewed in conjunction with Lexington County's land use map (see Attachment G).

General Recommendations for Aiken County

When compared nationally, Aiken County is unique in its (1) clear focus on supporting balanced agroecosystems, (2) conversion rates and patterns of agricultural land to LDR and then LDR to UHD, and (3) influence of equine on the local culture and land use. As a result, maintaining and promoting Aiken County's way of life is intimately tied to the ability to facilitate economic development and promote equine activities while protecting and upholding both agricultural production and ecosystem services.

People are in part drawn to Aiken County for its agricultural and environmental resources, among many other reasons. Added population and changes in industry directly challenge both agricultural and environmental resources through competing demands and increased disruption due to development. Likewise, agriculture in Aiken County directly depends on the status of environmental resources, and environmental resources depend on agriculture's ability to protect and promote them. As a result, Aiken County must manage for these interdependencies to maintain why Aiken County is cherished by many of its residents.

Aiken County faces a clear threat from agricultural land conversion to non-agricultural uses, such as farmland developed for industrial use. However, Aiken County also sees the conversion of more traditional farmland to LDR lands that stay related to agriculture (e.g., residential horse farms). Aiken County therefore faces a balancing act of preserving farmland that is lost to LDR while upholding an equine culture that is linked to the development of LDR. Ultimately, the conversion of agricultural land to any form of LDR poses a threat to the agricultural integrity of the area. This unique relationship offers both a challenge and opportunity for Aiken County farmland protection.

Given the limited regulations on farmland protection in the area, Aiken County remains highly suitable for development and ongoing sprawl and fragmentation without added protection strategies. Based on these factors, there are many general recommendations that can support Aiken County's priority of advocating for community development while protecting natural and working lands (Table 2).

TABLE 2. AMERICAN FARMLAND TRUST’S GENERAL RECOMMENDATIONS FOR AIKEN COUNTY.

1. Equine Data Availability
Improve local data collection and dissemination of equine industry related factors.
2. Landscape Fragmentation
Determine potential infrastructure effects of landscape fragmentation on agricultural production and county management goals. For example, fragmented cropland may negatively impact feed supplies for the local equine sector.
3. Cost of Community Service Study
Implement a case study approach used to determine the fiscal contribution of existing local land uses. A Cost of Community Service study can be used to fiscally evaluate working and open lands on equal ground with residential, commercial, and industrial land uses.
4. Include Ecosystem Value as Part of Economic Decision-Making
Improve the quantification and inclusion of ecosystem services in economic decision-making, especially when considering new investments or development projects.
5. In-Fill Availability Study
Identify the total area available for development within already urbanized lands to promote smart growth that reduces urban sprawl, focusing especially on the western side of the county.
6. Economic Cost/Benefit of Farmland Conversion
Quantify the expected economic losses due to agricultural land transformation. Consider the cost difference between row crop/pasture conversion to horse farms versus row crop/pasture conversion to low density residential.
7. Farmer Spokespersons from Trusted Resources
Partner with key members of the agricultural community who can champion the agricultural conversation to promote land protection (with a special focus on the east side of the county) from trusted resources.
8. Evaluate Encroachment from Adjacent Counties
Land use and land cover change in Aiken County can be influenced by activities in adjacent areas, especially given that major roadways cut across the county connecting larger metropolitan areas. As a result, Aiken County may experience development or other conversion pressures due to encroachment toward the county.
9. Ongoing Education and Communication
Building conservation initiatives requires continuous knowledge sharing with and education of the public, who ultimately drive decision-making outcomes.

County Policy Recommendations

County policy recommendations target strategies that Aiken County can design and implement to meet its farmland and environmental protection goals while still promoting economic development (Table 3). One interesting and important takeaway from this project is that future land use in Aiken County can largely be divided into western and eastern halves, where most development is likely to happen in the western half of the county and agriculture remains dominant in the eastern half. This clear divide offers a well-situated opportunity for both promoting economic development and protecting farmland (see Attachment H).

This divide is particularly notable when considering Aiken County's most suitable soils for long-term cultivation and food production (see Attachment I), also referred to by AFT as the most Productive, Versatile, and Resilient agricultural lands (PVR). Protecting the eastern portion of the county also protects the highest PVR lands. This contrasts the LV layer that shows more localized interest for land protection along waterways and in the western portion of the county. As a result, it is important for Aiken County to balance both the localized protection interests and the lands most suitable for agriculture long-term. For example, the high PVR lands can be protected in the eastern part of the county as part of a protection zone, where the high LV lands in the western part of the county can be protected through strategic planning.

Additionally, Aiken County must consider landscape fragmentation given its past development trends. Landscape fragmentation prevention is sensible when trying to promote well-functioning ecosystems. From an agroecological perspective, protecting farmland in the eastern portion of the county accomplishes both farmland protection and ecosystem services goals. Meanwhile, promoting development in areas that are already fully or partially developed in the western part of the county helps to meet development demand while protecting against further sprawl. Aiken County could benefit greatly if development is done in a way that promotes the agricultural identity of the county at-large. In short, the western portion of the county is well-poised to serve as an agricultural showcase to promote economic development while the eastern portion of the county is situated to serve as an agricultural protection zone to uphold production in the county.

TABLE 3. AMERICAN FARMLAND TRUST’S POLICY RECOMMENDATIONS FOR AIKEN COUNTY.

1. Management of Low-Density Residential Development
Apply strategies to support a low-density residential environment that showcases Aiken County equine culture in a thoughtful, integrated way.
2. Targeted Farmland Protection Area
Coordinate areas that are desired for farmland protection, particularly in the eastern part of the county where there is less development and greater density of land under agricultural production.
3. Coordinated Agricultural Mixed-Use Area
Catalyze economic development in Aiken County through the lens of an economic opportunity area that showcases the agricultural identity of the county, particularly in the western part of the county where there is a greater density of both current development and low-density residential use.
4. Integrate Localized Values and Farmland Protection into the Comprehensive Plan
Recognize the ongoing threats of farmland loss to Aiken County and establish actions to protect against them in coordination with the protection priorities identified by the public.
5. Funding Conservation Efforts
Develop a priority plan with key community members to assemble potential county, state, and/or federal funding sources to support conservation planning initiatives at the county level. Federal funding examples include the Land and Water Conservation Fund (available for the establishment of recreational areas) and the Conservation Stewardship Program (to enhance healthy agricultural production). State examples include the South Carolina Conservation Bank (available for conserving forest, farmlands, wetlands, etc.) and the South Carolina Heritage Trust program (to promote the protection of rare and endangered species by preserving specific habitat lands). County conservation finance measures include the bond for the protection of natural land and farmland in Beaufort County and the ½ cent sales tax for transportation, roads, and open space in Charleston County.

State Policy Recommendations

Statewide recommendations target programs and initiatives that apply to Aiken County but are managed at the state level (Table 4). These recommendations require alignment with the state budget instead of the county budget, though county programs can be modeled after state programs.

State recommendations place Aiken County within the broader framework of South Carolina and the Southeast region and are more in line with federal initiatives through the United States Department of Agriculture like the Agricultural Conservation Easement Program. Likewise, these larger initiatives allow Aiken County to advance representation and service to beginning and underserved farmers through additional funding streams. These state-specific recommendations apply to all counties in South Carolina and also appear in the Palmetto 2040 report.

TABLE 4. AMERICAN FARMLAND TRUST’S POLICY RECOMMENDATIONS FOR SOUTH CAROLINA.

1. Allocate funding for the conservation of highly valued lands.
Permanently protect highly valued lands through the purchase of conservation easements, including lands that support the agricultural industry but may not directly align with the ranking criteria from other agricultural easement programs (e.g., non-traditional or forested poultry lands).
2. Establish incentive programs for the adoption of regenerative farming practices.
Make farming more profitable and viable for long-term agricultural use through incentives for landowners who adopt specific farming practices that support larger ecosystem services and water quality improvements.
3. Establish a Beginning Farmers Ecosystem Services grant program.
Lower the barrier to beginner farmer assistance by offering funding for added ecosystems services and including early farmers as a ranking metric for easement acquisition where opportunities exist in local, state, and federal programs.
4. Allow for permanently protected agricultural lands to be subdivided if resulting parcels remain viable farming operations.
For existing and new conservation easements, establish a minimum acreage for viable farming operations, with subdivision provisions that are subject to local, state and/or federal programs.
5. Permit tax breaks in land transactions that sell from farmer-to-farmer.
Financially empower agricultural landowners to keep farms in the hands of farmers by incentivizing land transactions that remain agricultural in nature.

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Aiken County, South Carolina: Historic Conversion of Agricultural Land

Historic Agricultural Conversion (2001-2016)

- Urban and Highly Developed
- Low Density Residential

Farmland

- Cropland
- Pasture
- Woodland

Other Land Cover

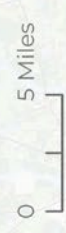
- Urban and Highly Developed (Pre-2001)
- Water
- Protected Lands
- Wetlands
- Forest
- Other

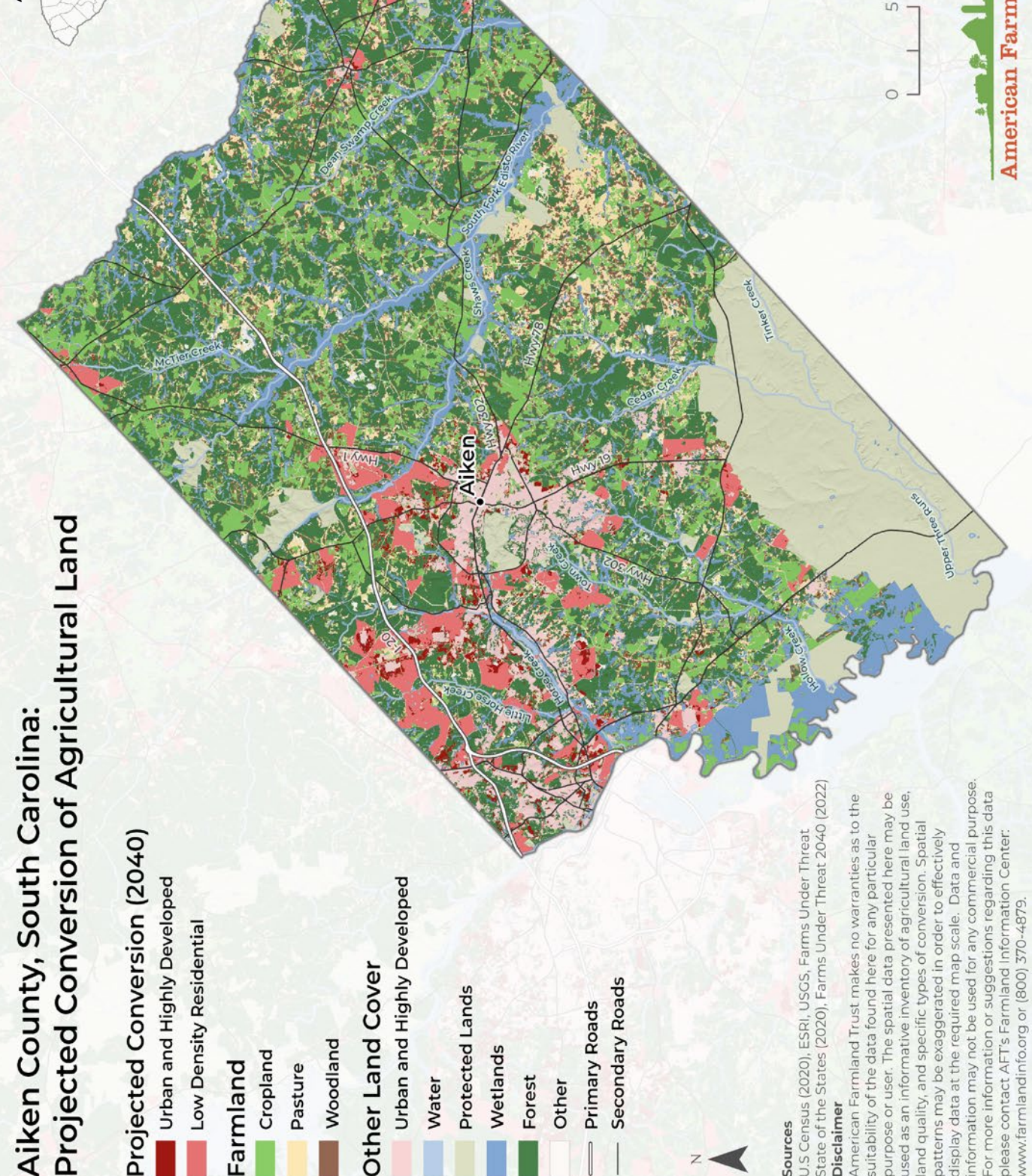
- Primary Roads
- Secondary Roads



Sources
 U.S. Census (2020), ESRI, USCS, Farms Under Threat
 State of the States (2020), Farms Under Threat 2040 (2022)

Disclaimer
 American Farmland Trust makes no warranties as to the suitability of the data found here for any particular purpose or user. The spatial data presented here may be used as an informative inventory of agricultural land use, land quality, and specific types of conversion. Spatial patterns may be exaggerated in order to effectively display data at the required map scale. Data and information may not be used for any commercial purpose. For more information or suggestions regarding this data please contact AFT's Farmland Information Center: www.farmlandinfo.org or (800) 370-4879.

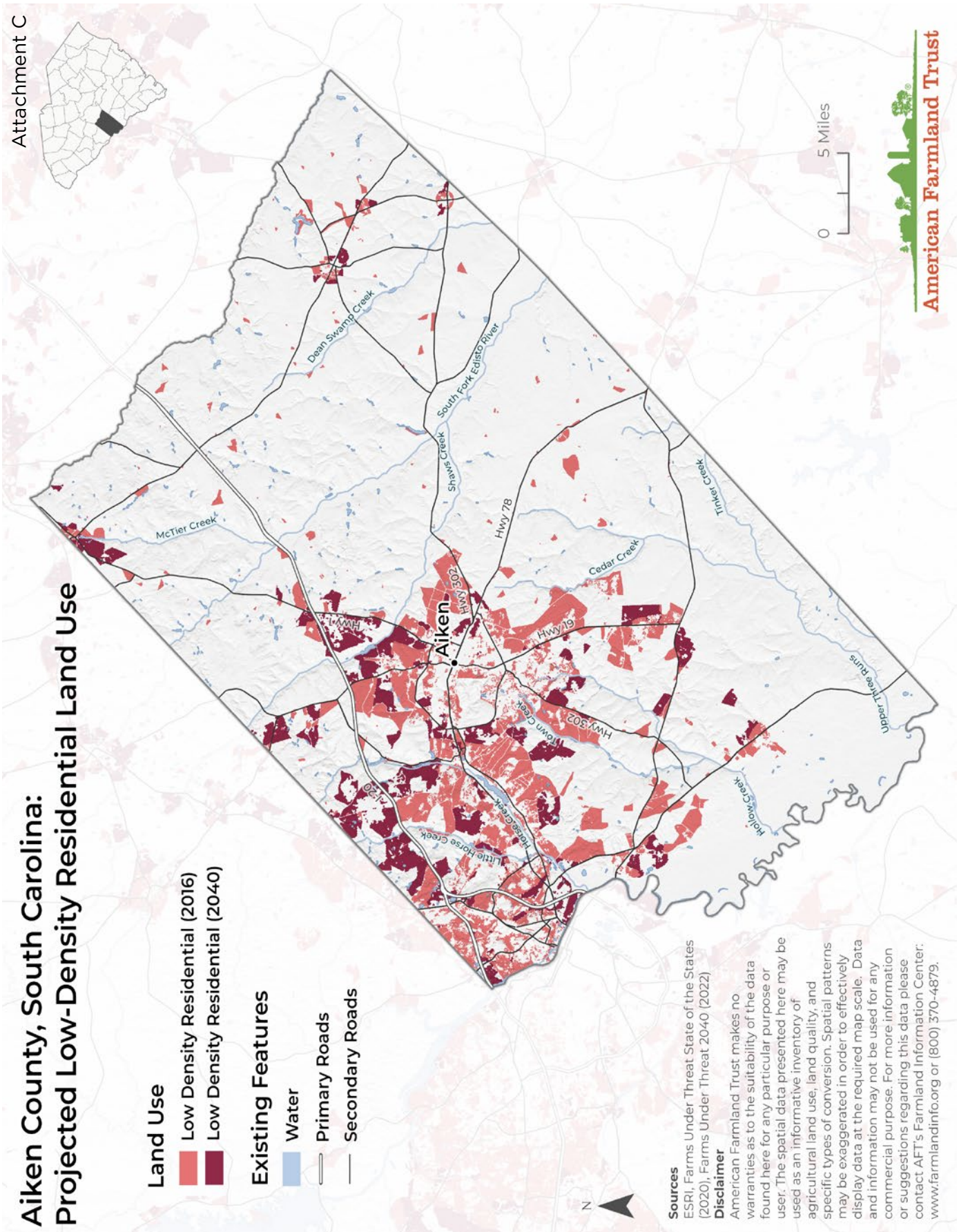




Sources
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Aiken County, South Carolina: Projected Low-Density Residential Land Use



- Land Use**
- Low Density Residential (2016)
 - Low Density Residential (2040)
- Existing Features**
- Water
 - Primary Roads
 - Secondary Roads

Sources
ESRI, Farms Under Threat State of the States (2020); Farms Under Threat 2040 (2022)

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Aiken County, South Carolina: Distance to Farmland 1992



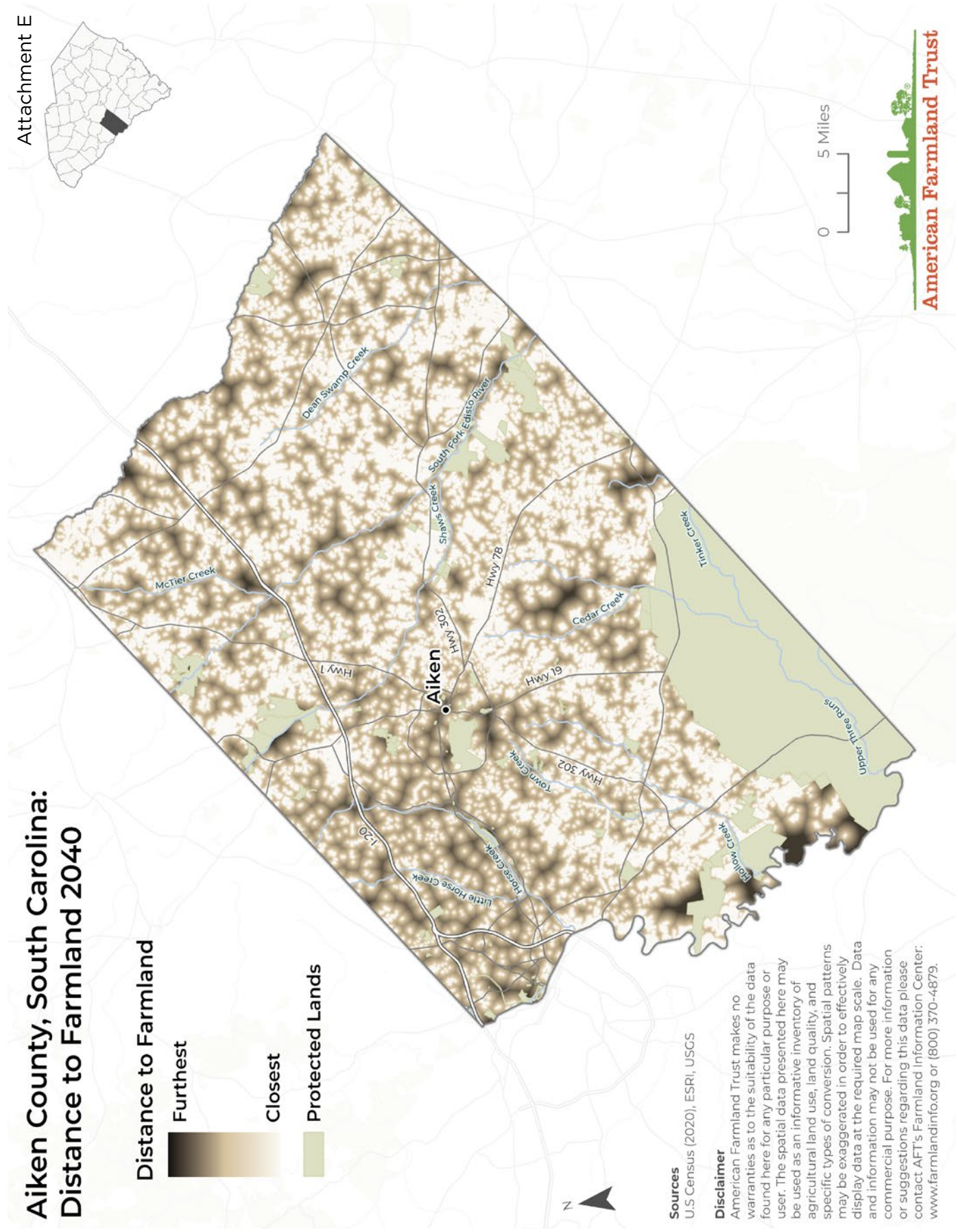
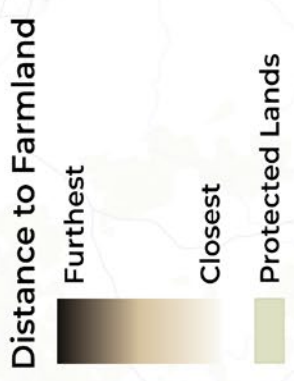
Distance to Farmland



Sources
U.S. Census (2020), ESRI, USGS

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Aiken County, South Carolina: Distance to Farmland 2040



Sources
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Aiken County, South Carolina: Localized Values Index



Attachment F

Localized Values Index



Existing Features

- Urban and Highly Developed Lands
- Protected Lands
- Water
- Other Lands
- Primary Roads
- Secondary Roads



Sources
ESRI, USGS, U.S. Census, Farms Under Threat State of the States and 2040 (2020, 2022)

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Aiken & Lexington County, South Carolina: Projected Conversion of Agricultural Land

Projected Conversion (2040)

- Urban and Highly Developed
- Low Density Residential

Farmland

- Cropland
- Pasture

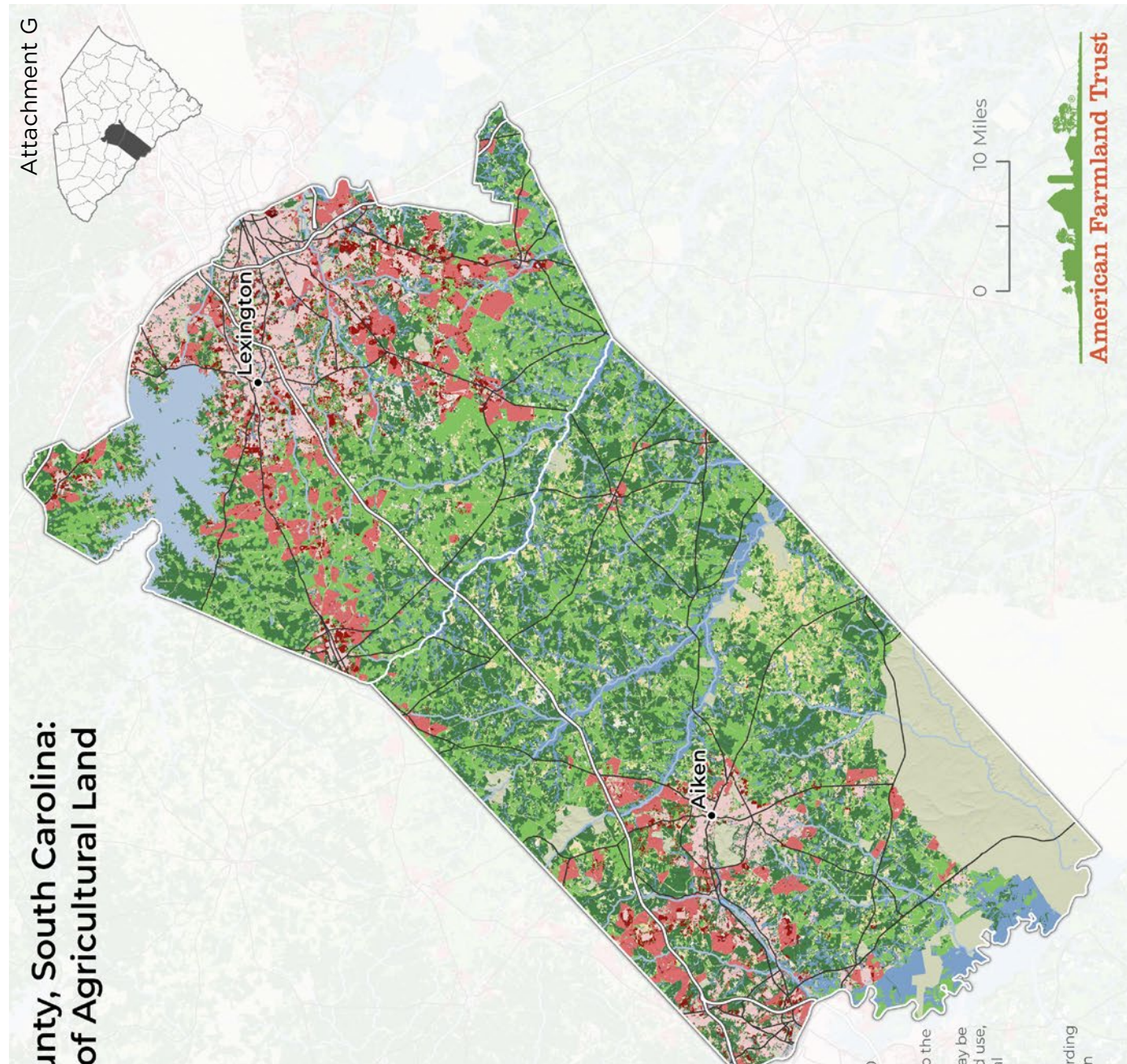
Other Land Cover

- Urban and Highly Developed
- Water
- Protected Lands
- Wetlands
- Forest
- Other
- Primary Roads
- Secondary Roads



Sources
 U.S. Census (2020); ESRI, USGS, Farms Under Threat State of the States (2020); Farms Under Threat 2040 (2022)

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Aiken County, South Carolina: Projected Conversion of Agricultural Land

Projected Conversion (2040)

- Urban and Highly Developed
- Low Density Residential

Farmland

- Cropland
- Pasture
- Woodland

Other Land Cover

- Urban and Highly Developed
- Water
- Protected Lands
- Wetlands
- Forest
- Other

- Primary Roads
- Secondary Roads



Sources
 U.S. Census (2020), ESRI, USGS, Farms Under Threat
 State of the States (2020); Farms Under Threat 2040 (2022)

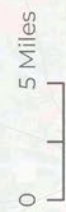
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Attachment H

Protection Opportunity

Showcase Opportunity

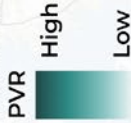


Aiken County, South Carolina: Productivity, Versatility, and Resilience

Projected Conversion (2040)

- Urban and Highly Developed
- Low Density Residential

Productivity, Versatility, and Resilience

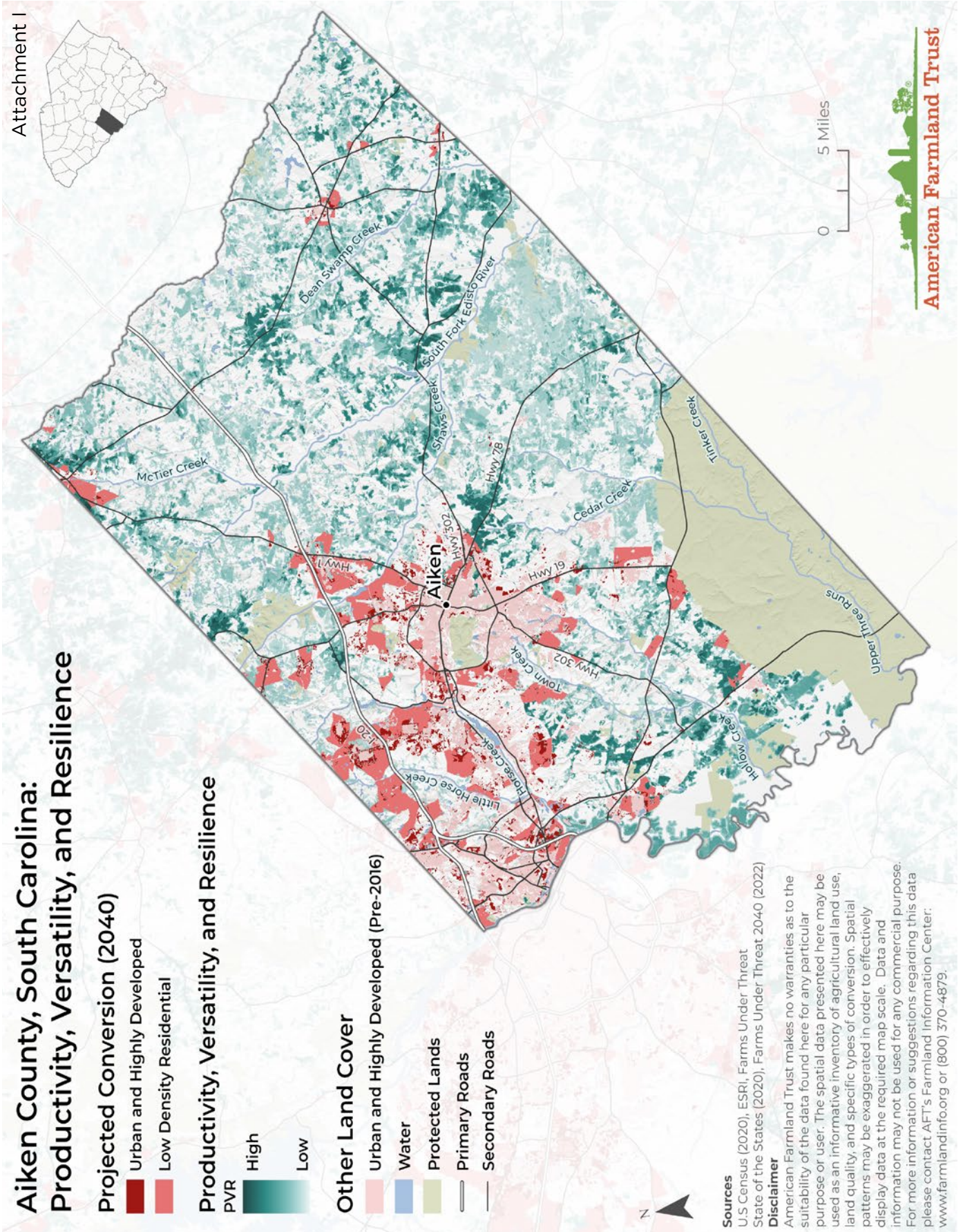


Other Land Cover

- Urban and Highly Developed (Pre-2016)
- Water
- Protected Lands
- Primary Roads
- Secondary Roads

Sources
 U.S. Census (2020), ESRI, Farms Under Threat
 State of the States (2020), Farms Under Threat 2040 (2022)

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