Southeast Conservation Blueprint Summary

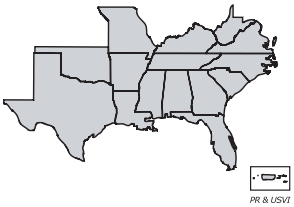
for Tennessee

Created 04/18/2023

Table of Contents

The Southeast Conservation Adaptation Strategy

SECAS



The Southeast Conservation Blueprint 2022

[THIS PAGE INTENTIONALLY LEFT BLANK]

About the Southeast Blueprint

The Southeast Conservation Blueprint is the primary product of the Southeast Conservation Adaptation Strategy (SECAS). It is a living, spatial plan to achieve the SECAS vision of a connected network of lands and waters across the Southeast and Caribbean. The Blueprint is regularly updated to incorporate new data, partner input, and information about on-the-ground conditions.

Across 15 states of the Southeast, the Blueprint identifies priority areas based on a suite of natural and cultural resource indicators representing terrestrial, freshwater, and marine ecosystems. A connectivity analysis identifies corridors that link coastal and inland areas and span climate gradients. This portion of the Southeast Blueprint is referred to as the "Base Blueprint".

To provide more complete coverage of the SECAS geography, the Blueprint incorporates two additional input plans: the Florida Marine Blueprint for marine areas in Florida and the Caribbean Landscape Conservation Design for inland areas in Puerto Rico.

For more information:

- Visit the Blueprint webpage
- Review the Blueprint 2022 Development Process
- View and download the Blueprint data and make maps on the Blueprint page of the SECAS Atlas

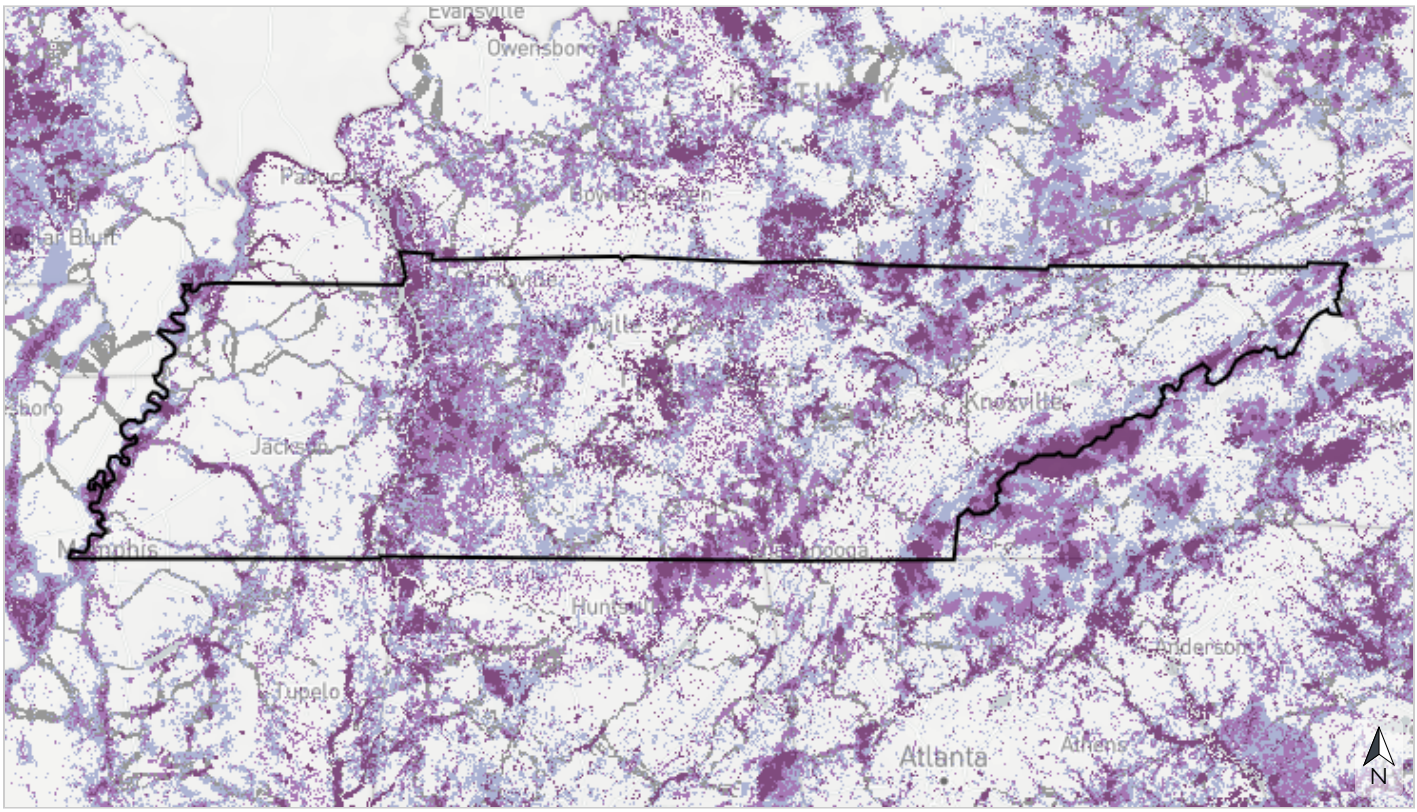
We're here to help!

- Do you have a question about the Blueprint?
- Would you like help using the Blueprint to support a proposal or inform a decision?
- Do you have a suggestion on how to improve the Blueprint? The Blueprint and its inputs are regularly revised based on input from people like you.
- Do you have feedback on how to improve the Simple Viewer interface?

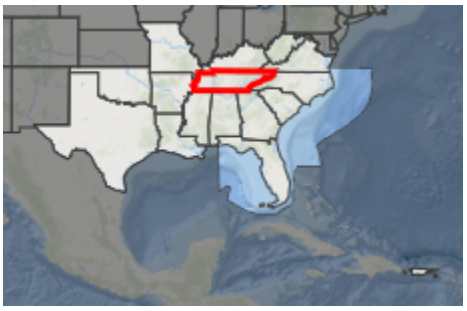
If you need help or have questions, contact Southeast Blueprint staff by reaching out to a member of the user support team.

We're here to support you. We really mean it. It's what we do!

Southeast Blueprint Priorities



55 110 219 miles



Priorities for a connected network of lands and waters

- Highest priority
- High priority
- Medium priority
- Priority connections

Priority Categories

For a connected network of lands and waters

In total, Blueprint priorities and priority connections cover roughly 50% of the Southeast Blueprint geography.

Highest priority

Areas where conservation action would make the biggest impact, based on a suite of natural and cultural resource indicators. This class covers roughly 10% of the Southeast Blueprint geography.

High priority

Areas where conservation action would make a big impact, based on a suite of natural and cultural resource indicators. This class covers roughly 15% of the Southeast Blueprint geography.

Medium priority

Areas where conservation action would make an above-average impact, based on a suite of natural and cultural resource indicators. This class covers roughly 20% of the Southeast Blueprint geography.

Priority connections

Connections between priority areas that cover the shortest distance possible while routing through as much Blueprint priority as possible. This class covers roughly 5% of the Southeast Blueprint geography.

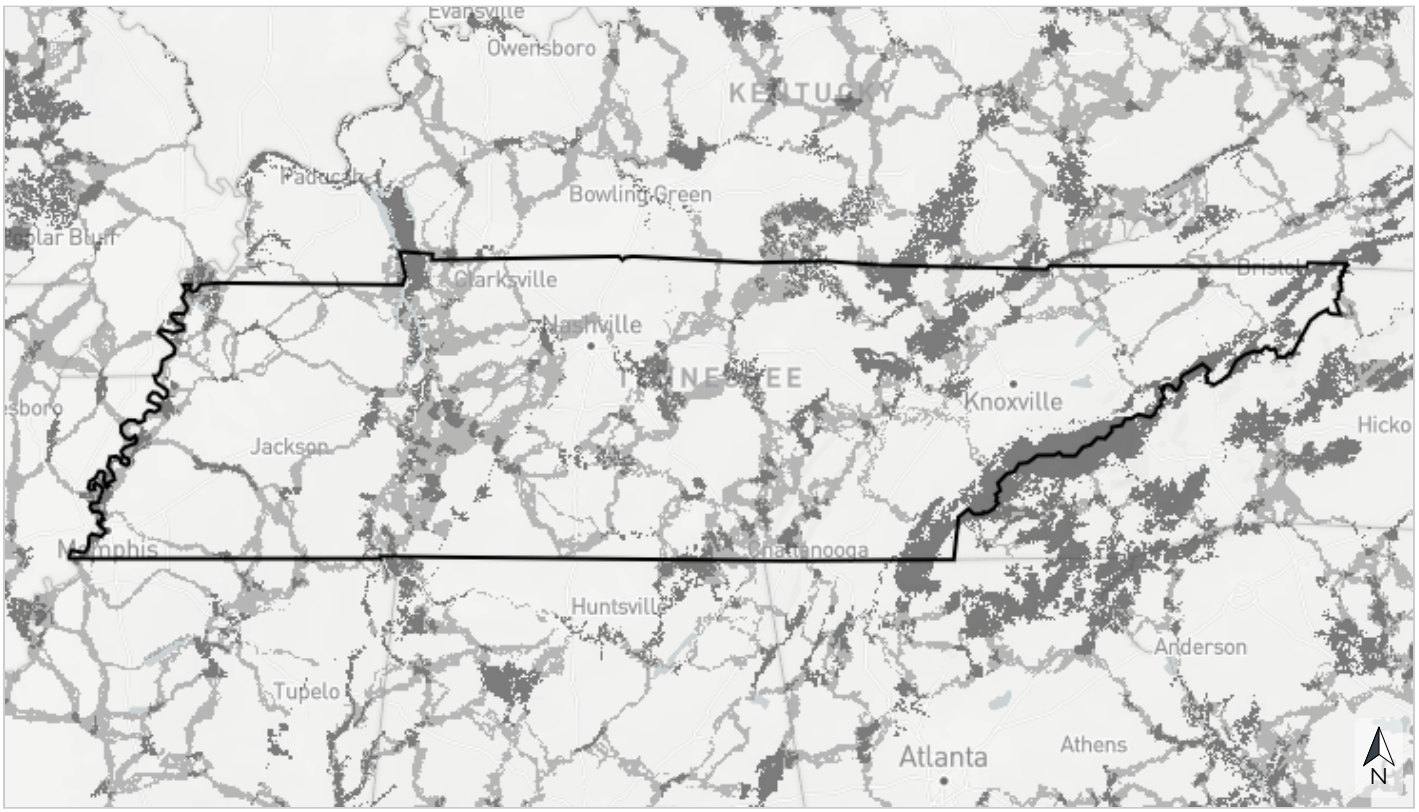
Table 1: Extent of each Blueprint priority category.

Priority Category	Acres	Percent of Area
Highest priority	2,735,663	10.1%
High priority	4,293,391	15.9%
Medium priority	4,981,016	18.5%
Priority connections	1,223,587	4.5%
Lower priority	13,729,114	50.9%
Total area	**26,962,771**	**100%**

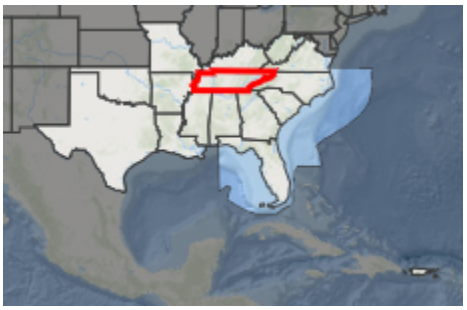
Hubs and Corridors

The Blueprint uses a least-cost path connectivity analysis to identify corridors that link hubs across the shortest distance possible, while also routing through as much Blueprint priority as possible.

Inland hubs are large patches (~5,000+ acres) of highest priority Blueprint areas and/or protected lands, connected by inland corridors. Marine and estuarine hubs are large estuaries and large patches (~5,000+ acres) of highest priority Blueprint areas. Marine and estuarine corridors connect those hubs within broad marine mammal movement areas.



55 110 219 miles



- Inland hubs
- Inland corridors
- Marine & estuarine hubs
- Marine & estuarine corridors
- Not a hub or corridor

Table 2: Extent of hubs and corridors.

Type	Acres	Percent of Area
Inland hubs	3,081,771	11.4%
Inland corridors	4,618,608	17.1%
Not a hub or corridor	19,262,392	71.4%
Total area	**26,962,771**	**100%**

Indicator Summary

Table 3: Terrestrial indicators.

Indicator	Present
East Coastal Plain open pine birds	-
Equitable access to potential parks	✓
Fire frequency	✓
Great Plains perennial grasslands	-
Greenways & trails	✓
Intact habitat cores	✓
Interior Southeast grasslands	✓
Mississippi Alluvial Valley forest birds (protection)	✓
Mississippi Alluvial Valley forest birds (reforestation)	✓
Playas	-
Resilient terrestrial sites	✓
South Atlantic amphibian & reptile areas	-
South Atlantic forest birds	-
South Atlantic low-urban historic landscapes	-
Urban park size	✓
West Coastal Plain & Ouachitas forested wetland birds	-
West Coastal Plain & Ouachitas open pine birds	-
West Gulf Coast mottled duck nesting	-

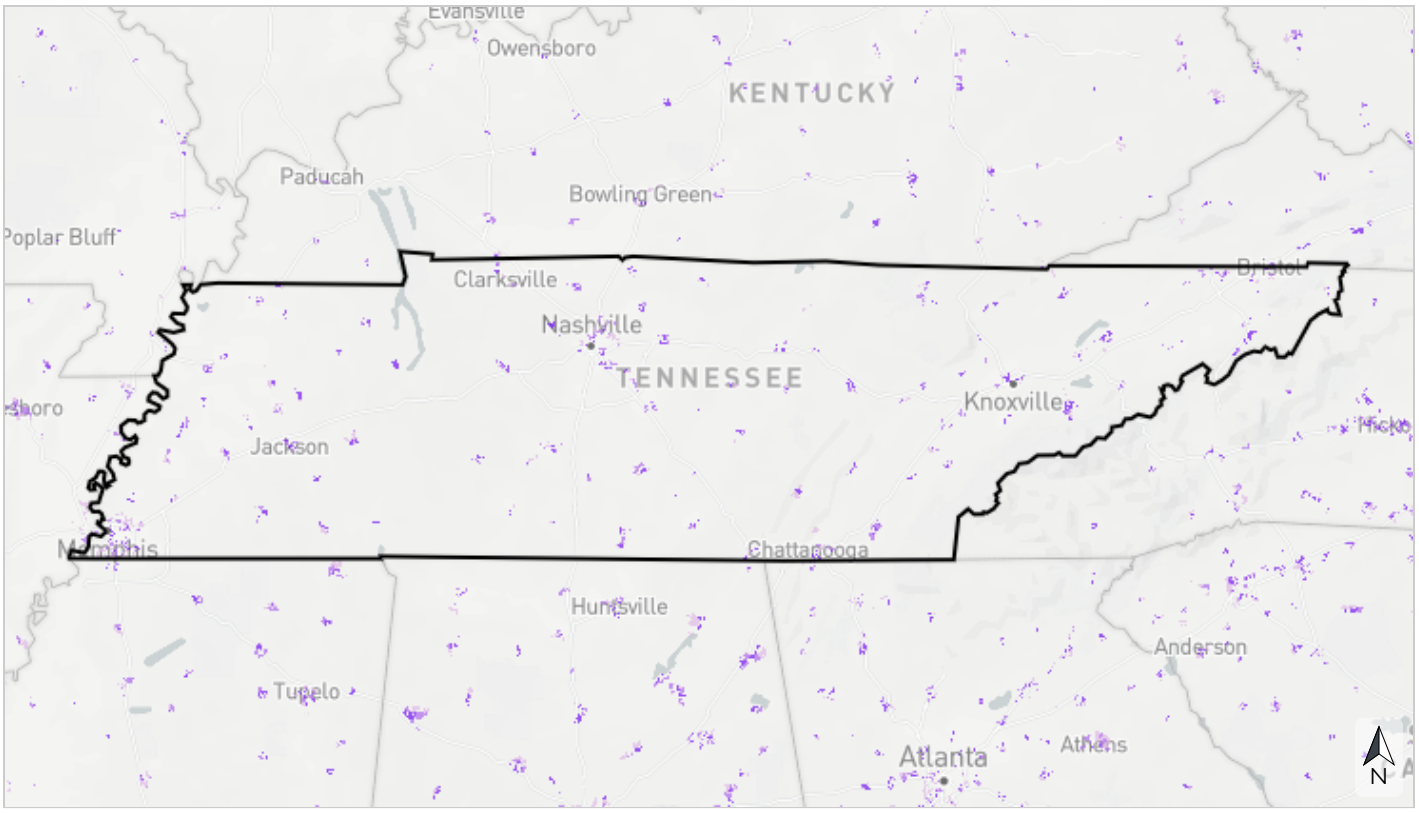
Table 4: Freshwater indicators.

Indicator	Present
Atlantic migratory fish habitat	-
Gulf migratory fish connectivity	-
Imperiled aquatic species	✓
West Virginia imperiled aquatic species	-
Natural landcover in floodplains	✓
Network complexity	✓
Permeable surface	✓

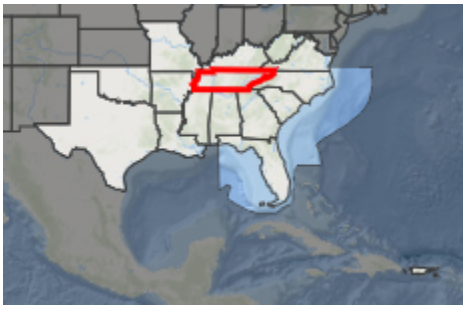
Terrestrial

Equitable access to potential parks

This cultural resource indicator prioritizes places to create new parks that would fill gaps in equitable access to open space within socially vulnerable communities. It identifies areas where residents currently lack access to parks within a 10-minute walk (accounting for walkable road networks and access barriers like highways and fences), then prioritizes based on park need using demographic and environmental metrics. Parks help improve public health, foster a conservation ethic by providing opportunities for people to connect with nature, and support critical ecosystem services. This indicator originates from the Trust for Public Land's ParkServe park priority areas.



55 110 219 miles



- Very high priority for a new park that would create nearby equitable access
- High priority for a new park that would create nearby equitable access
- Moderate priority for a new park that would create nearby equitable access

Table 5: Indicator values for equitable access to potential parks in this area. A good condition threshold is not yet defined for this indicator.

	Indicator Values	Acres	Percent of Area
↑ High	Very high priority for a new park that would create nearby equitable access	135,322	0.5%
	High priority for a new park that would create nearby equitable access	141,515	0.5%
↓ Low	Moderate priority for a new park that would create nearby equitable access	101,880	0.4%
	Area not evaluated for this indicator	*26,584,054*	*98.6%*
	Total area	**26,962,771**	**100%**

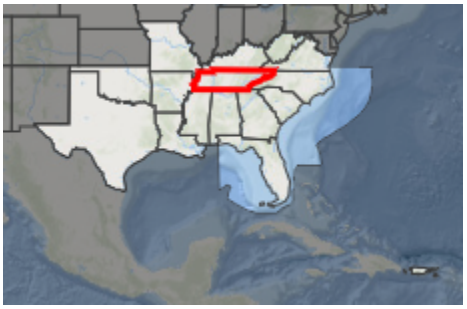
To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

Terrestrial

Fire frequency

This indicator uses remote sensing to estimate the number of times an area has been burned from 2013 to 2021. Many Southeastern ecosystems rely on regular, low-intensity fires to maintain habitat, encourage native plant growth, and reduce wildfire risk. This indicator combines burned area layers from both U.S. Geological Survey Landsat data and the inter-agency Monitoring Trends in Burn Severity program. Landsat-based fire predictions within the range of longleaf pine are also available through Southeast FireMap.

55 110 219 miles



- Burned 3+ times from 2013-2021
- Burned 2 times from 2013-2021
- Burned 1 time from 2013-2021
- Not burned from 2013-2021 or row crop

Table 6: Indicator values for fire frequency in this area. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

	Indicator Values	Acres	Percent of Area	
↑ High	Burned 3+ times from 2013-2021	3,451	<0.1%	
	Burned 2 times from 2013-2021	13,359	<0.1%	↑ In good condition
	Burned 1 time from 2013-2021	249,723	0.9%	↓ Not in good condition
↓ Low	Not burned from 2013-2021 or row crop	26,696,239	99.0%	
	Total area	**26,962,771**	**100%**	

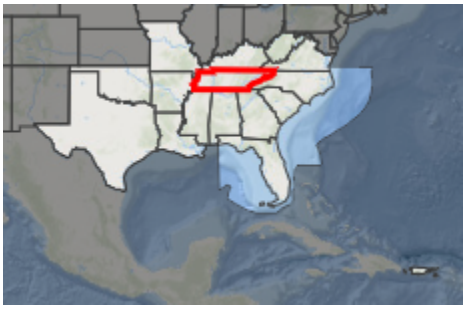
To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

Terrestrial

Greenways & trails

This cultural resource indicator measures both the natural condition and connected length of greenways and trails to characterize the quality of the recreational experience. Natural condition is based on the amount of impervious surface surrounding the path. Connected length captures how far a person can go without leaving a dedicated path, based on common distances for walking, running, and biking. This indicator originates from OpenStreetMap.

55 110 219 miles



- Mostly natural and connected for ≥40 km
- Mostly natural and connected for 5 to <40 km or partly natural and connected for ≥40 km
- Mostly natural and connected for 1.9 to <5 km, partly natural and connected for 5 to <40 km, or developed and ≥40 km
- Mostly natural and connected for <1.9 km, partly natural and connected for 1.9 to <5 km, or developed and connected for 5 to <40 km
- Partly natural and connected for <1.9 km or developed and connected for 1.9 to <5 km
- Developed and connected for <1.9 km
- Sidewalk or other path

Table 7: Indicator values for greenways & trails in this area. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

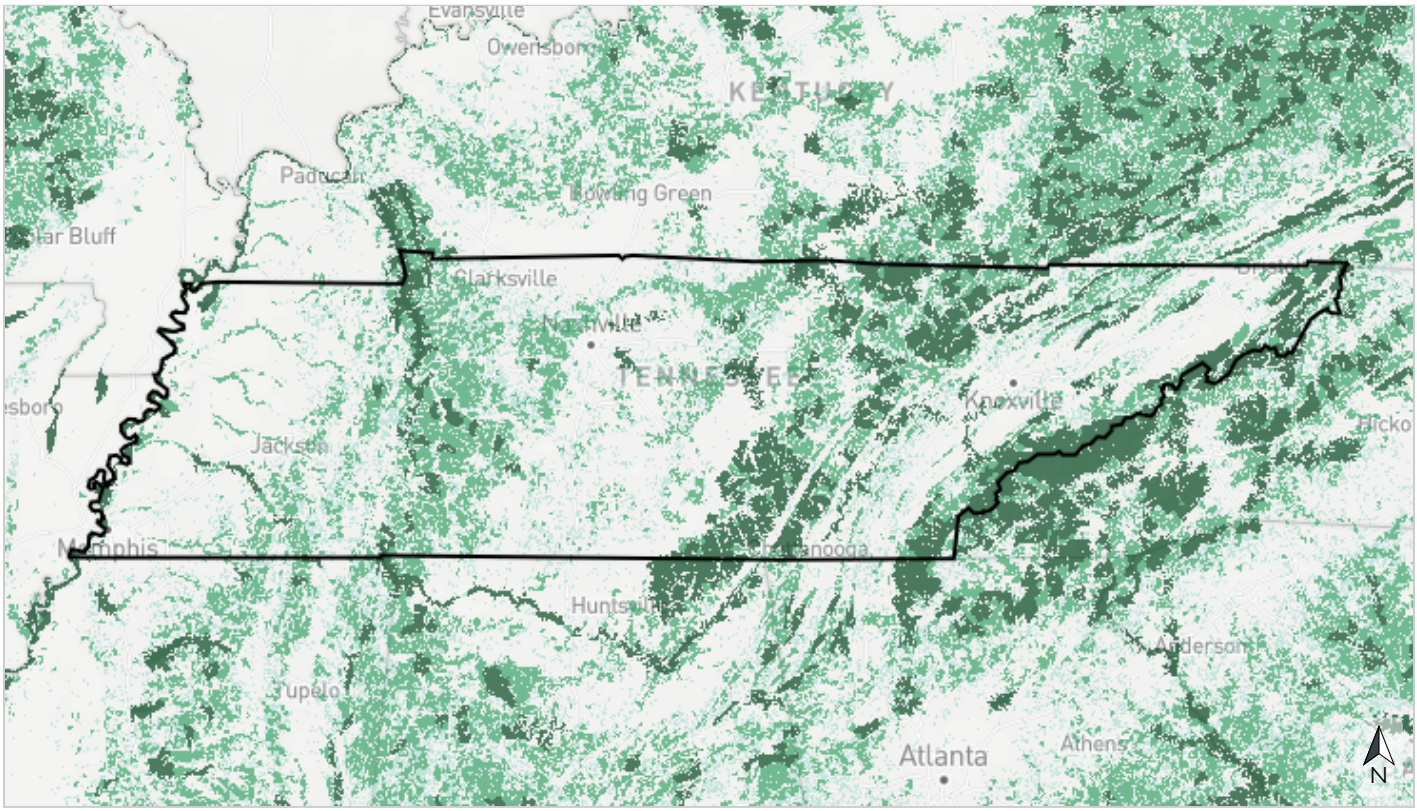
	Indicator Values	Acres	Percent of Area	
↑ High	Mostly natural and connected for ≥40 km	13,099	<0.1%	
	Mostly natural and connected for 5 to <40 km or partly natural and connected for ≥40 km	9,124	<0.1%	
	Mostly natural and connected for 1.9 to <5 km, partly natural and connected for 5 to <40 km, or developed and ≥40 km	2,697	<0.1%	
	Mostly natural and connected for <1.9 km, partly natural and connected for 1.9 to <5 km, or developed and connected for 5 to <40 km	1,389	<0.1%	↑ In good condition
	Partly natural and connected for <1.9 km or developed and connected for 1.9 to <5 km	1,019	<0.1%	↓ Not in good condition
	Developed and connected for <1.9 km	294	<0.1%	
↓ Low	Sidewalk or other path	43,535	0.2%	
	Area not evaluated for this indicator	*26,891,614*	*99.7%*	
	Total area	**26,962,771**	**100%**	

To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

Terrestrial

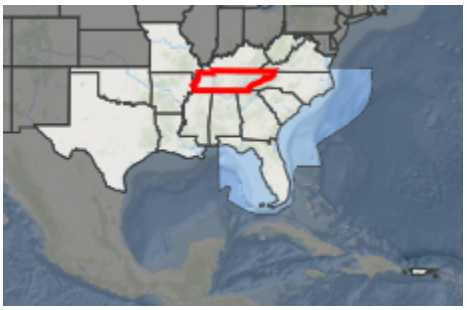
Intact habitat cores

This indicator represents the size of large, unfragmented patches of natural habitat. It identifies minimally disturbed natural areas at least 100 acres in size and greater than 200 meters wide. Large areas of intact natural habitat are important for many wildlife species, including reptiles and amphibians, birds, and large mammals. This indicator originates from Esri's green infrastructure data.



Basemap credits: © Mapbox © OpenStreetMap **Improve this map**

55 110 219 miles



- Large core (>10,000 acres)
- Medium core (>1,000-10,000 acres)
- Small core (>100-1,000 acres)
- Not a core

Table 8: Indicator values for intact habitat cores in this area. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

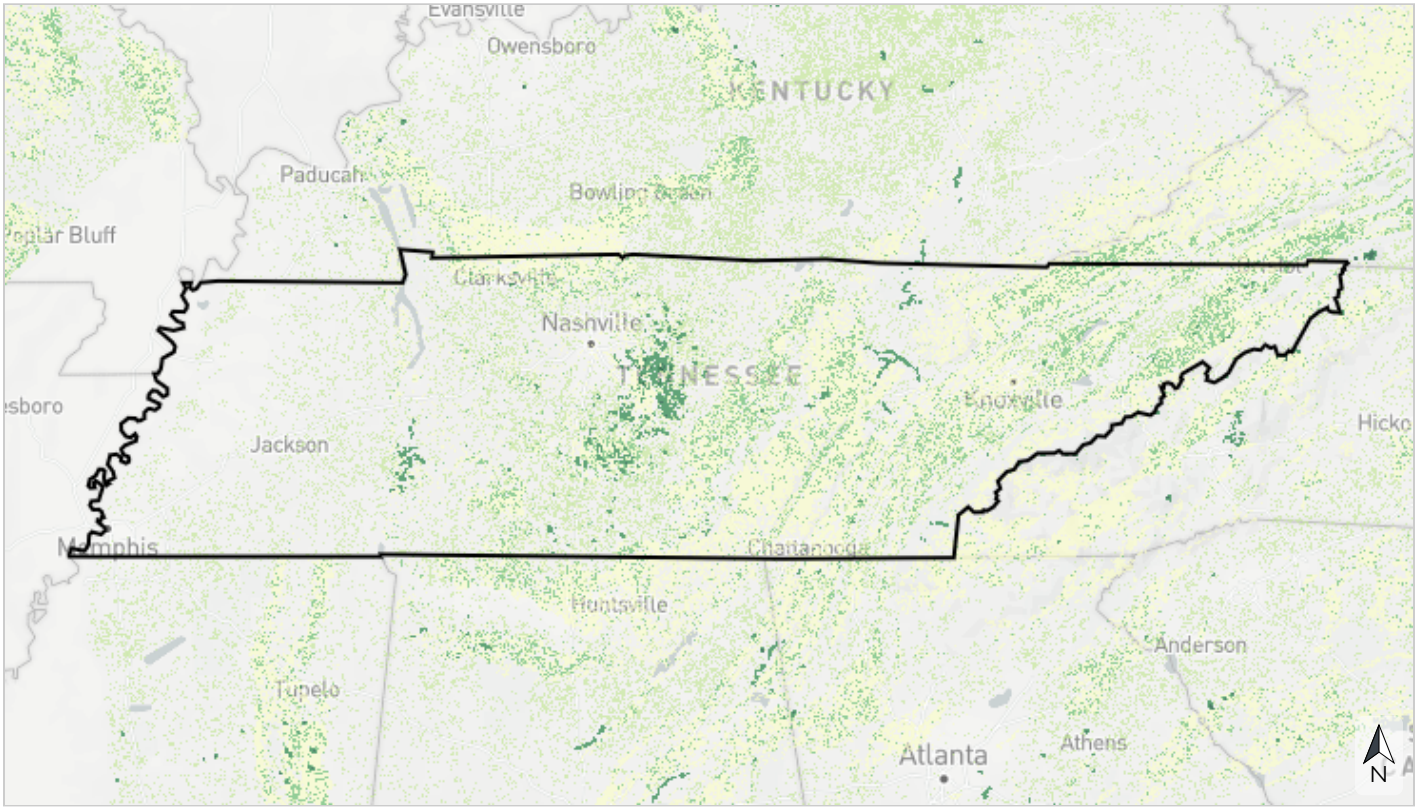
	Indicator Values	Acres	Percent of Area	
↑ High	Large core (>10,000 acres)	3,657,194	13.6%	
	Medium core (>1,000-10,000 acres)	4,862,097	18.0%	
	Small core (>100-1,000 acres)	2,655,185	9.8%	↑ In good condition
↓ Low	Not a core	15,788,296	58.6%	↓ Not in good condition
	Total area	**26,962,771**	**100%**	

To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

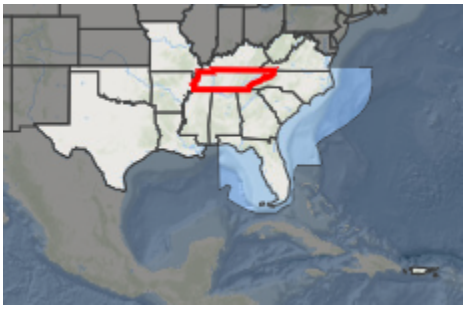
Terrestrial

Interior Southeast grasslands

This indicator represents grasslands in the interior southeastern United States, which support important plants, birds, and pollinators. It includes grasslands with and without trees that are historically maintained by geology (e.g., outcrops, glades, and barrens), fire (e.g., Piedmont prairies), and/or the regular violent flooding on the banks of high-energy rivers known as “riverscour” (e.g, riverscour prairies). Known grasslands receive the highest scores, followed by bumble bee habitat buffers around known sites, areas in potentially compatible management, and restoration opportunities within grassland geology. This indicator combines data from multiple sources, including the Southeastern Grasslands Initiative, the Central Hardwoods Joint Venture, the Rangeland Analysis Platform, and The Nature Conservancy.



219 miles
55 110



- Known grassland
- Known grassland buffer
- Potentially compatible management within grassland geology (undeveloped powerline right-of-way or perennial forbs and grasses)
- Potentially compatible management outside of grassland geology (undeveloped powerline right-of-way or perennial forbs and grasses)
- Grassland geology
- Grassland less likely

Table 9: Indicator values for Interior Southeast grasslands in this area. A good condition threshold is not yet defined for this indicator.

	Indicator Values	Acres	Percent of Area
↑ High	Known grassland	5,977	<0.1%
	Known grassland buffer	414,180	1.5%
	Potentially compatible management within grassland geology (undeveloped powerline right-of-way or perennial forbs and grasses)	1,519,337	5.6%
	Potentially compatible management outside of grassland geology (undeveloped powerline right-of-way or perennial forbs and grasses)	3,185,926	11.8%
	Grassland geology	5,320,852	19.7%
↓ Low	Grassland less likely	15,977,536	59.3%
	Area not evaluated for this indicator	*538,963*	*2.0%*
	Total area	**26,962,771**	**100%**

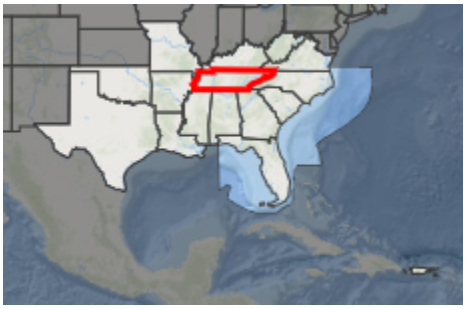
To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

Terrestrial

Mississippi Alluvial Valley forest birds (protection)

This indicator prioritizes areas for new land protection within the Mississippi Alluvial Valley (MAV) based on benefits to forest breeding birds that depend on large interior cores of bottomland hardwood habitat (Swainson's warbler, cerulean warbler, swallow-tailed kite). The model considers core size, the amount of existing protected land within the forest patch, proximity to reforestation priority areas, and risk of conversion to agriculture based on flooding frequency. The highest scores represent drier, unprotected forest patches with cores at least 2,000 ha (~5,000 ac) that are adjacent to priority areas from a complementary reforestation model also developed by the Lower Mississippi Valley Joint Venture (LMVJV). This indicator originates from the LMVJV's MAV forest breeding bird protection priorities.

219 miles
55 110



Priority of forest breeding bird habitat patch for future protection

- Score >90-100 (highest priority)
- Score >80-90
- Score >70-80
- Score >60-70
- Score >50-60
- Score >40-50
- Score >30-40
- Score >20-30
- Score >10-20
- Score 0-10 (lowest priority)

Table 10: Indicator values for Mississippi Alluvial Valley forest birds (protection) in this area. A good condition threshold is not yet defined for this indicator.

	Indicator Values: Priority of forest breeding bird habitat patch for future protection	Acres	Percent of Area
↑ High	Score >90-100 (highest priority)	6,580	<0.1%
	Score >80-90	3,060	<0.1%
	Score >70-80	429	<0.1%
	Score >60-70	1,590	<0.1%
	Score >50-60	9,199	<0.1%
	Score >40-50	1,909	<0.1%
	Score >30-40	3,539	<0.1%
	Score >20-30	4,290	<0.1%
	Score >10-20	9,388	<0.1%
↓ Low	Score 0-10 (lowest priority)	1,194	<0.1%
	Area not evaluated for this indicator	*26,921,593*	*99.8%*
	Total area	**26,962,771**	**100%**

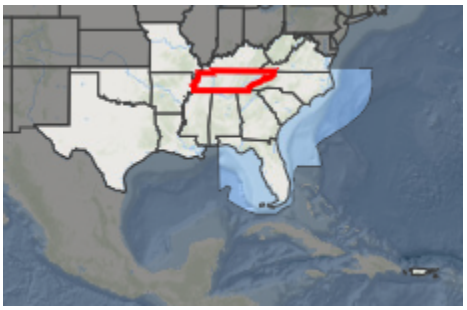
To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

Terrestrial

Mississippi Alluvial Valley forest birds (reforestation)

This indicator prioritizes areas for reforestation within the Mississippi Alluvial Valley (MAV) based on benefits to three species of forest breeding birds that depend on large interior cores of bottomland hardwood habitat (Swainson's warbler, cerulean warbler, swallow-tailed kite). The model considers the core size, number of cores, and percent of local forest cover that would result from reforestation, as well as risk of conversion to agriculture based on flooding frequency. The highest scores represent drier areas where reforestation would create new forest patches containing interior cores at least 2,000 ha (~5,000 ac). It originates from the Lower Mississippi Valley Joint Venture's MAV forest breeding bird reforestation priorities.

55 110 219 miles



Likelihood that reforestation will contribute to forest breeding bird habitat needs

- Most likely (≥90th percentile)
- Most likely (80th to <90th percentile)
- More likely (70th to <80th percentile)
- Less likely (60th to <70th percentile)
- Least likely (50th to <60th percentile)
- Least likely (40th to <50th percentile)
- Least likely (30th to <40th percentile)
- Least likely (20th to <30th percentile)
- Least likely (10th to <20th percentile)
- Least likely (<10th percentile)

Table 11: Indicator values for Mississippi Alluvial Valley forest birds (reforestation) in this area. A good condition threshold is not yet defined for this indicator.

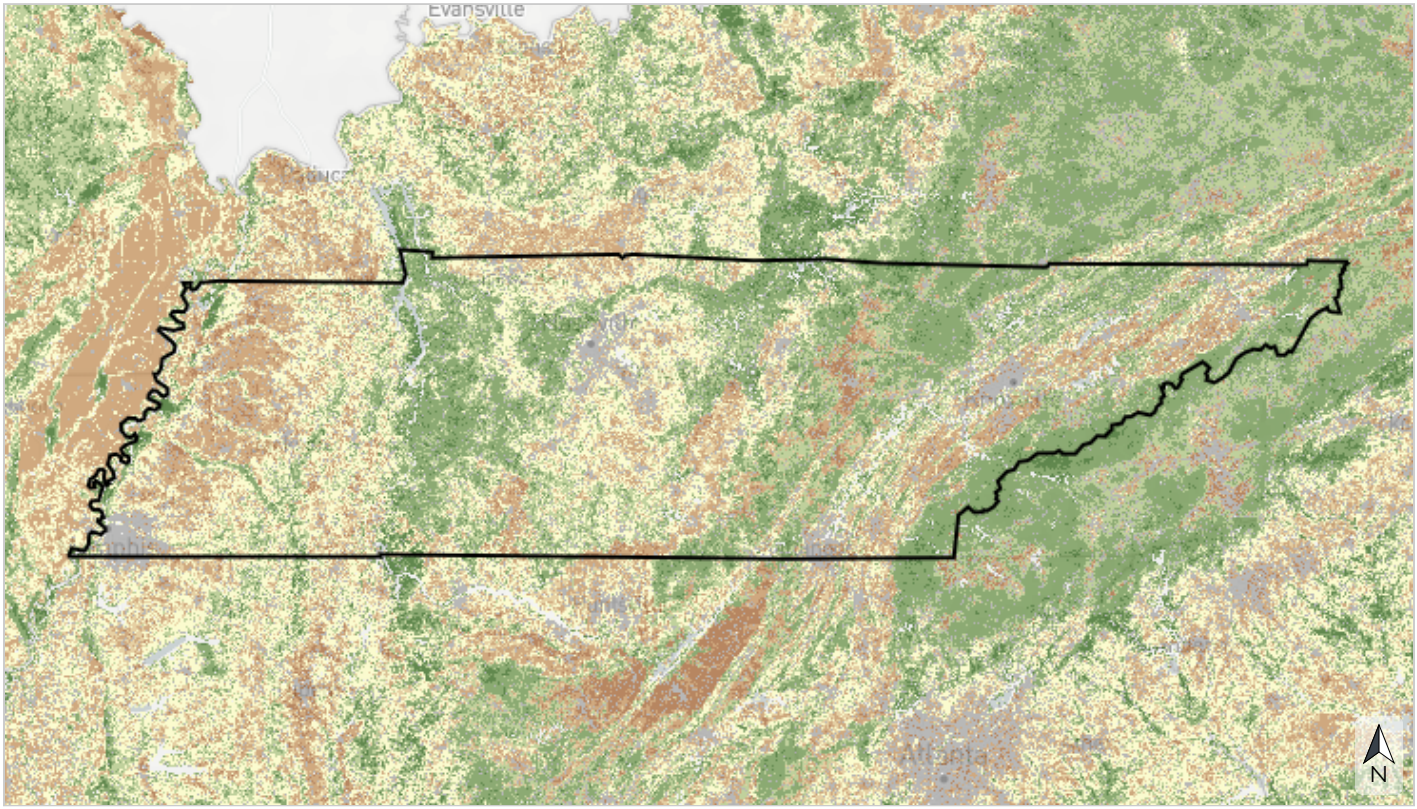
	Indicator Values: Likelihood that reforestation will contribute to forest breeding bird habitat needs	Acres	Percent of Area
↑ High	Most likely (≥90th percentile)	52,078	0.2%
	Most likely (80th to <90th percentile)	48,189	0.2%
	More likely (70th to <80th percentile)	33,983	0.1%
	Less likely (60th to <70th percentile)	35,743	0.1%
	Least likely (50th to <60th percentile)	53,020	0.2%
	Least likely (40th to <50th percentile)	38,410	0.1%
	Least likely (30th to <40th percentile)	21,962	<0.1%
	Least likely (20th to <30th percentile)	10,957	<0.1%
	Least likely (10th to <20th percentile)	3,453	<0.1%
↓ Low	Least likely (<10th percentile)	0	0%
	Area not evaluated for this indicator	*26,664,976*	*98.9%*
	Total area	**26,962,771**	**100%**

To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

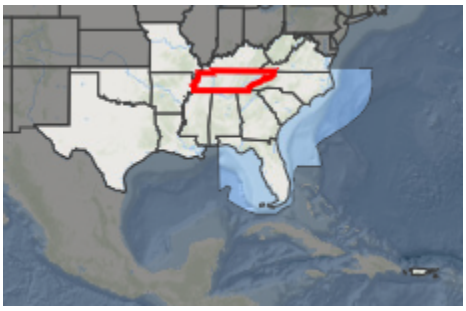
Terrestrial

Resilient terrestrial sites

This indicator depicts an area's capacity to maintain species diversity and ecosystem function in the face of climate change. It measures two factors that influence resilience. The first, landscape diversity, reflects the number of microhabitats and climatic gradients created by topography, elevation, and hydrology. The second, local connectedness, reflects the degree of habitat fragmentation and strength of barriers to species movement. Highly resilient sites contain many different habitat niches that support biodiversity, and allow species to move freely through the landscape to find suitable microclimates as the climate changes. This indicator originates from The Nature Conservancy's Resilient Land data.



219 miles
55 110



- Most resilient
- More resilient
- Slightly more resilient
- Average/median resilience
- Slightly less resilient
- Less resilient
- Least resilient
- Developed

Table 12: Indicator values for resilient terrestrial sites in this area. A good condition threshold is not yet defined for this indicator.

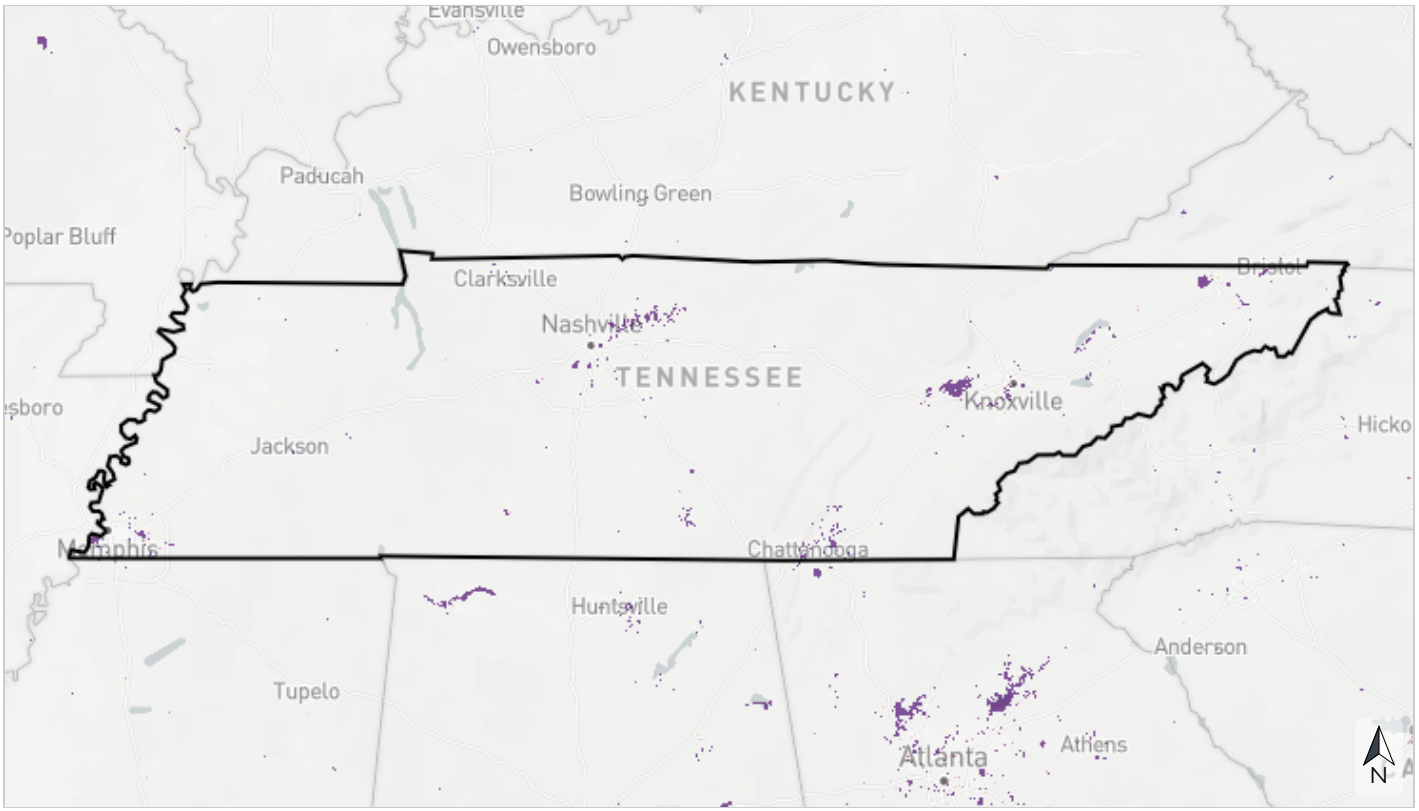
	Indicator Values	Acres	Percent of Area
↑ High	Most resilient	566,380	2.1%
	More resilient	6,371,862	23.6%
	Slightly more resilient	4,577,830	17.0%
	Average/median resilience	5,384,235	20.0%
	Slightly less resilient	2,601,526	9.6%
	Less resilient	3,076,156	11.4%
	Least resilient	520,553	1.9%
↓ Low	Developed	3,276,601	12.2%
	Area not evaluated for this indicator	*587,629*	*2.2%*
	Total area	**26,962,771**	**100%**

To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

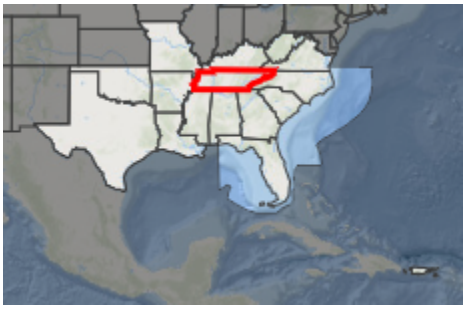
Terrestrial

Urban park size

This cultural resource indicator measures the size of parks larger than 5 acres in the urban environment. Protected natural areas in urban environments provide urban residents a nearby place to connect with nature, and offer refugia for some species. This indicator complements the equitable access to potential parks indicator by capturing the value of existing parks. It originates from the U.S. Geological Survey's Protected Areas Database and 2019 National Land Cover Database percent developed impervious layer.



55 110 219 miles



- >75 acre urban park
- >50-75 acre urban park
- >30-50 acre urban park
- >10-30 acre urban park
- 5-10 acre urban park

Table 13: Indicator values for urban park size in this area. A good condition threshold is not yet defined for this indicator.

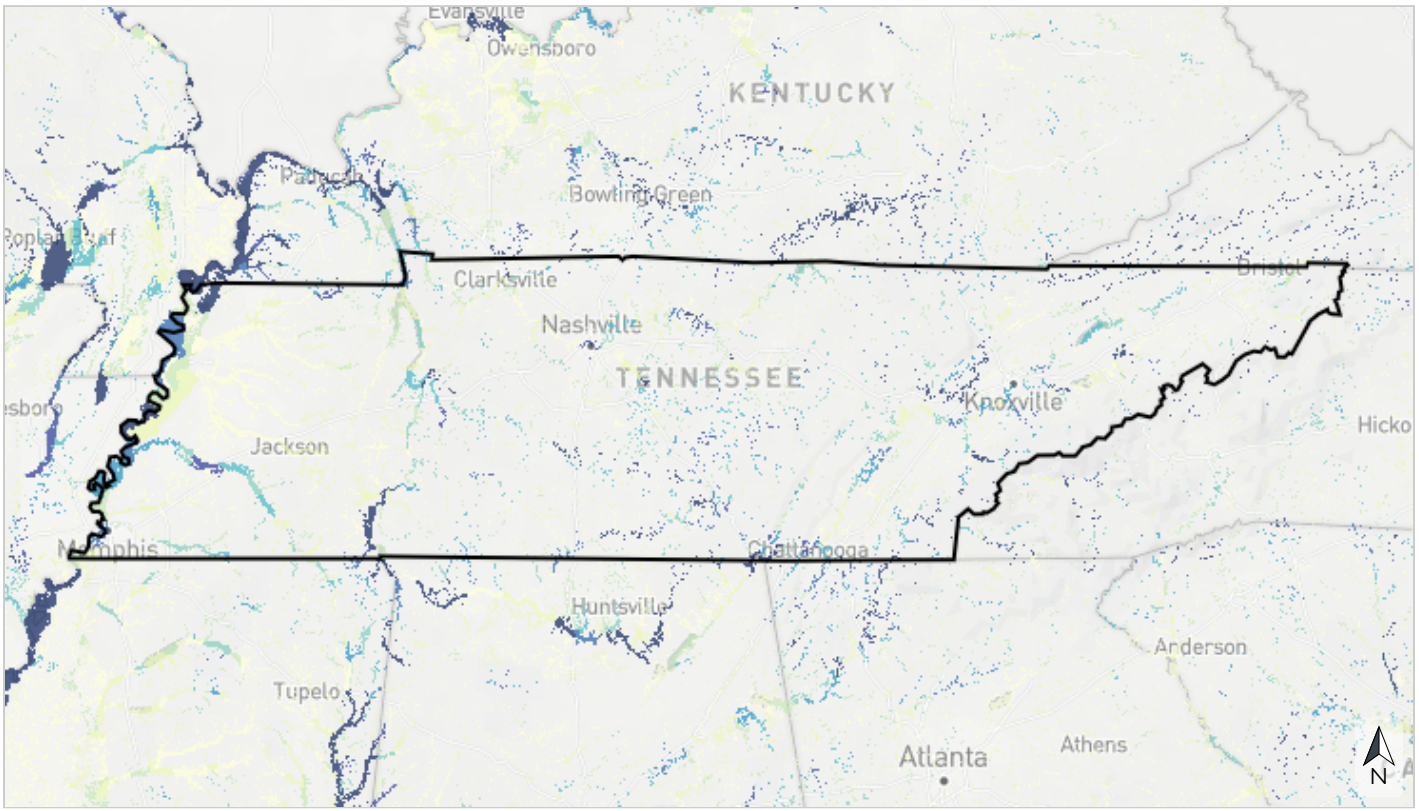
	Indicator Values	Acres	Percent of Area
↑ High	>75 acre urban park	170,378	0.6%
	>50-75 acre urban park	5,081	<0.1%
	>30-50 acre urban park	5,603	<0.1%
	>10-30 acre urban park	7,895	<0.1%
↓ Low	5-10 acre urban park	2,126	<0.1%
	Area not evaluated for this indicator	*26,771,688*	*99.3%*
	Total area	**26,962,771**	**100%**

To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

Freshwater

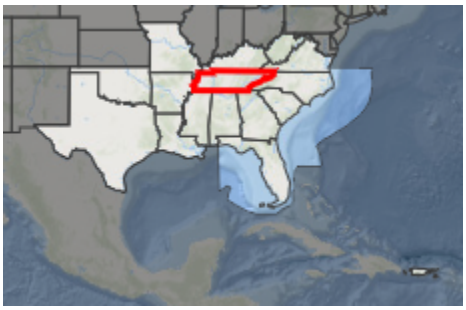
Imperiled aquatic species

This indicator measures the number of aquatic animal Species of Greatest Conservation Need (SGCN) observed within each 12-digit HUC subwatershed, including fish, mussels, snails, crayfish, and amphibians. SGCN are identified in State Wildlife Action Plans as most in need of conservation action. This indicator captures patterns of rare and endemic species diversity not well-represented by other freshwater aquatic indicators. It originates from state Natural Heritage Program data collected by the Southeast Aquatic Resources Partnership and applies to the Environmental Protection Agency's estimated floodplain, which spatially defines areas estimated to be inundated by a 100-year flood, also known as the 1% annual chance flood.



Basemap credits: © Mapbox © OpenStreetMap **Improve this map**

55 110 219 miles



- 8+ aquatic Species of Greatest Conservation Need (SGCN) observed
- 7 aquatic SGCN observed
- 6 aquatic SGCN observed
- 5 aquatic SGCN observed
- 4 aquatic SGCN observed
- 3 aquatic SGCN observed
- 2 aquatic SGCN observed
- 1 aquatic SGCN observed
- No aquatic SGCN observed

Table 14: Indicator values for imperiled aquatic species in this area. A good condition threshold is not yet defined for this indicator.

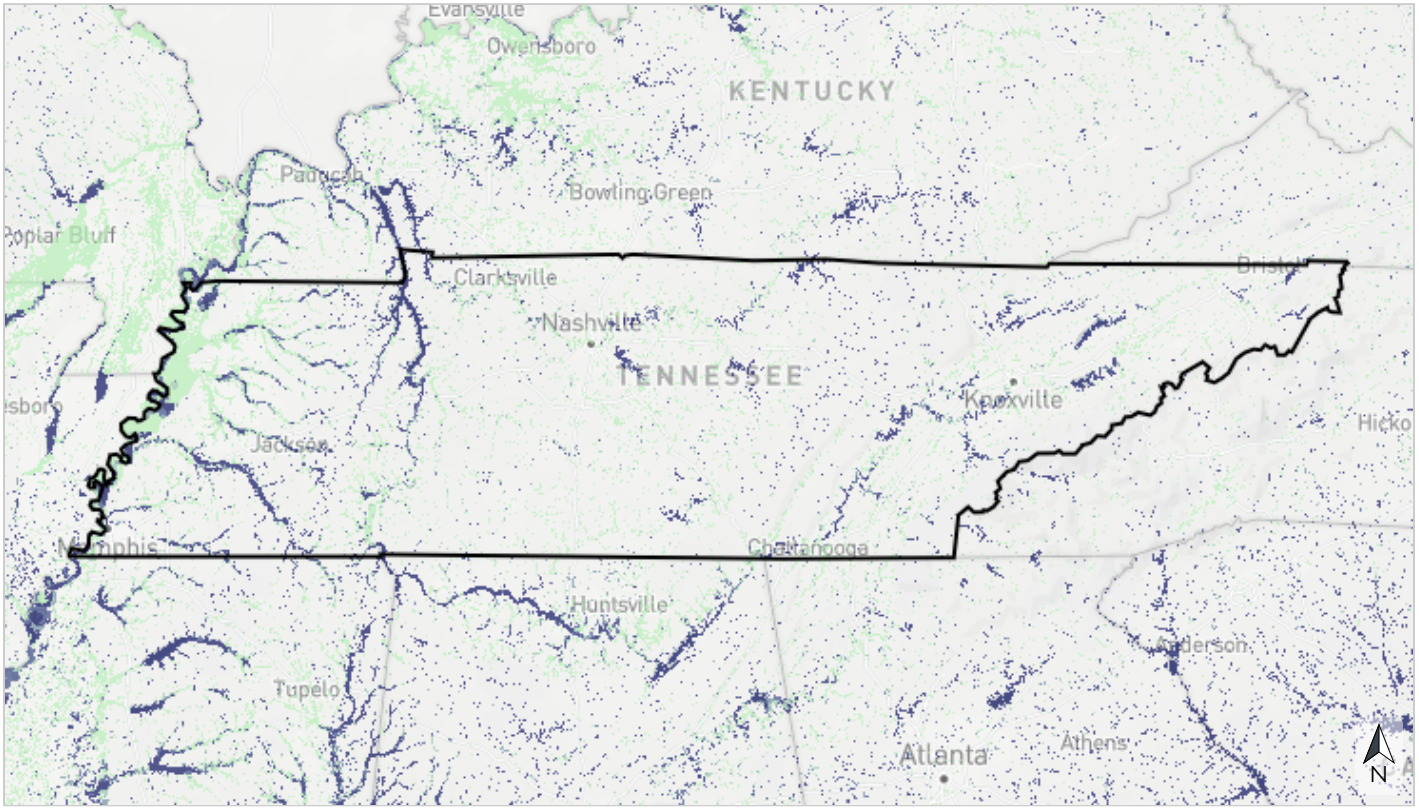
	Indicator Values	Acres	Percent of Area
↑ High	8+ aquatic Species of Greatest Conservation Need (SGCN) observed	243,773	0.9%
	7 aquatic SGCN observed	81,955	0.3%
	6 aquatic SGCN observed	152,933	0.6%
	5 aquatic SGCN observed	168,692	0.6%
	4 aquatic SGCN observed	209,837	0.8%
	3 aquatic SGCN observed	312,087	1.2%
	2 aquatic SGCN observed	448,254	1.7%
	1 aquatic SGCN observed	728,326	2.7%
↓ Low	No aquatic SGCN observed	979,654	3.6%
	Area not evaluated for this indicator	*23,637,261*	*87.7%*
	Total area	**26,962,771**	**100%**

To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

Freshwater

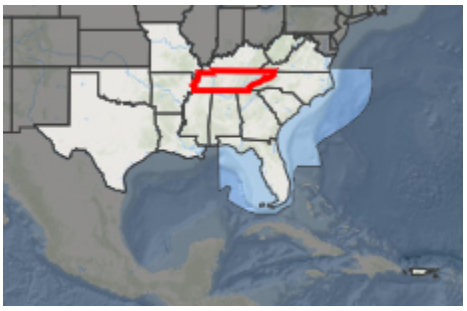
Natural landcover in floodplains

This indicator measures the amount of natural landcover in the estimated floodplain of rivers and streams within each catchment. It assesses the stream channel and its surrounding riparian buffer, measuring the percent of unaltered habitat like forests, wetlands, or open water (rather than agriculture or development). Intact vegetated buffers within the floodplain of rivers and streams provide aquatic habitat, improve water quality, reduce erosion and flooding, recharge groundwater, and more. This indicator originates from the 2019 National Land Cover Database and applies to the Environmental Protection Agency's estimated floodplain, which spatially defines areas estimated to be inundated by a 100-year flood, also known as the 1% annual chance flood.



Basemap credits: © Mapbox © OpenStreetMap **Improve this map**

219 miles
55 110



- >90% natural habitat within the estimated floodplain, by catchment
- >80-90%
- >70-80%
- >60-70%
- ≤60% natural habitat within the estimated floodplain, by catchment

Table 15: Indicator values for natural landcover in floodplains in this area. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

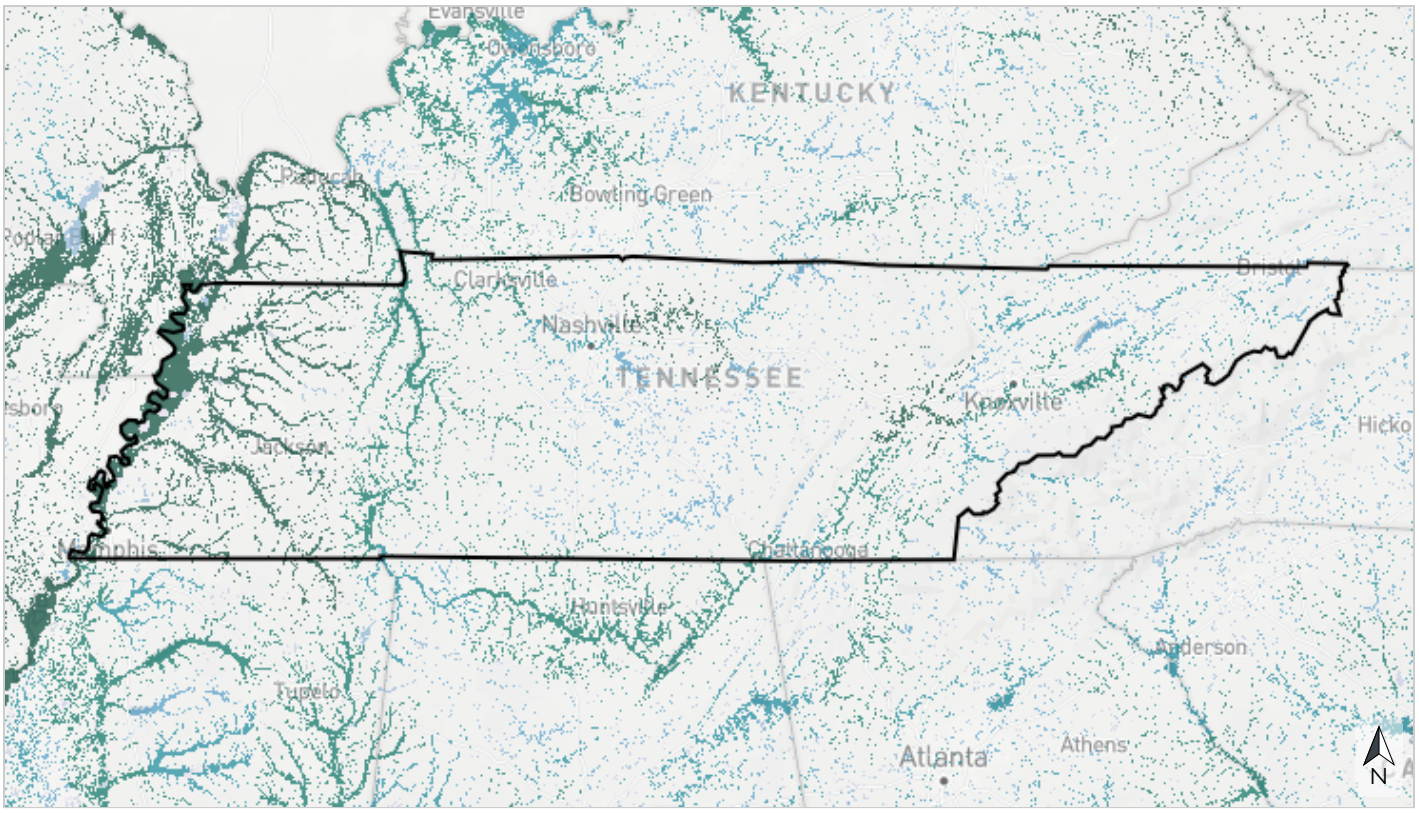
	Indicator Values	Acres	Percent of Area	
↑ High	>90% natural habitat within the estimated floodplain, by catchment	812,395	3.0%	↑ In good condition
	>80-90%	273,062	1.0%	
	>70-80%	215,216	0.8%	↓ Not in good condition
	>60-70%	220,930	0.8%	
↓ Low	≤60% natural habitat within the estimated floodplain, by catchment	1,803,909	6.7%	
	Area not evaluated for this indicator	*23,637,261*	*87.7%*	
	Total area	**26,962,771**	**100%**	

To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

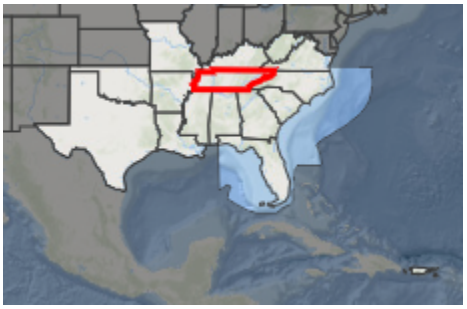
Freshwater

Network complexity

This indicator depicts the number of different stream size classes in a river network not separated by dams or waterfalls. River networks with a variety of connected stream classes help retain aquatic biodiversity in a changing climate by allowing species to access climate refugia and move between habitats. This indicator originates from the Southeast Aquatic Resources Partnership and applies to the Environmental Protection Agency's estimated floodplain, which spatially defines areas estimated to be inundated by a 100-year flood, also known as the 1% annual chance flood.



55 110 219 miles



- 7 connected stream classes
- 6 connected stream classes
- 5 connected stream classes
- 4 connected stream classes
- 3 connected stream classes
- 2 connected stream classes
- 1 connected stream class

Table 16: Indicator values for network complexity in this area. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

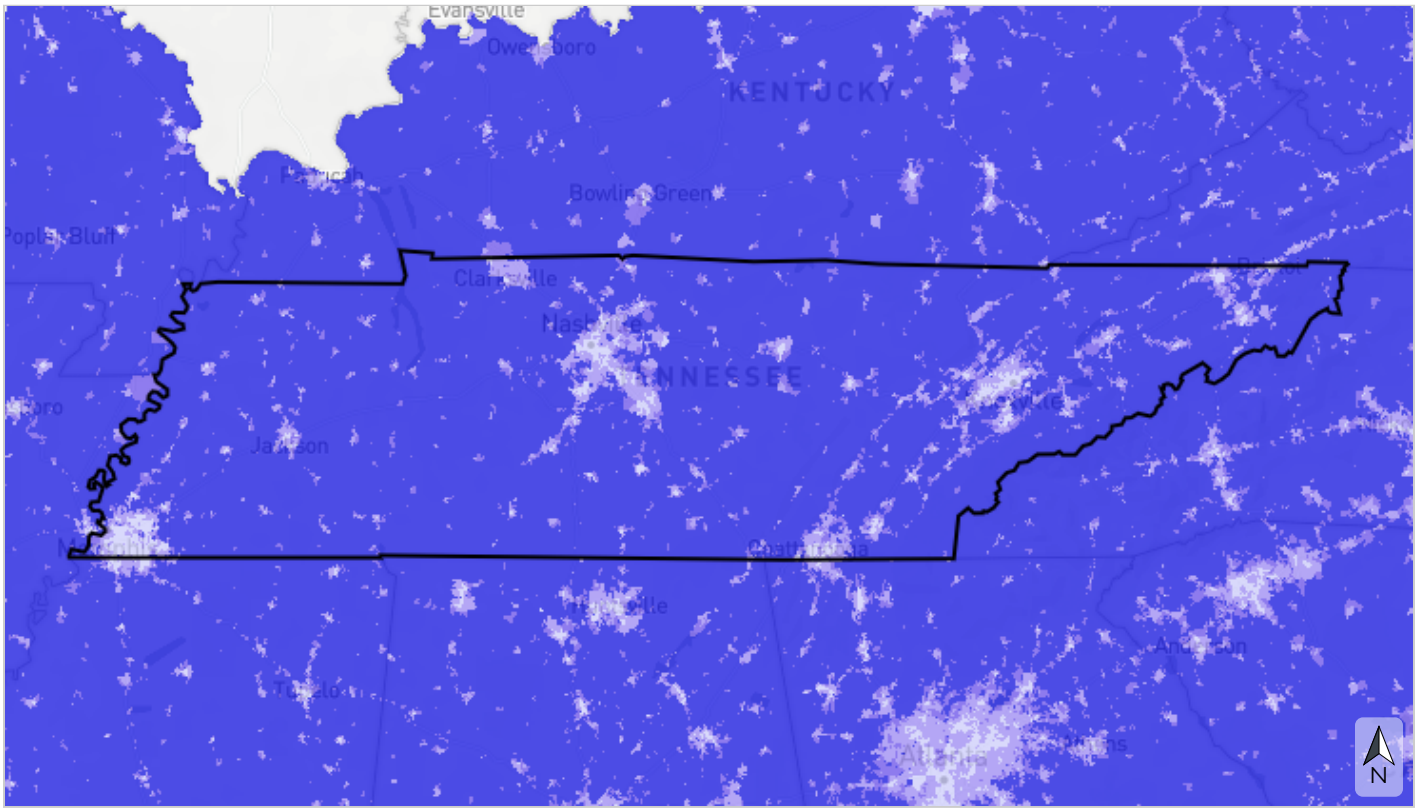
	Indicator Values	Acres	Percent of Area	
↑ High	7 connected stream classes	1,356,150	5.0%	
	6 connected stream classes	865,650	3.2%	
	5 connected stream classes	349,194	1.3%	
	4 connected stream classes	394,130	1.5%	↑ In good condition
	3 connected stream classes	159,111	0.6%	↓ Not in good condition
	2 connected stream classes	96,328	0.4%	
↓ Low	1 connected stream class	73,327	0.3%	
	Area not evaluated for this indicator	*23,668,881*	*87.8%*	
	Total area	**26,962,771**	**100%**	

To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

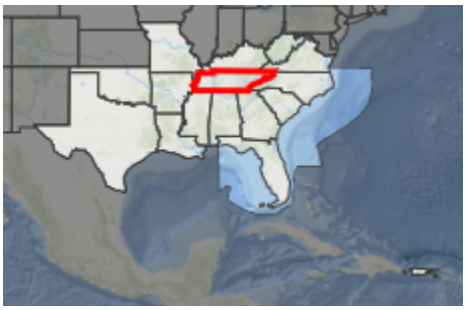
Freshwater

Permeable surface

This indicator measures the average percent of non-impervious cover within each catchment. High levels of impervious surface degrade water quality and alter freshwater flow, impacting both aquatic species communities and ecosystem services for people, like the availability of clean drinking water. This indicator originates from the 2019 National Land Cover Database percent developed impervious layer.



55 110 219 miles



- >95% of catchment permeable (likely high water quality and supporting most sensitive aquatic species)
- >90-95% of catchment permeable (likely declining water quality and supporting most aquatic species)
- >70-90% of catchment permeable (likely degraded water quality and not supporting many aquatic species)
- ≤70% of catchment permeable (likely degraded instream flow, water quality, and aquatic species communities)

Table 17: Indicator values for permeable surface in this area. Good condition thresholds reflect the range of indicator values that occur in healthy, functioning ecosystems.

	Indicator Values	Acres	Percent of Area	
↑ High	>95% of catchment permeable (likely high water quality and supporting most sensitive aquatic species)	23,713,314	87.9%	↑ In good condition
	>90-95% of catchment permeable (likely declining water quality and supporting most aquatic species)	1,337,823	5.0%	↓ Not in good condition
	>70-90% of catchment permeable (likely degraded water quality and not supporting many aquatic species)	1,449,976	5.4%	
↓ Low	≤70% of catchment permeable (likely degraded instream flow, water quality, and aquatic species communities)	461,659	1.7%	
	Total area	**26,962,771**	**100%**	

To learn more and explore the GIS data, view this indicator in the SECAS Atlas.

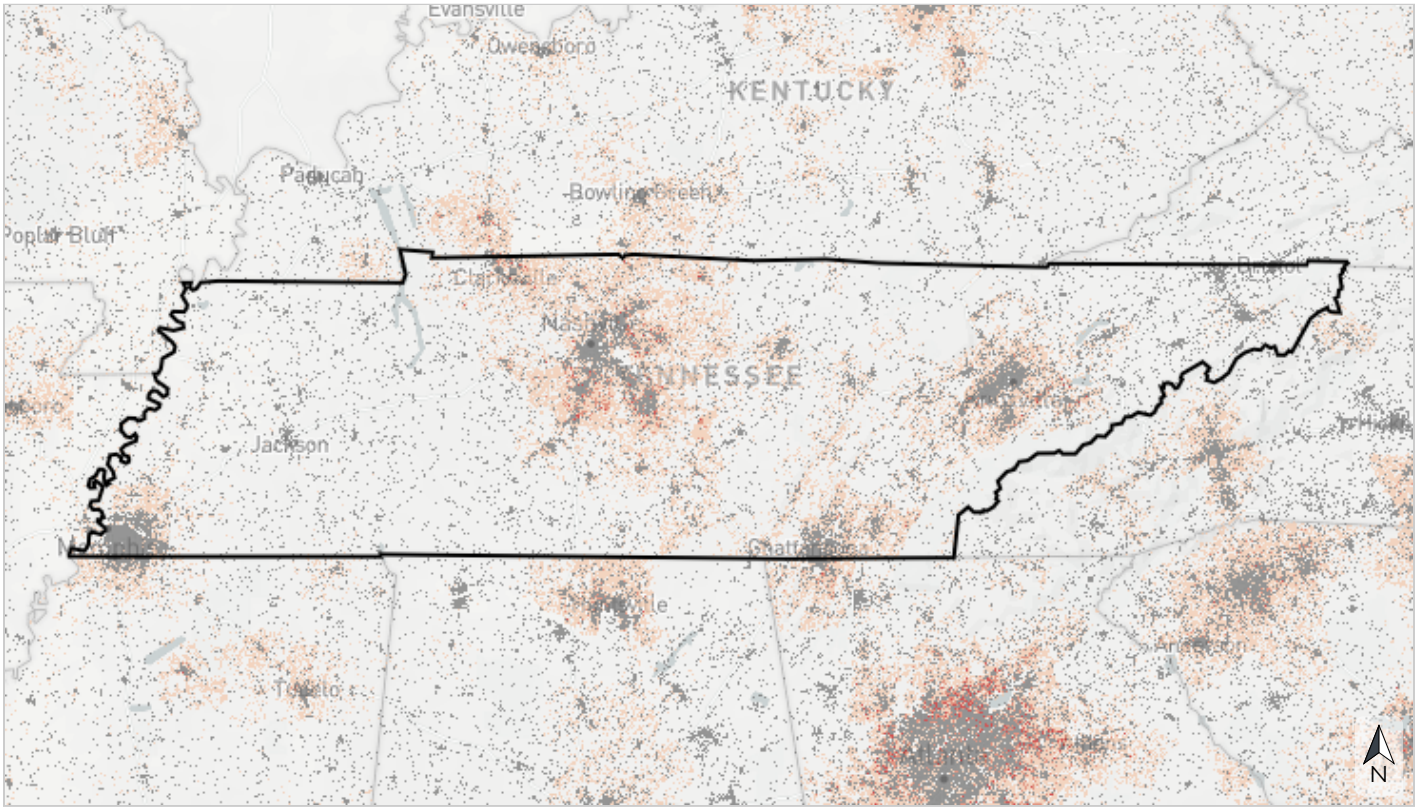
Threats

Sea-level rise

Sea-level rise unlikely to be a threat (inland counties).

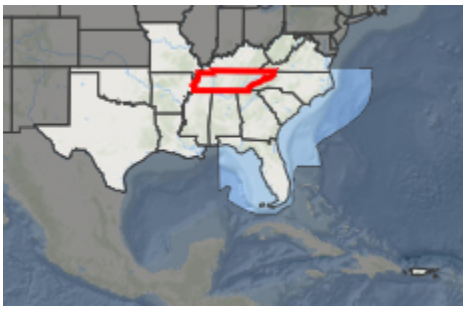
Urban growth

The FUTURES urban growth model predicts the likelihood that an area will urbanize at every decade from 2020 to 2100. Developed areas from the 2019 National Landcover Database serve as the baseline for current urban areas. The model simulates landscape change based on trends in population growth, local development suitability factors, and an urban patch-growing algorithm. It considers environmental drivers like distance to floodplain, slope, and available infrastructure, and even socio-economic status. The probability of urbanization for each area reflects how many times it urbanized out of 50 model runs.



Basemap credits: © Mapbox © OpenStreetMap **Improve this map**

55 110 219 miles



Probability of urbanization by 2060

- Urban in 2019
- Very high likelihood of urbanization (>50% probability)
- High likelihood of urbanization (25 - 50% probability)
- Moderate likelihood of urbanization (2 - 25% probability)
- Not likely to urbanize

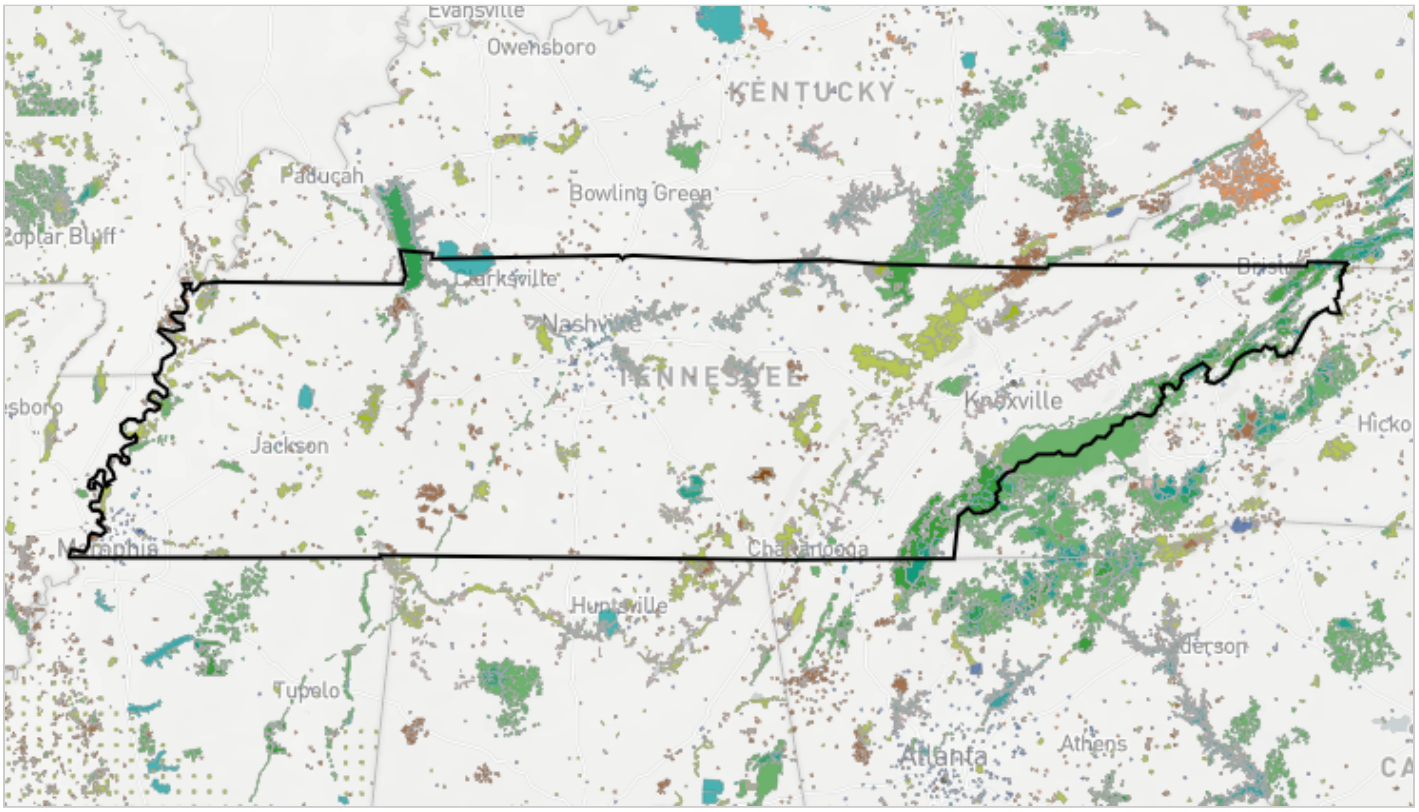
10.8% of this area is already urban in 2019, and an additional 12.3% has at least a moderate probability of urbanizing by 2060.

Table 18: Extent of projected urbanization by decade in this area. Values from the FUTURES urban growth model. Data provided by the Center for Geospatial Analytics, NC State University. 2060 corresponds to the SECAS goal: a 10% or greater improvement in the health, function, and connectivity of Southeastern ecosystems by 2060.

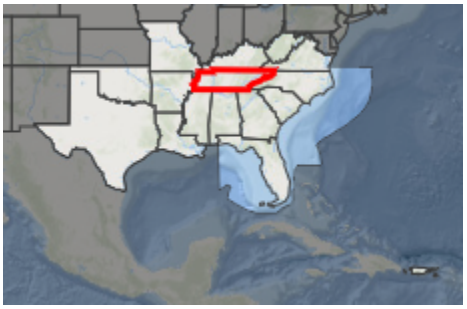
Decade	Acres	Percent of Area
Urban in 2019	2,917,745	10.8%
2020 projected extent	2,929,901	10.9%
2030 projected extent	2,999,603	11.1%
2040 projected extent	3,054,538	11.3%
2050 projected extent	3,098,258	11.5%
2060 projected extent	3,137,329	11.6%
2070 projected extent	3,174,245	11.8%
2080 projected extent	3,203,195	11.9%
2090 projected extent	3,222,919	12.0%
2100 projected extent	3,237,086	12.0%
Not projected to urbanize by 2100	*20,168,669*	*74.8%*
Total area	**26,962,771**	**100%**

Ownership and Partners

Conserved lands ownership



55 110 219 miles

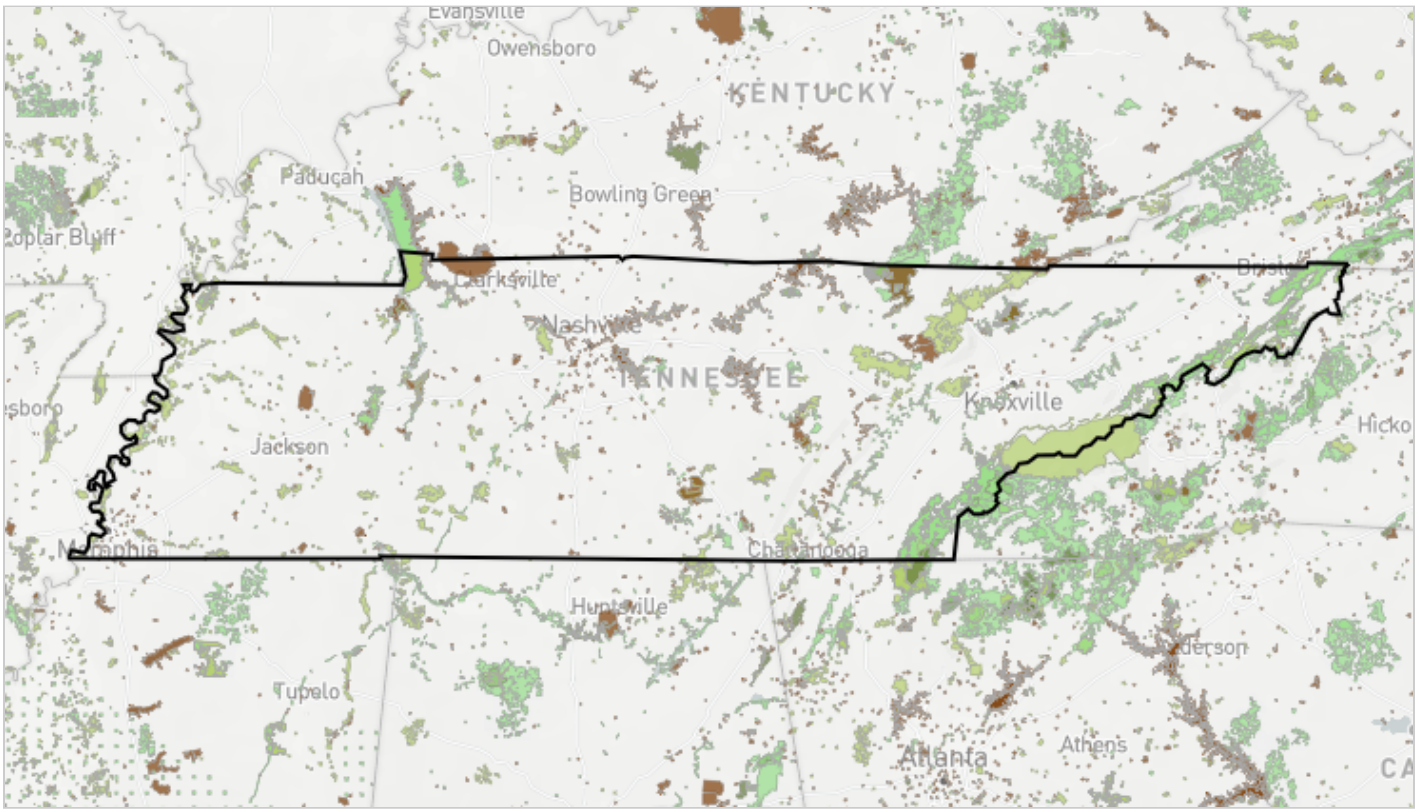


- Federal
- State/province
- Territorial
- Regional
- Local
- Joint
- Private non-profit conserved lands
- Private conservation land
- Tribal
- Designation
- Ownership unknown

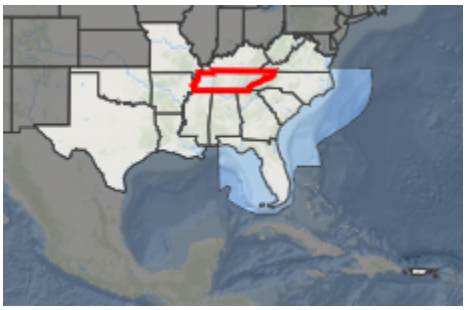
Table 19: Extent of ownership class in this area. Protected areas are derived from the Protected Areas Database of the United States (PAD-US v3.0). Note: areas are based on the polygon boundary of this area compared to protected area polygons, rather than pixel-level analyses used elsewhere in this report.

Ownership	Acres	Percent of Area
Federal	2,365,952	8.8%
State/province	1,116,446	4.1%
Regional	451	<0.1%
Local	70,550	0.3%
Joint	8,917	<0.1%
Private non-profit conserved lands	12,642	<0.1%
Private conservation land	349,546	1.3%
Designation	485,934	1.8%
Ownership unknown	403,594	1.5%
Not conserved	*22,148,722*	*82.1%*
Total area	**26,962,755**	**100%**

Land protection status



55 110 219 miles



- Managed for biodiversity (disturbance events proceed or are mimicked)
- Managed for biodiversity (disturbance events suppressed)
- Managed for multiple uses (subject to extractive uses such as mining or logging, or OHV use)
- No known mandate for biodiversity protection

Table 20: Extent of land protection status in this area. Protected areas are derived from the Protected Areas Database of the United States (PAD-US v3.0). Note: areas are based on the polygon boundary of this area compared to protected area polygons, rather than pixel-level analyses used elsewhere in this report.

Land Protection Status	Acres	Percent of Area
Managed for biodiversity (disturbance events proceed or are mimicked)	86,104	0.3%
Managed for biodiversity (disturbance events suppressed)	2,069,669	7.7%
Managed for multiple uses (subject to extractive uses such as mining or logging, or OHV use)	1,693,546	6.3%
No known mandate for biodiversity protection	964,713	3.6%
Not conserved	*22,148,722*	*82.1%*
Total area	**26,962,755**	**100%**

Protected Areas

- Cherokee National Forest (USDA FOREST SERVICE; 660,467 acres)
- South Cherokee National Forest & Wildlife Management Area (US Forest Service; 590,976 acres)
- North Cherokee National Forest & Wildlife Management Area (Forest Service; 340,125 acres)
- GRSM (NPS; 241,081 acres)
- (Unknown; 150,099 acres)
- Royal Blue Unit (Tennessee Wildlife Resources Agency; 91,099 acres)
- BISO (NPS; 83,326 acres)
- Catoosa Wildlife Management Area (Tennessee Wildlife Resources Agency; 79,207 acres)
- Big South Fork N.R.R.A. (National Park Service; 71,869 acres)
- Fort Campbell (67,532 acres)
- Land Between The Lakes Wildlife Management Area (Forest Service; 64,040 acres)
- Land Between The Lakes (63,694 acres)
- Land Between the Lakes National Recreation Area (USDA FOREST SERVICE; 63,694 acres)
- Tennessee National Wildlife Refuge (PVT; 49,523 acres)
- Chuck Swan Wildlife Management Area & State Forest (State Department of Agriculture, Division of Forestry; 47,851 acres)
- Tackett Creek Wildlife Management Area (Corrigan TLP/Molpus Timberland; 45,542 acres)
- DALE HOLLOW (Unknown; 44,125 acres)

- CENTER HILL (Unknown; 40,398 acres)
- Sundquist Unit (Tennessee Wildlife Resources Agency; 39,581 acres)
- Arnold Air Force Base (38,892 acres)
- Natchez Trace State Forest (State Department of Agriculture, Division of Forestry; 36,644 acres)
- Natchez Trace State Forest & Wildlife Management Area (State Department of Agriculture, Division of Forestry; 34,931 acres)
- Pickett State Forest & Wildlife Management Area (State Department of Agriculture, Division of Forestry; 33,986 acres)
- J. PERCY PRIEST (Unknown; 33,737 acres)
- OLD HICKORY (Unknown; 29,862 acres)
- ... and 2,413 more protected areas ...

Nearby land trusts

Click here to search for land trusts within 500 miles of this area on the Land Trust Alliance website.

Credits

This report was generated by the Southeast Conservation Blueprint Explorer, which was developed by Astute Spruce, LLC in partnership with the U.S. Fish and Wildlife Service under the Southeast Conservation Adaptation Strategy.

Data credits

Urbanization data are derived from the FUTURES urban growth model. Data provided by the Center for Geospatial Analytics, NC State University (June 2022).

Sea level rise data are derived from the National Oceanic and Atmospheric Administration's Sea Level Rise Inundation Depth Data and the 2022 Sea Level Rise Technical Report.

Land ownership and conservation status is derived from the Protected Areas Database of the United States (PAD-US v3.0).